

**School of Management  
Curtin Business School**

**Determinants of Quality of Headquarters-Subsidiary Relationship:  
A Study of Chinese Multinational Enterprises**

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**This thesis is presented for the Degree of  
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## **DECLARATION**

To the best of my knowledge and belief, this thesis contains no material previously published by any person except where due acknowledgement has been made. This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

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JIZHONG LI



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## **ABSTRACT**

In the past decade, China has become an increasingly prominent investor in the global market by conducting outward foreign direct investment. The statistics show that China scored an average annual growth of 45% during the eleven year period from 2002-2012 after its accession to the World Trade Organization (MOFCOM, 2013). By the end of 2012, China was the world's third largest investing country in terms of outward foreign direct investment flow, with the thirteenth largest outward foreign direct investment stock (MOFCOM, 2013), and was also the leading investing country amongst the countries from emerging economies (UNCTAD, 2012).

Given the increasing prominence of China's outward foreign direct investment, research in this area is becoming significantly more extensive. Researchers have predominantly focused on issues at the planning and early entry stages of Chinese outward foreign direct investment, such as trends and development, determinants and motivations, entry mode choice and location choice, as well as the influence of the strategic intent of Chinese firms. Interestingly, issues at the post-entry and implementation stages remain largely untapped. Despite the fact that the headquarters-subsidiary relationship is one of the most critical issues in studying the internationalization of firms, and the quality of the headquarters-subsidiary relationship is a source of a firm's competitive advantage, little is known about the determinants of quality of the headquarters-subsidiary relationship in Chinese multinational enterprises. In view of this theoretical gap, this study sets out to investigate the quality of the headquarters-subsidiary relationship in Chinese multinational enterprises, focusing on the determinants of the quality of the headquarters-subsidiary relationship from three different theoretical perspectives.

After an extensive review of the literature in the areas of relationship quality and the headquarter-subsidiary relationship, a conceptual framework for this study is developed by incorporating institutional perspective, social exchange perspective and upper echelons perspective theories. The conceptual framework and its hypotheses are then empirically tested using survey data collected from headquarters and overseas subsidiaries of 354 Chinese multinational enterprises in 2012.

The moderated hierarchical regression analyses were performed. The results suggest that the quality of the headquarters-subsidiary relationship in Chinese multinational enterprises can be enhanced by a number of factors, including their perceived regulative distance, cultural distance, levels of organizational and managerial exchange, level of subsidiary managers' global mindset and subsidiary managers' perceived psychic distance. Furthermore, the positive relationship between regulative distance, cultural distance and quality of the headquarters-subsidiary relationship can be strengthened by the level of institutionalization of headquarters' practices within subsidiaries. However, the positive association between the level of organizational exchange and quality of the headquarters-subsidiary relationship will be weaker when the subsidiary is wholly owned by the Chinese parent firm or established by greenfield entry mode. The positive association between the level of managerial exchange and the quality of the headquarters-subsidiary relationship will be weaker when the subsidiary manager has a higher level of organizational identity with the subsidiary. Subsidiary managers' non-flexible personality can weaken the positive influence of subsidiary managers' global mindset on the quality of the headquarters-subsidiary relationship; whereas this positive influence can be enhanced by subsidiary managers' overseas study experience.

This research contributes to the literature on the quality of the headquarters-subsidiary relationship by constructing and validating a conceptual framework that can explain the determinants of quality of headquarters-subsidiary relationship in Chinese multinational enterprises. This research provides Chinese multinational enterprises with a frame of reference, which may be of assistance in managing their headquarters-subsidiary relationship, as well as fostering a high quality headquarters-subsidiary relationship. Given this is the first research on the determinants of the quality of headquarters-subsidiary relationships in the context of emerging economies, this research also provides managerial implications for future studies in this area of research.



## ABBREVIATIONS

|        |   |
|--------|---|
| CMCEI  | Chengdu Municipal Commission of Economy and Informatization |
| e.g.   | exempli gratia (for example)                                |
| EE     | Emerging Economies  |
| etc.   | et cetera (and so on)                                       |
| FDI    | Foreign Direct Investment                                   |
| FSA    | Firm-Specific Advantage                                     |
| H      | Hypothesis  |
| HQ-Sub | Headquarters-Subsidiary                                     |
| i.e.   | id est (that is)  |
| ID     | Identity  |
| LISREL | Linear Structural Relations                                 |
| LMX    | Leader Member Exchange                                      |
| M&A    | Merger and Acquisition                                      |
| MNE    | Multinational Enterprise                                    |
| MOFCOM | Ministry of Commerce  |
| N.A.   | Not Available   |
| NBS    | National Bureau of Statistics                               |
| NDRC   | National Development and Reform Commission                  |
| No.    | Number  |
| OFDI   | Outward Foreign Direct Investment                           |
| Ph.D.  | Doctor of Philosophy  |
| SAFE   | State Administration of Foreign Exchange                    |
| SASAC  | State-owned Asset Supervision and Administration Commission |

|        |  |
|--------|--|
| SOE    | State Owned Enterprise                             |
| U.K.   | The United Kingdom                                 |
| UNCTAD | United Nations Conference of Trade and Development |
| US     | The United States, or the U.S.                     |
| USD    | U.S. Dollar  |
| WOS    | Wholly Owned Subsidiary                            |
| WTO    | World Trade Organization                           |

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## **CHAPTER 1 INTRODUCTION**

### **1.1 Research Background**

Since the ‘open door’ policy in the late 1970s, China has experienced dramatic social and political reform, as well as rapid economic development and growth. In terms of foreign direct investment (FDI), China has become an increasingly prominent investor in the global market, led by the growing number of Chinese multinational enterprises (MNEs) conducting outward FDIs in the past decade. During the FDI implementation stage, the inter-organizational relationship between headquarters and subsidiary is one of the most critical factors that will impact on the survival of the subsidiary and its performance, as this particular relationship influences how headquarters internalize global activities within a firm and how a subsidiary overcomes disadvantages by obtaining resources from other parts of the firm (Luo, 2003). This thesis is written in the context of China as a source of foreign direct investment, addressing the issue of the headquarters-subsidiary relationship in Chinese MNEs when investing overseas. It focuses on the determinants of the quality of headquarters-subsidiary relationship in Chinese MNEs. This thesis argues that the quality of headquarters-subsidiary relationship in Chinese MNEs is influenced by institutional environment, social exchange and managerial cognition related factors.

China has gradually shifted its role in the international market from being a major recipient of FDI to being both a major recipient and source of outward FDI. The Chinese outward FDI has experienced steady growth since the mid-1990s (Liu, Buck, & Shu, 2005). China has recorded an average annual growth of 45% during the eleven-year period from 2002 to 2012, and its total outward FDI stock volume increased dramatically from 37.17 billion US dollars to 509 billion US dollars during this period. The development of China’s outward FDI is influenced by its unique characteristics, including its unique institutional environment and its special ownership advantages (Buckley, Clegg, Cross, Liu, Voss, & Zheng, 2007). The outward FDI behaviours of Chinese MNEs is largely shaped by its home institutional environment, which includes the high levels of government support such as favourable policy, access to raw material and low-cost capital, subsidies and other benefits to offset their ownership and location disadvantages (Aggarwal & Agmon, 1990). On the other hand, Chinese MNEs face bureaucratic and burdensome

administrative procedures imposed by the government at different levels, which seek to influence different aspects of the the outward FDI behaviour of Chinese MNEs. The Chinese MNEs also possess certain ownership advantages, such as flexibility and network skills, which also allow them to operate certain types of activities more effectively than their local and developed economy counterparts (Buckley et al., 2007). The development of China's outward FDI has attracted a lot of research attention, and prior studies on Chinese MNEs have predominantly focused on the issues at the planning stage and entry stage, for instance, trends and development of Chinese outward FDI (Morck, Yeung, & Zhao, 2008), determinants and motivations of Chinese outward FDI (Buckley et al., 2007), Chinese MNEs' FDI entry mode choice (Cui & Jiang, 2009, 2012), FDI location choice (Kang & Jiang, 2012), and their strategic intent (Cui, Meyer, & Hu, 2013). However, these researchers haven't adequately addressed the post entry and implementation stage issue such as the headquarters-subsidiary relationship in Chinese MNEs, in particular, the quality of the headquarters-subsidiary relationship and its determinants in Chinese MNEs. This is despite the fact that the headquarters-subsidiary relationship in MNEs is one of the most critical aspects in studying the internationalization of firms (Johnston, 2005).

## **1.2 Research Significance**

When MNEs expand their operations into different host countries, they are entering into diversified and unfamiliar business environments. Due to the unfamiliarity and lack of experience in the foreign markets, their subsidiaries will face different challenges and incur extra costs (i.e., liability of foreignness) (Hymer, 1960/1976). It becomes critically important for the MNEs to manage a good relationship between headquarters and subsidiary, so as to overcome or minimize these disadvantages and to maintain their competitiveness (Fenton-O'Creevy, Gooderham, & Nordhaug, 2008). Therefore, the quality of the headquarters-subsidiary relationship is a critical source of MNEs' competitive advantage, and it can influence their performance (Kostova, 1998). Various aspects of the headquarters-subsidiary relationship have been examined in the literature, most notably headquarters control (e.g., Doz & Prahalad, 1984; Prahalad & Doz, 1981), subsidiary autonomy (e.g., Ginsberg & Venkatraman, 1985) and knowledge transfer (e.g., Gupta & Govindarajan, 1991). The main focus was directed towards the management of the headquarters-subsidiary

relationship, in particular, how much decision-making autonomy a subsidiary may have (Nohria & Ghoshal, 1994), however, the quality of the headquarters-subsidary relationship, especially the determinants of the quality of headquarters-subsidary relationship remains largely unexplored.

In view of this significant theoretical gap, this study sets out to investigate the quality of the headquarters-subsidary relationship in Chinese MNEs, focusing on major determinants of the quality of headquarters-subsidary relationship from three theoretical perspectives, including an institutional perspective, a social exchange perspective, and an upper echelons perspective. The institutional perspective focuses on the dynamic interaction between institution and organization, and how this interaction impacts on the actions of the organization (Peng, 2002). As discussed earlier, China's outward FDI is heavily influenced by its home institutional environment, and the firms' behaviours can be shaped both formally and informally by the government and its agents (Scott, 2002). The institutional perspective therefore offers a suitable theoretical lense in studying how the institutional environment shapes the responses of headquarters and subsidiaries in Chinese MNEs, and how the responses might influence the interaction between headquarters and subsidiary. According to the social exchange perspective, the headquarters-subsidary relationship can be conceptualized as a social exchange relationship among different business units (Ghoshal & Bartlett, 1990). This is highly relevant to the Chinese MNE context, as social exchange is widely used as a relationship-building mechanism in China, and these social exchange or interactions can impact on the quality of relationship (Cropanzano & Mitchell, 2005). Furthermore, the upper echelons perspective suggests that firm behaviour can be viewed as the outcome of the decision makers' (senior managers) cognitive process (Hambrick & Mason, 1984), so the explanation on firm behaviour is incomplete without an understanding of the mental make-up of the decision makers (Finkelstein, Hambrick, & Cannella, 2009). Therefore, it is also crucial to examine the influence of managerial cognition on the quality of the headquarters-subsidary relationship in this study. In addition to its theoretical significance, this study also has practical significance for future studies in this area of research. It offers a point of reference for researchers to further investigate other aspects of the quality of the headquarters-subsidary relationship, so

that future studies may seek explanations from alternative theories instead of the general theory of the headquarters-subsidary relationship.

### **1.3 Research Objective**

Although the pioneering study by Kostova (1998) proposed that the quality of the headquarters-subsidary relationship is a source of a firm's competitive advantage which can positively influence the performance of a subsidiary, it did not address the issue of the determinants of the quality of headquarters-subsidary relationship. Moreover, the study was conducted in the context of developed economy MNEs (i.e., US MNEs), which differs significantly from the context of emerging economies (EE) such as China in terms of their home country institutions, ownership advantages, and FDI motivations (Buckley et al., 2007). Therefore, the applicability of the findings from this research to EE MNEs is questionable. In this study, the guiding research questions are: what are the determinants of the quality of headquarters-subsidary relationship in Chinese MNEs, and more specifically, what are the determinants when viewed from different theoretical perspectives? This leads to the major research objective of this study, which is the investigation of the significant variables that influence the quality of the headquarters-subsidary relationship in Chinese MNEs. It consists of three specific research objectives:

- 1) To investigate the impacts of differences in institutional environments between host and home countries on the quality of the headquarters-subsidary relationship in Chinese MNEs. Further, to investigate how the impacts of differences in institutional environments between host and home countries on the quality of the headquarters-subsidary relationship in Chinese MNEs are contingent upon the levels of headquarters' practices institutionalized in subsidiaries.
- 2) To investigate the impacts of organizational and managerial exchanges between headquarters and subsidiary on the quality of the headquarters-subsidary relationship in Chinese MNEs. Further, to investigate how the impacts of organizational exchanges between headquarters and subsidiary on the quality of the headquarters-subsidary relationship in Chinese MNEs are contingent upon the Chinese parent ownership in the subsidiary and entry

mode of the subsidiary, and how the impacts of managerial exchanges between headquarters and subsidiary on the quality of headquarters-subsidiary relationship in Chinese MNEs are contingent upon the level of subsidiary manager's organizational identity with the subsidiary.

- 3) To investigate the impacts of subsidiary managers' global mindset and perceived differences between host and home countries on the quality of the headquarters-subsidiary relationship in Chinese MNEs. Further, to investigate how the impacts of subsidiary managers' global mindset on the quality of the headquarters-subsidiary relationship in Chinese MNEs are contingent upon subsidiary managers' personality flexibility and overseas study experience.

#### **1.4 Operational Definitions**

*Foreign direct investment (FDI).* Foreign direct investment is defined as an investment involving a long-term relationship, reflecting a lasting interest and control by a firm in an enterprise resident in a foreign country (UNCTAD, 2009).

*China.* In this study, China refers to the mainland of People's Republic of China, which excludes two special administration regions of Hong Kong and Macau for the purpose of this study. The Republic of China (Taiwan) is treated as a separate economy and regions with disputed sovereignty issues are also excluded from the definition of China in this study.

*Chinese firm.* A Chinese firm is defined as an enterprise that is located in mainland China, and it is exclusively owned by mainland China state or residents. A Chinese firm that engages in outward foreign direct investment is referred to as a Chinese FDI firm or Chinese MNEs.

*Headquarters.* The headquarters is the entity that controls assets of other entities in countries other than its home country, usually by owning a certain level of equity capital stake. An equity capital stake of equal or greater than ten percent of ordinary shares or voting power for an incorporated enterprise, or its equivalent for an

unincorporated enterprise is normally considered as the threshold for the control of assets (UNCTAD, 2009).

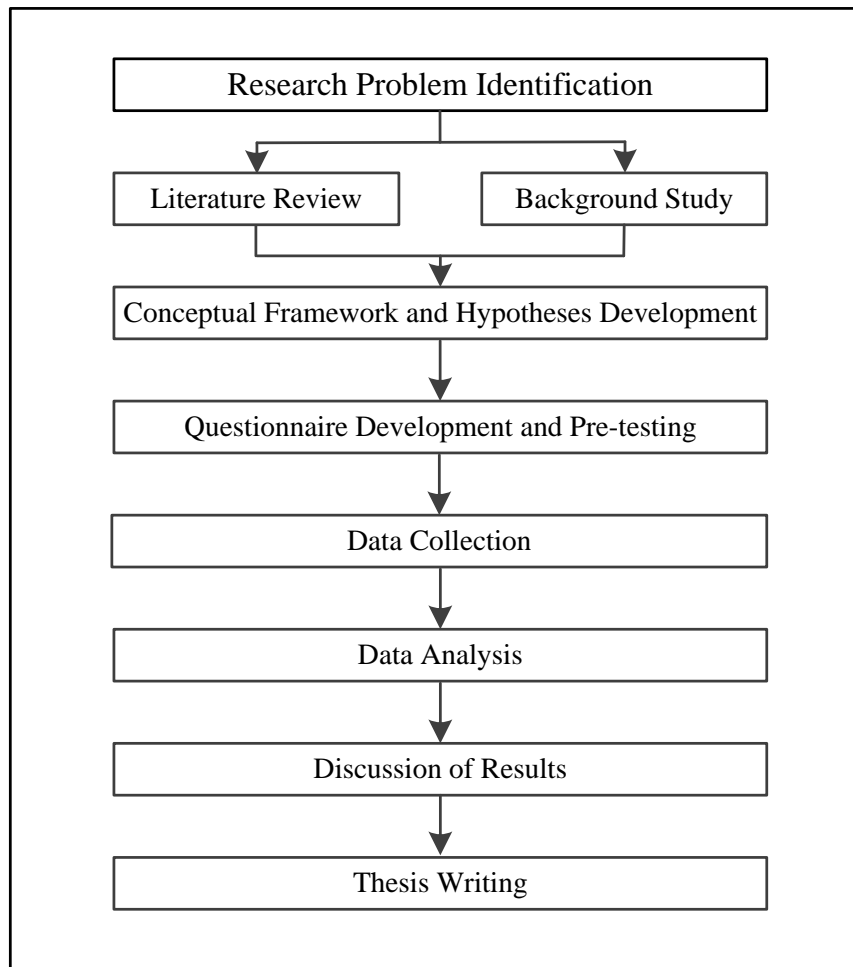
*Subsidiary.* For the purpose of this study, a subsidiary is an incorporated or unincorporated enterprise in which an investor, who is a resident in another country, owns a stake that permits a lasting interest in the management of that enterprise (an equity stake of ten percent for an incorporated enterprise, or its equivalent for an unincorporated enterprise) (UNCTAD, 2009).

*Quality of the headquarters-subsidiary relationship.* The quality of the headquarters-subsidiary relationship refers to the four aspects of the headquarters-subsidiary relationship, including level of communication effectiveness, level of commitment, level of mutual trust and level of satisfaction (Johnston & Menguc, 2007).

## **1.5 Research Process**

This study uses the quantitative research method, and it is scientifically designed and systematically conducted. Eight steps are carried out in this study, including (1) research problem identification, (2) background study and literature review, (3) establishment of conceptual framework and hypotheses development, (4) development of data collection instrument, (5) data collection, (6) data analysis, (7) result discussion and (8) thesis writing. These eight research steps are illustrated in Figure 1.1.

**Figure 1.1 Flowchart of Research Process**



The first step in this study is to identify the research problem, which includes the identification of the research problem significance and main research objective. This is then followed by a background study of China's outward foreign direct investment and an extensive literature review of theories and empirical studies that are related to the headquarters-subsidiary relationship. In the second step, secondary data are collected, including government policies and regulations, statistics, as well as corporate information. The first two steps of research do interact with each other since the research problem identification defines the scope of the literature review and background study, and the outcomes of the literature review and background study assist the researcher to fine-tune the details of the research problem and objectives. The results of the literature review and background study also lay the foundation for the establishment of the conceptual framework. In the third step, a conceptual framework is established on the basis of extant literature, and several

hypotheses are specified accordingly. Then a pair of questionnaires is developed in step four to collect management data for hypotheses testing. After the questionnaires are finalized and pre-tested, a survey is carried out based on a self-constructed sample frame, collecting primary information from senior executives in headquarters and overseas subsidiaries of Chinese multinational enterprises. The collected data are entered into the computer by statistical software and processed with various statistical analyses. The results of statistical analysis are then discussed in response to the research questions. Once the steps discussed above are completed, the final step is to write up the thesis.

## **1.6 Major Research Findings**

This study finds that factors related to managers' perceived differences in institutional environments, levels of social exchange and managerial cognition impacts on the quality of the headquarters-subsidiary relationship in Chinese MNEs, including levels of commitment, communication effectiveness, mutual trust and satisfaction. In particular, twelve variables are found to be significant in either directly or indirectly influencing the quality of the headquarters-subsidiary relationship in Chinese MNEs, which include three institutional theory-related variables, five social exchange-related variables and four managerial cognition-related variables.

From the institutional perspective, the quality of the headquarters-subsidiary relationship in Chinese MNEs are determined by managers' perceived regulative and cultural distance, and their influences on the quality of the headquarters-subsidiary relationship can be altered by the level of institutionalization of headquarters' practices in the subsidiary. When operating in regulatory distant host countries, Chinese MNEs headquarters and subsidiaries tend to work more closely with each other, since the regulative institutions are different from the ones in China. The headquarters and subsidiaries of Chinese MNEs need to commit extra resources and establish more effective communication to learn, as well as to follow the host country rules and regulations in order to achieve their regulatory legitimacy. Therefore, a higher quality relationship between headquarters and subsidiaries are achieved. In the culturally distant host countries, Chinese subsidiaries are subject to a



different set of norms, values and beliefs, and their legitimization process also requires learning and adapting to these informal institutions of their respective host countries. The legitimization process thus requires more collaboration between headquarters and subsidiary, which also enhances the quality of the headquarters-subsidary relationship. In addition, these influences of regulative and cultural distances can be strengthened by institutionalization of headquarters' practices in the subsidiary. As the institutionalization of headquarters' practices confer subsidiaries' internal legitimacy within the MNEs, it allows subsidiaries to implement different strategies in response to external institutional pressures from the host country rather than mere compliance. This can reduce the conflict between headquarters and subsidiary in regards to the institutional duality they face, and further enhance the quality of the headquarters-subsidary relationship.

From the social exchange perspective, higher levels of organizational and managerial exchange can positively influence the quality of the headquarters-subsidary relationship in Chinese MNEs. The higher levels of organizational and managerial exchange can foster a higher quality relationship between headquarters and subsidiary, as they tend to have a better ideological agreement and goal compatibility, as well as having less perceptual gaps between headquarters and subsidiary after having these exchanges. Furthermore, the impacts of these two levels of exchange on the quality of the headquarters-subsidary relationship can be altered by different factors. The influence of organizational exchange on the quality of the headquarters-subsidary relationship can be weakened when the subsidiary is wholly owned by the headquarters or the subsidiary is established by greenfield entry mode. For managerial exchange, a subsidiary manager who has a stronger organizational identity with the subsidiary can weaken the influence of managerial exchange on the quality of the headquarters-subsidary relationship.

From the upper echelons perspective, Chinese MNE subsidiary managers' global mindset and their perceived psychic distance have positive influences on the quality of the headquarters-subsidary relationship. Subsidiary managers' global mindset represents their information-processing capabilities, and perceived psychic distance represents their perceived uncertainty in the host country. Subsidiary managers with higher levels of information-processing capabilities and higher levels of perceived

uncertainty in the host country are more likely to be capable of handling complex situations and even conflicting demands, as well as implementing measures such as extensive research and planning, in order to make a better strategic decision. In particular, the development of subsidiary managers' global mindset, i.e., the development of their conceptualization and contextualization that are manifested in their knowledge and skills, are subject to their personality flexibility and their overseas study experience. The results reveal that the impact of subsidiary managers' global mindset on the quality of the headquarters-subsidary relationship can be weakened by their non-flexible personality, but strengthened by their overseas study experience.

### **1.7 Research Contribution and Implications**

This study investigates the determinants of quality of the headquarters-subsidary relationship in Chinese MNEs from three theoretical perspectives, including institutional perspective, social exchange perspective and upper echelons perspective. This study makes a unique contribution to the literature at both the theoretical and empirical levels, as it is the first study that develops a conceptual framework for the determinants of quality of the headquarters-subsidary relationship and it provides empirical tests on the framework. The findings reveal important factors that have significant direct or indirect impacts on the quality of the headquarters-subsidary relationship in Chinese MNEs, showing the similarities and differences between MNEs from developed economies and emerging economies such as China. These findings have significant implications for Chinese MNEs that are currently engaged in outward foreign direct investment, as well as for those that are planning to invest overseas, as the findings outline a frame of reference for decision makers to rationalize their decision making in order to achieve optimal results with available management resources.

In addition to its empirical contributions to the literature and its related managerial implications, this study also provides theoretical implications for future research. This study reviews a range of theoretical perspectives related to the headquarters-subsidary relationship. Through critical evaluation and comparative analysis, this study incorporates three complementary theoretical perspectives at three different

levels with each focusing on a different perspective that influences quality of the headquarters-subsidary relationship. The literature review systematically summarizes the existing theoretical perspectives related to the headquarters-subsidary relationship, and this study proposes an incorporation of three complementary theories into a conceptual framework. Such a conceptual framework can guide future research on the quality of the headquarters-subsidary relationship in emerging economies' MNEs.

### **1.8 Thesis Structure**

There are eight chapters in this Thesis. Chapter 1 introduces the research background, research significance, research objectives and process, research findings, contributions and implications, as well as the structure of this thesis. In Chapter 2, background information of China's OFDI is presented, which consists of its stages of development, related government policies and regulations, trend and patterns of development, and Chinese firms' motivation for conducting OFDI. Chapter 3 presents a thorough review of headquarters-subsidary relationship related literature, including theoretical perspectives and frameworks related to the topic of the headquarters-subsidary relationship, as well as relevant empirical studies. This is followed by the development of research questions for this research. Chapter 4 describes the construction of conceptual framework and hypotheses development. Research methodology is introduced in Chapter 5, including the population definition, sample frame, survey method and development of data collection instrument, survey process and data analysis method. Chapter 6 presents the key descriptive statistics of responding firms and respondents, followed by the main results of data analysis in Chapter 7. Conclusions on the research question, research contributions and implications, as well as limitations and future research directions are presented in Chapter 8.



## **CHAPTER 2 BACKGROUND OF CHINA'S OUTWARD FOREIGN DIRECT INVESTMENT**

### **2.1 Introduction**

In this chapter, the background information of China's outward foreign direct investment (OFDI) is presented. In Section 2.2, the evolution of China's OFDI is introduced. It divides China's OFDI into five stages based on the path of economic development in China and the official statistics. This is followed by the introduction on China's OFDI policies and regulations in Section 2.3. In Section 2.4, it discusses the general trend and specific patterns in China's OFDI development, including their geographic and industrial distributions. Prior studies on Chinese firms OFDI motivation are reviewed and reported in Sections 2.5. Section 2.6 ends this chapter with conclusive remarks.

### **2.2 Evolution Path of China's OFDI**

China's OFDI can be dated back to the late 1970s, with the launch of the 'open-door' policy, and the implementation of the 'four modernizations' reforms (Child, 1994; Warner, Hong, & Xu, 2004), which is mainly dominated by state-owned enterprises (SOEs). Since then, China's OFDI outflow has increased gradually in the 1980s and 1990s, and the range of participants have also expanded to non-SOEs. After entering into the World Trade Organization (WTO) in 2001, China has initiated a more aggressive internationalization approach named 'going-out' strategy and its OFDI outflow has experienced a sharp increase. Despite its general trend of growth and expansion, scholars have identified five stages in the evolution path of China's OFDI in response to the institutional environment changes in terms of government regulations and policies (Buckley et al., 2007) (see Table 2.1). The first stage (1979 - 1985) was the inaugural phase of China's 'open-door' policy and economic reform that coincide with China's 'four modernizations' reforms. These reforms aim to open and integrate China into the world economy. At this stage, China's OFDI was strictly controlled by government and lead by only a small number of SOEs. These SOEs were allowed to establish their trading representative offices as conduits for advancing trade relations with these host countries. These trading representative offices are the point of contact for liaison with their host country trading partners,

and they also collected host country's market and economic information. In the following stage of China's OFDI (1986 - 1991), government liberalized the restrictive policies and encouraged more firms, especially these that are not state-owned, to establish their foreign affiliates. At the same time, China's economic development was constrained due to the lack of resources, and Chinese firms were therefore encouraged to acquire extra resources, as well as to exploit their comparative advantage in the regional and global markets. Firms with sufficient capital, technical and operational know-how, and a suitable foreign joint venture partner were granted approval to invest overseas. As a result, the Chinese OFDI was undertaken on a larger scale. The third stage (1992 - 1998) was hallmarked by Chinese leader Deng Xiaoping's tour to south China and his call for a deeper and faster economic reform. At this stage, the Chinese sub-national level authorities actively engaged in promoting domestic firms' international business activities, which saw a big surge in the Chinese OFDI. However, this stage also suffered from the 1997 Asian financial crisis and the later collapses of some of the firms. In addition, the government tightened approval procedures with a higher level of risk assessment due to the concerns about loss of control over state assets, capital flight, as well as 'leakage' in foreign exchange reserves. This is evident in the fluctuations in the OFDI flows during this period. The fourth stage (1999 - 2001) commenced with the formation and implementation of 'going global' strategy. Government introduced policies and regulations to encourage OFDI in specific industries, especially for those in manufacturing industries. This leads to a significant increase in the manufacturing OFDI by small- and medium-sized firms. The last stage (since 2001) witnessed the period since China's accession to the World Trade Organization in late 2001. Since then, more and more Chinese firms are actively searching for overseas markets due to the increasing domestic market pressure. They began to organize their OFDI activities more systematically with long-term strategic perspective. Large firms even implemented their internationalization strategies with aggressive approaches, such as mergers and acquisitions (M&A) to address their competitive disadvantages.

**Table 2.1 Evolution Path of China's OFDI**

| Year        | Key Events   | OFDI Development   |
|-------------|--|--|
| 1979 - 1985 | Implementation of 'open-door' policy and economic reform under the 'four modernizations' reforms | Lead by a small number of SOEs   |
| 1986 - 1991 | Government encourages more firms to invest overseas with less restrictive policies               | Increased volume and more participation from non-SOEs  |
| 1992 - 1998 | Deng Xiaoping's tour to South China and domestic liberalization                                  | High speed growth with fluctuation due to the Asian financial crisis and tightening controls                 |
| 1999 - 2001 | Launch of 'go global' strategy in the 10th five-year plan to encourage more internationalization | Steady growth and increase in quality  |
| Since 2001  | China's entry into WTO with less centralized and more streamlined approval system                | Opening Chinese market to foreign competitors drives more Chinese firms to seek market and resource overseas |

*Source: Wu and Chen (2001), Warner et al. (2004), Buckley et al. (2007)*

### 2.3 China's Policies and Regulations on OFDI

As discussed in section 2.2, China's OFDI evolution path involves a series of policy and regulation liberalization since the implementation of 'open-door' policy in the late 1970s, as part of the overall economic reform in China. China's initial OFDI was directed by the government aiming to collaborate with foreign countries by building international trade relationships and increase the political and economic influences of China, rather than profit maximization (Wu & Chen, 2001). More recently, China's OFDI are driven by domestic firms that are actively seeking new markets for their products and services, as well as natural and strategic resources to address their competitive disadvantages (Buckley et al., 2007). However, the Chinese government is also concerned about the national security issues such as loss of state assets, capital flight and loss of its foreign exchange reserve. In order to minimize these risks, government policies generally favoured OFDIs in equipment, know-how and manufacturing materials, rather than the ones in capital assets. At the same time,

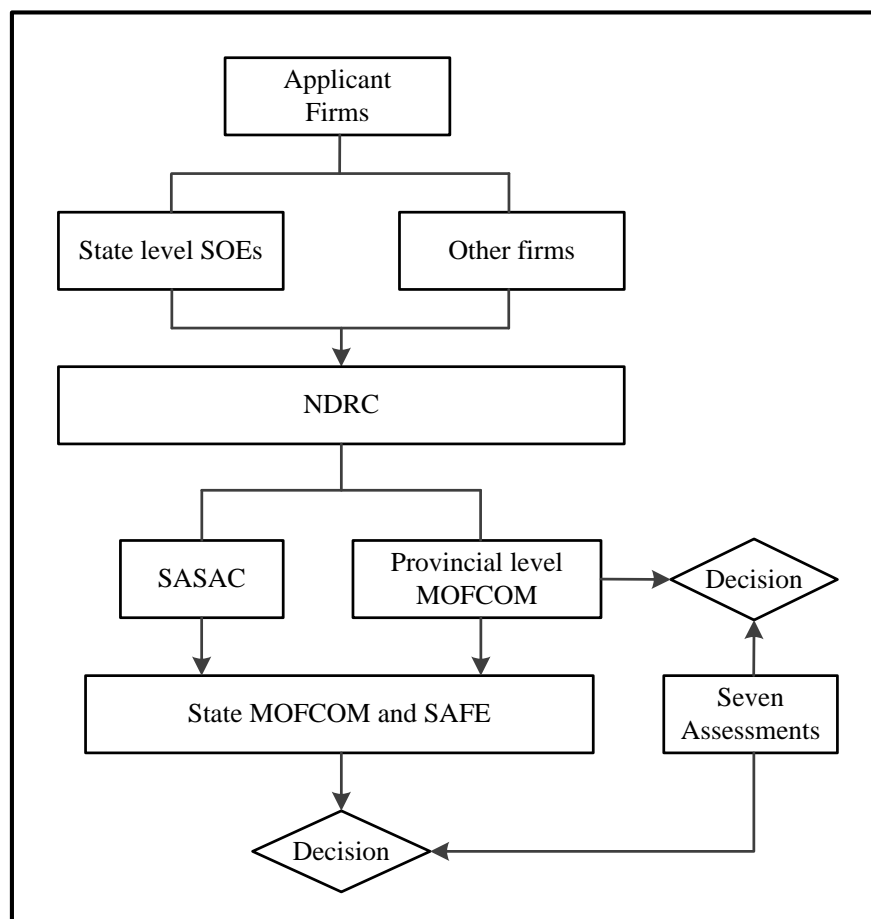
Chinese firms were encouraged to share their investments with their local partners and to raise funds from local or international financial markets, so that the capital export from China could be limited. Hence, the pace of liberalization in China's OFDI regime is slower in comparison to its inward FDI regime (Cai, 1999). However, the Chinese government has recently loosened restriction on the OFDI capital, due to the potential overheating in China's domestic investment in some industries, and the country has reached its secured level of foreign exchange reserve. Since the inaugural stage of China's OFDI, the government's role changed gradually from direct administrating to supporting and direction, such as providing host country investment environment information, domestic tax incentives and fiscal support.

In order to regularize OFDI of Chinese firms, the Chinese government has established an approval system with detailed procedures. This approval system was highly centralized prior 1983, and has been gradually decentralized after that. Chinese firms are divided into two categories, namely the SOEs that are under central government jurisdiction (state-level SOEs: *zhong yang qi ye*), and those other than state-level SOEs. Both categories of firms need to obtain approvals from multiple government bodies prior to their investment overseas. The current approval procedure is '*Approval Procedure of Establishing Overseas FDI Companies*' issued in 2009 by the Ministry of Commerce (MOFCOM). The MOFCOM at both state level and provincial level is the primary government authority in charge of the approval and administration of Chinese firms' OFDI. Before the application is lodged to MOFCOM, firms are required to submit their foreign investment proposal to the National Development and Reform Commission (NDRC). After the NDRC's review, normally within twenty working days, firms are granted approval to lodge their applications to the MOFCOM. For the state-level SOEs, they have to lodge their applications to state MOFCOM, and the approval decision will be made within fifteen working days. In addition, applications from state-level SOEs are also subject to the approval by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC). For firms other than state-level SOEs, their applications are normally processed by provincial MOFCOM after the approval granted by NDRC. Applications may be referred to state MOFCOM by the provincial MOFCOM for further approval due to specific reasons. According to the '*Regulations of OFDI Approval Procedure*' (MOFCOM document 2009-5), there are



seven assessment criteria for a proposed investment project, including: (1) investment environment of host country, (2) level of security in the host country, (3) political and economic relationship between host country (territory), (4) Chinese government's OFDI directing policy, (5) geographic distribution of China's OFDI in host country (territory), (6) related international regulations and agreements, and (7) protection of Chinese investing firms' benefit and legal right. After the MOFCOM's approval, the application needs to be further checked and approved by State Administration of Foreign Exchange (SAFE) for its source of investment capital, as SAFE is responsible for the registration and approval of the amount of foreign exchange required for the investment. The approval procedure is illustrated in Figure 2.1.

**Figure 2.1 China's OFDI Approval Procedure**



Source: Regulations of OFDI Approval Procedure (MOFCOM document 2009-5, <http://www.mofcom.gov.cn/aarticle/b/bf/200903/20090306103210.html>, <http://www.mofcom.gov.cn/article/difang/anhui/201302/20130200025071.shtml>) accessed in May 2014

Under the 'go global' strategy, the Chinese government is actively encouraging Chinese domestic firms to engage in outward investment with promotional measures in four areas, i.e., favourable financial and taxation policy, a risk-safeguard mechanism, an information service network and direction guidance of OFDI (Luo, Xue, & Han, 2010). A wide range of financial supports are offered to Chinese OFDI firms. Firstly, a single corporate tax system is used to avoid double taxation in China and foreign countries. China's export-import bank also supports OFDI by offering credit funds with low lending rates, fast approval procedures and flexible lending terms, as well as credit insurance. Furthermore, Chinese OFDI firms can get discounted loans from Chinese banks. Chinese government established risk-safeguard mechanisms to protect Chinese firms investing abroad at both macroeconomic and microeconomic levels. At the macroeconomic level, the Chinese government have signed mutual protection agreements with one hundred and fifteen countries to reduce the risk associated with OFDI. At the microeconomic level, personal accident insurance subsidies are provided to Chinese nationals work overseas. In addition, Chinese government established an information service network to assist Chinese firms to overcome obstacles in host countries. The 'Obstacle Report Rules on the Investment to Different Countries' is published by Chinese government reporting information collected from Chinese investing firms with the problems they face. Chinese firms can also learn more about their host country environment from the annually published 'Report on the Trade and Investment Environment in Different Countries'. Information banks and institutions such as 'China Council for International Investment Promotion' and 'China Research Centre for Foreign Direct Investment' are established to serve Chinese firms for their information needs. To complement the information service, the Chinese government also guide the direction of OFDI. Pamphlet such as 'Countries and Industries for Overseas Investment Guidance Catalogue' provides an assessment of overseas investment by Chinese investors and offers information on the preferential policies to investing firms.

Although the government has spent a great deal of effort in policy liberalization and assisting Chinese firms' OFDI activities, improvements are still required in many areas of the regime. In general, the support from the government policy is still insufficient and the effectiveness of the incentive structure is low (Cai, 1999; Wong

& Chan, 2003). For example, the approval procedure for investment project is complicated and time consuming, as it is examined by different government bodies at provincial and state levels. The incentive policies are lack of transparency and supporting services following the investment project approval is still largely inadequate.

## **2.4 Trends and Patterns of China's OFDI**

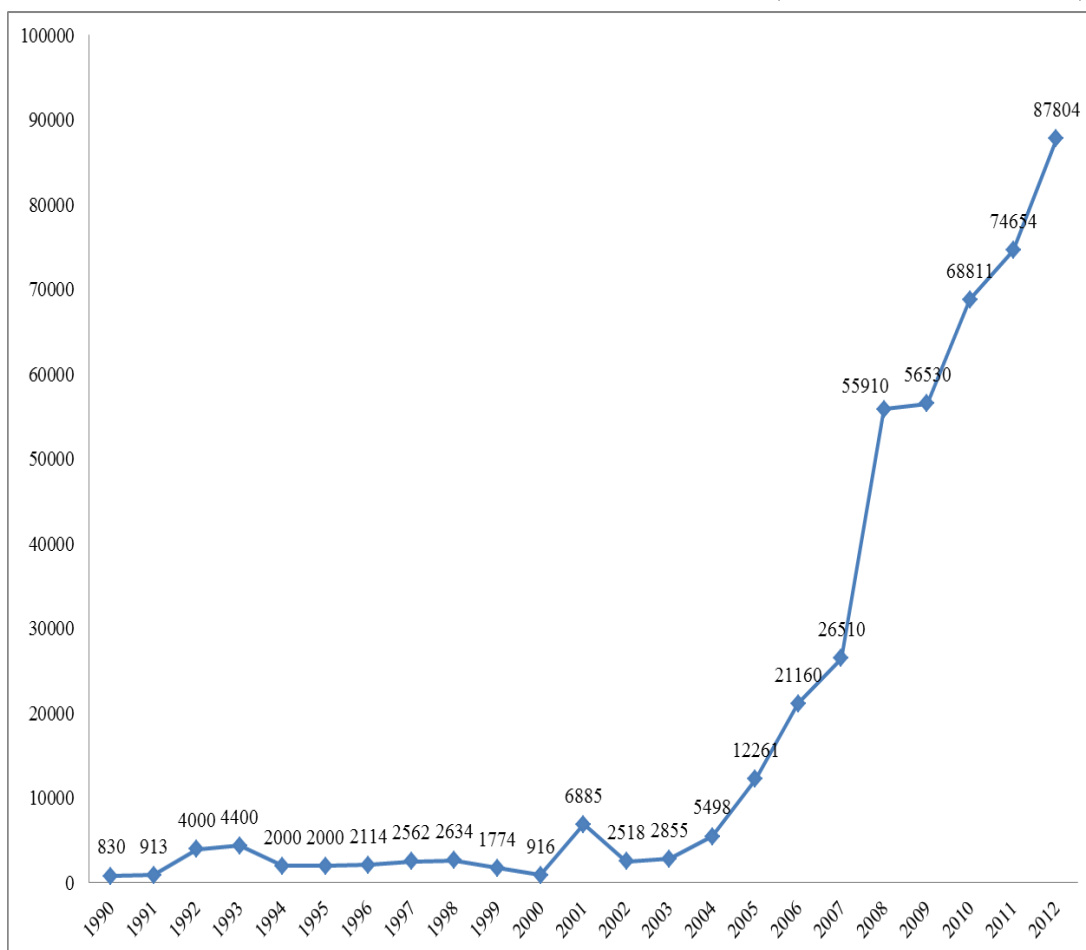
This section summarizes China's OFDI trends and patterns, including general trends of development in terms of annual OFDI flow and stock volume, geographic distribution in the number of projects and investment volume, as well as their industrial distribution. All the statistics are sourced from '2012 Statistical Bulletin of China's Outward Foreign Direct Investment' co-published by MOFCOM, National Bureau of Statistics (NBS), and SAFE in September 2013, and all monetary measures are in US dollars.

### **2.4.1 General Trends of Development**

Although China's OFDI history is relatively short in comparison to countries from developed economies, it has had a rapid and significant development since its inaugural stage in the late 1970s. Since its accession to the WTO in late 2001, China's OFDI flow has had continuous growth for more than ten years, and the annual growth rate of China's OFDI flow averaged 45% during the eleven year period from 2002 to 2012 (see Figure 2.2).

**Figure 2.2 China's OFDI Outflow 1990 – 2012**

(Unit: millions of US dollars)



Source: UNCTAD Online FDI Statistic Database (<http://stats.unctad.org/fdi>), accessed in May 2014

Despite the slow recovery of global economy in 2012, China's annual OFDI flow increased 17.6 percent to a historical high of 87.8 billion dollars, which comprises of 35.5 percent of new equity investment, 25.6 percent of reinvested earning, and 38.9 percent of intra-firm loans. It makes China the world's third largest investing country in terms of OFDI flow by the end of 2012, with the thirteenth largest OFDI stock in the world. China's OFDI stock volume has reached 531.94 billion dollars by the end of 2012, of which 77.95 percent was contributed by the OFDI from the post WTO period (2002-2012). The 2012 statistics shows that China's OFDI accounted for 6.3 percent of the world's OFDI flow and 2.3 percent of stock respectively (MOFCOM, 2013), suggesting that China is a prominent supplier of FDI and this trend is likely to continue in the future (Morck et al., 2008).

## **2.4.2 Geographic Distribution**

By the end of 2012, there are 22,000 foreign affiliates established by nearly 16,000 Chinese firms in 179 countries and territories around the world, which cover six continents including Asia, Europe, Latin America (Caribbean and South America), North America, Africa and Oceania (see Table 2.2). In general, a majority of Chinese firms' foreign investments flow to its home region in Asian countries and territories, which weighs 73.78 percent of China's total OFDI flow in 2012. This pattern is similar to other countries MNEs' investments that are home-region based and concentrated in its neighbouring economies (Rugman & Li, 2007). The top five OFDI destinations for Chinese firms in Asia are Hong Kong, Kazakhstan, Singapore, Indonesia and South Korea, and Hong Kong received the largest part of China's OFDI flow to Asia (79.1%). This can be explained by the similarities in culture, low transaction cost and familiarities with business conditions and practices between China and Hong Kong. Furthermore, there are strong ethnic ties between China and Hong Kong, which play an important role in stimulating China's OFDI to Hong Kong (Cai, 1999). In addition, the Chinese government's political and economic policies regarding to stability in Hong Kong also influence China's OFDI flow to Hong Kong, as many of the Chinese investments directed to Hong Kong are directly driven by government policies. China's investment in Asia is followed by its investments in Europe, Latin America and North America, accounted for 20.6 percent of China's total OFDI flow in 2012. Africa and Oceania received the least amount (2.87% and 2.75% respectively) of China's investment in 2012. Amongst the six continents, four continents experienced a decrease in Chinese OFDI flow in 2012, whereas Asia and North America received higher levels of investment outflow from China. In particular, China's investment in North America has increased by 96.9 percent, with a significant growth of 123.5 percent for OFDI flow to United States mainly in the service and manufacturing sectors. Latin America experienced the biggest drop in China's investment outflow (-48.3%), as a result of the sharp decrease of investment in the tax heavens (-72.5%), i.e., Cayman Islands and British Virgin Islands. This is followed by decreases in Oceania (-27.3%) and Africa (-20.6%), due to China's slowing demand for mining resources in Oceania and the fluctuation of market value in the finance sector in Africa (MOFCOM, 2013).

With regard to China's OFDI stock by 2012, Asia again leads the rest of the group for 364.41 billion, accounted for 68.5 percent of China's total OFDI stock, and 84.1 percent of the investment in Asia is received by Hong Kong. The second largest recipient of China's OFDI stock is Latin America with 68.21 billion. Together, Asia and Latin America received 81.3 percent of China's OFDI stock, but this only covered 40.2 percent of China's OFDI host countries (MOFCOM, 2013). This indicates that China's OFDI is heavily concentrated in a relatively small number of countries within Asia and Latin America, whereas the rest of China's OFDI is scattered in other continents with a lower level of flow to the host countries.

**Table 2.2 Geographic Distribution of China's FDI Outflow in 2012**

| Continent     | FDI Outflow (Million USD) | Percentage (%) | Variance (%) |
|---------------|---------------------------|----------------|--------------|
| Asia          | 64,785                    | 73.78          | 42.4         |
| Europe        | 7,035                     | 8.01           | -14.7        |
| Latin America | 6,170                     | 7.03           | -48.3        |
| North America | 4,882                     | 5.56           | 96.9         |
| Africa        | 2,517                     | 2.87           | -20.6        |
| Oceania       | 2,415                     | 2.75           | -27.3        |
| <b>Total</b>  | <b>87,804</b>             | <b>100.00</b>  |              |

Source: '2012 Statistical Bulletin of China's Outward Foreign Direct Investment' MOFCOM

The uneven distribution of China's OFDI is also reflected in Table 2.3, which shows the top twenty destinations of China's OFDI in 2012. Although China has investments in 179 countries around the world, the top twenty destinations accounted for more than 90 percent of its OFDI flow. More than half of China's OFDI flow is directed to Hong Kong (58.36%), followed by United States, Kazakhstan, United Kingdom, and British Virgin Islands. Amongst China's top twenty OFDI recipients, there are nine countries located in Asia, four from Europe and four from Latin America, two countries in North America and one in Oceania, which is generally consistent with the OFDI destination distribution by continent shown in Table 2.2.

**Table 2.3 Top 20 Destinations for China's FDI Outflow in 2012**

|    | Country and Region     | FDI Outflow (Million USD) | Percentage (%) |
|----|------------------------|---------------------------|----------------|
| 1  | Hong Kong              | 51,238                    | 58.36          |
| 2  | United States          | 4,048                     | 4.61           |
| 3  | Kazakhstan             | 2,996                     | 3.41           |
| 4  | United Kingdom         | 2,775                     | 3.16           |
| 5  | British Virgin Islands | 2,239                     | 2.55           |
| 6  | Australia              | 2,173                     | 2.47           |
| 7  | Venezuela              | 1,542                     | 1.76           |
| 8  | Singapore              | 1,519                     | 1.73           |
| 9  | Indonesia              | 1,361                     | 1.55           |
| 10 | Luxembourg             | 1,133                     | 1.29           |
| 11 | South Korea            | 942                       | 1.07           |
| 12 | Mongolia               | 904                       | 1.03           |
| 13 | Cayman Islands         | 827                       | 0.94           |
| 14 | Laos                   | 809                       | 0.92           |
| 15 | Germany                | 799                       | 0.91           |
| 16 | Canada                 | 795                       | 0.91           |
| 17 | Russia                 | 785                       | 0.89           |
| 18 | Myanmar                | 749                       | 0.85           |
| 19 | Argentina              | 743                       | 0.85           |
| 20 | Iran                   | 702                       | 0.80           |
|    | Total                  | 79,079                    | 90.07          |

*Source: '2012 Statistical Bulletin of China's Outward Foreign Direct Investment' MOFCOM*

### 2.4.3 Industrial Sector Distribution

Chinese firms are investing in a wide range of industries overseas, and investments in different industries vary significantly. As shown in Table 2.4, the top four industries, i.e., rental and commercial services, finance, mining, wholesale and retail account for 78 percent of the total OFDI stock. Amongst the non-financial industries that Chinese firms invested in, they can be categorized into three major sectors, namely the service sector, the resource-based sector, and the manufacturing sector.

**Table 2.4 Industrial Sector Distribution of China's FDI Stock by 2012**

| Industries   | FDI Volume<br>(Million USD) | Percentage (%) |
|--|-----------------------------|----------------|
| Rental and commercial services                             | 175,700                     | 33.03          |
| Finance  | 96,450                      | 18.13          |
| Mining   | 74,780                      | 14.06          |
| Wholesale and retail                                       | 68,210                      | 12.82          |
| Manufacturing  | 34,140                      | 6.42           |
| Transportation, storage and post                           | 29,230                      | 5.49           |
| Construction   | 12,860                      | 2.42           |
| Real estate  | 9,580                       | 1.80           |
| Production and supply of electricity, gas and water        | 8,990                       | 1.69           |
| Scientific research and technical service                  | 6,790                       | 1.28           |
| Agriculture, forestry, husbandry and fishing               | 4,960                       | 0.93           |
| Information transmission, software and information service | 4,820                       | 0.91           |
| Residential service and other service                      | 3,580                       | 0.67           |
| Culture, sports and entertainment                          | 790                         | 0.15           |
| Lodging and catering services                              | 760                         | 0.14           |
| Other industries   | 300                         | 0.06           |
| <b>Total</b>   | <b>531,940</b>              | <b>100.00</b>  |

*Source: '2012 Statistical Bulletin of China's Outward Foreign Direct Investment' MOFCOM*

### **2.4.3.1 Service Sector**

The service sector includes firms in the rental and commercial service industry, wholesale and retail industry, transportation, storage and post industry, information transmission, software and information service industry, residential service and other service industries. The total investment from the service sector accounted for 52.92 percent of China's OFDI stock by the end of 2012. Chinese investment in commercial service industry is commonly established in the form of investment holding companies, and is mainly located in low tax countries and territories such as Hong Kong, as well as tax havens such as the Cayman Islands and the British Virgin Islands. These investment holding companies are established to arrange and transfer parent firm assets for public listing in foreign markets, or to have reverse investment back to China as investment from foreign countries to take advantage of tax benefits and favourable policies set by the Chinese government. Core businesses in the commercial service industry are asset and investment management service, legal



service, consulting service, property right service, advertising service and other trade related services. Their major functions are market information collection, liaison with foreign trade agencies and customers, as well as vendor for goods from the home country. Investments in transportation, storage and postal service industry are mainly seen in the logistics industry and the material handling industry. These industries are the key to promote and facilitate the export of goods made in China to foreign markets. These industries normally requires significant amounts of capital to build the infrastructure and to purchase equipment and machinery, hence only a few large Chinese SOEs such as China Ocean Shipping (Group) Company and Sinotrans Changjiang National Shipping (Group) Corporation invest in this industry (MOFCOM, 2013).

#### **2.4.3.2 Resource Sector**

The resource sector which consists of mining, agriculture, forestry, husbandry and fishery, accounted for 14.99 percent of China's OFDI stock by 2012. Investments in these industries are small in number but large in scale, as such capital-intensive industries also involve a significant amount of financial resources input. Chinese firms investing in foreign resource sectors are predominantly state-owned resource-based companies or groups, with large scale operations and enormous amounts of financial resources. The mining investments are mainly located in Canada, United States, Russia, Australia and Southeast Asian countries, whereas agriculture, forestry, husbandry and fishery investments are directed to Southeast Asian countries, Russia and Australia (MOFCOM, 2013). China's investment in the resource sector has experienced continuous growth since the mid-1980s, which mirrors the increasing demand for energy and raw material for its domestic development, and the shortage of supply within China. In particular, China's investment in the mining industry has averaged annual growth of 42.2 percent since 2004, and accounted for 15.4 percent of China's total investment outflow in 2012 (MOFCOM, 2013). As a result of this rapid growth, acquisition of foreign energy and mining companies by Chinese firms is becoming a very common theme in the international market. The Chinese government is also playing a significant role in supporting and financing these investments in the resource sector. The majority of the investing firms in the resource sector are Chinese SOEs at state level in mining, forestry, petroleum and fishery

industries, whose major purpose is to safeguard the resource supply for China's domestic development.

### **2.4.3.3 Manufacturing Sector**

The manufacturing sector occupies only a small part of total stock volume in the early stage of Chinese OFDI. However, its volume has steadily increased, as more and more manufacturing firms are engaging in OFDI activities. For the past decade, it reaches an average annual growth of 29 percent, and represents 9.9 percent of the total outflow of Chinese investment in 2012. Compared to the other sectors, investments in manufacturing sector is large in number but small in scale, 25.7% of Chinese firms' foreign affiliates operate in the manufacturing sector (MOFCOM, 2013). Earlier investments in the manufacturing sector from Chinese firms are commonly seen in labour-intensive production industries, such as apparel, footwear, and home appliances where Chinese firms possess a competitive advantage. These industries often require relatively simple technologies and processes that produce low added-value products, which are mainly directed to China's neighbouring developing countries such as Vietnam. More recently, many large Chinese manufacturing firms with technology know-how such as computers (e.g., Lenovo), telecommunication equipment (e.g., Huawei), automobile (e.g., Geely) and pharmacy (e.g., Shanghai Pharma) are investing overseas, in both developing countries, as well as developed countries (Liu & Li, 2002).

## **2.5 Motivations of Chinese Firms' OFDI**

According to Dunning (2000), there are four motivations for developed economy firms to conduct OFDI, namely market seeking, resource seeking, efficiency seeking and strategic asset seeking. In a later study on OFDI from less developed countries and newly industrialized economies, Moon and Roehl (2001) identified market seeking, factor seeking, oligopolistic reaction, risk diversification, country of origin and product image are the main motivations of the non-conventional OFDI. However, Chinese firms' OFDI does not match exactly the motivations of the firms from developed economies and newly industrialized economies. For example, the Chinese firms are not motivated to seek better efficiencies abroad as they already have low cost labour in China (Buckley et al., 2007). Despite the rising labour cost in the

southeast part of China, Chinese firms can maintain their low cost advantage by relocating their manufacturing facilities to central and western provinces, where the labour costs are still low (Zhan, 1995). Oligopolistic reaction is not an essential motivation for Chinese firms either, since no Chinese MNE is holding an oligopolistic position in the global market. Hence, Chinese MNEs' OFDIs may be less motivated by ownership advantage exploitation, but driven by various domestic market imperfections. Scholars highlighted the following disadvantageous domestic conditions in China, including: regional protectionism, limited access to capital, underdeveloped intellectual property rights, lack of access to advanced technologies, lack of training and education for skilled human resources, poor infrastructure and fragmented regional markets by different levels of governments (Child & Rodrigues, 2005). In general, motivation of China's OFDI is multidimensional, and it is mainly driven by market seeking, resource seeking and strategic asset seeking purposes (Buckley et al., 2007).

### **2.5.1 Market-Seeking**

Host country market characteristics such as market size are key determinants of China's FDI outflows, since the Chinese domestic market is becoming saturated in some industries with limited demand. The issue of excess production capacity is commonly seen in industries such as textiles, apparels, footwear and home appliances (Deng, 2004). Under this circumstance, Chinese firms in these industries need to find larger markets and to exploit their ownership advantages outside the saturated domestic market. There are several ways for Chinese firms to expand and seek new markets. First, Chinese firms can establish a joint venture with their foreign partners in the host country, and act as a supplier of materials and other products to their foreign partners. In this case, Chinese investing firms can explore the host country market for their products. Second, through their foreign affiliates, Chinese MNEs can collect the latest market information and take actions to adapt to the international market demand. This market information can make Chinese MNEs to better match their products with global trends and customers' needs, which also leads to larger markets for their products. Third, Chinese MNEs can establish their affiliates in third countries that are not, or less, subjected to the target country's trade restrictions such as export quota, high tariff and protective policies. In so doing,

Chinese MNEs can effectively overcome the trade barriers, as well as increase their market size in the world.

### **2.5.2 Resource-Seeking**

Although China's large geographic area is well endowed with its own natural resources, its resource endowment per capita is very low, given it has the largest population in the world. As China's economy continues to grow, the Chinese government has directed FDI as a means to safeguard its domestic demand for energy and resources (Zhan, 1995). Therefore, Chinese FDIs in foreign resource sectors play an important role in meeting its domestic energy and resource demands, as well as maintaining its domestic development and economic growth. The major sectors that Chinese MNEs invested in are minerals, petroleum, timber, fisheries and agricultural products (Cai, 1999). The internationalization theory highlights the importance of equity control in the exploitation of scarce natural resources (Buckley et al., 2007), and this is evident in Chinese MNEs' investments in foreign energy and resource sectors, which is commonly through the purchase of foreign firms' stakes, i.e., acquisition. The acquisitions are normally undertaken by large state-owned corporations with the intention of securing the energy and resource supplies to China; notable examples include China International Trust and Investment Corporation's (CITIC) purchase of stakes in Australia-based Alumina, and acquisition of Canada-based PetroKaz by China National Petroleum Corporation (CNPC), as acquisition offers a fast route to gain access to these natural resources.

### **2.5.3 Strategic Asset-Seeking**

Acquisition of strategic assets, which include advanced proprietary technology, immobile strategic assets (i.e., brands, local distribution networks) and other capabilities abroad, have been the goal of Chinese state-directed OFDIs in recent years (Deng, 2003; Taylor, 2002; Warner et al., 2004; Zhang, 2003). Economies with significant levels of intellectual and human capital are targeted by Chinese firms to address their competitive disadvantages, as well as to strengthen their competitiveness elsewhere (Dunning, 2006). Large Chinese firms in technology-intensive industries such as aviation, space, electronics and engineering have actively engaged in investments in technological advanced countries to access state-of-the-art

technology, and later use such technology to upgrade their own manufacturing process and develop new products for the global market. Greenfield and acquisition are the major entry modes for Chinese firms to access advanced technologies. They either establish a greenfield joint venture with foreign firms that possess advanced technology, or purchase shares in those foreign firms that own advanced technology. Furthermore, Chinese firms can also purchase advanced equipment from foreign countries, and assimilate the parts or components from the advanced equipment into their domestically manufactured equipment. In addition, immobile strategic assets and other capabilities such as management know-how, research and development skills are acquired by the Chinese firms during their investment.

#### **2.5.4 Other Motivations**

Apart from the major FDI motivations discussed above, Chinese firms also invest abroad to develop foreign financing channels, to follow government policies for economic and political purposes, and to receive benefits that are related to foreign investor. Access to foreign financial resources is another major motivation for Chinese OFDI, as the domestic financing channels are very limited compared to their international competitors. China's government also has concerns over issues such as capital flow and its foreign exchange reserve, hence direct access to foreign capital markets is prohibited, and there are restrictions posted on Chinese firms' access to foreign exchange. These limitations drive Chinese firms to invest overseas, in particular Hong Kong, to gain access to foreign capital markets, as well as to overcome Chinese government's restrictions over foreign exchange to satisfy their financial needs. Governments' policies also play an important role in directing Chinese FDI to overseas markets, especially to China's Special Administration Regions (SAR) - Hong Kong and Macau. Chinese firms mainly invest in these two regions' infrastructure and essential service sector, such as transportation, housing, telecommunication, waste disposal and electricity supply. As part of the Chinese government's strategy, investments in these sectors serve the purpose of maintaining social and economic stability in these two regions before and after their changes of sovereignty in the late 1990s. The increasingly important roles played by Chinese investing firms in Hong Kong and Macau people's economic and daily life also build stronger ties between these two regions and mainland China. For some of the

Chinese firms, foreign investor related benefits are the main driver of their investment, and this is particularly evident in private small and medium sized enterprises. For example, countries like Australia and Canada grant permanent residency rights to individuals with significant amounts of investment, who will later be eligible for citizenship application. Investors with foreign permanent residency and citizenship will be able to enjoy a wide range of foreign social benefits such as legal protection, consular assistance, social security, and health services.

## **2.6 Summary**

This chapter draws information from statistics, government publications, literature and other sources, and reports background information on China's OFDI. Statistics and literature suggest that Chinese OFDI is at its early stage with its distinctive characteristics. Two of the major unique characteristics of Chinese OFDI are its latecomer characteristic and the role played by the Chinese government (Child & Rodrigues, 2005). As shown in the evolutionary path of China's OFDI, China is a latecomer in terms of its industrialization and internationalization. Chinese firms can borrow and learn existing technologies and knowledge for their own development, although this fast-lane approach can be constrained by capital availability and liquidity that enables firms to acquire corporate assets overseas (Warner et al., 2004). This latecomer characteristic of Chinese firms also leads to their diverse investment motivations, such as market seeking and strategic asset seeking, and their relatively small scale FDI projects. This may suggest that the late but fast growth and distinctive OFDI motivations, as well as the weak corporate governance in Chinese MNEs could shape Chinese managers' cognition in a different way (Morck et al., 2008), and they may not manage their headquarters-subsidiary relationship in a way that is similar to their developed economy counterparts. Hence, the managerial cognition may have influence on the quality of the headquarters-subsidiary relationship. Moreover, China's OFDI is also heavily influenced by the Chinese government, as it plays a key role in directing, supporting and monitoring China's OFDI overseas (Warner et al., 2004). This implies that the institutional environment in China is very different from other countries, and it has significant influences over the OFDI activities of Chinese MNEs. Therefore, it is important to take the institutional factors into consideration when studying the quality of the headquarters-

subsidiary relationship in Chinese MNEs. In addition, the heavy concentration of Chinese OFDI in the Asian region, especially in Hong Kong, reveals the role played by ethnic and personal ties in stimulating investment activities (Cai, 1999). This implies that it is also important to consider the specific features, such as relational factors when studying the quality of the headquarters-subsidiary relationship in Chinese MNEs.





## **CHAPTER 3 LITERATURE REVIEW AND RESEARCH QUESTIONS**

### **3.1 Introduction**

This chapter presents a literature review of theories and empirical studies related to this research. There are five areas of literature reviewed for this research. In Section 3.2, the importance of the headquarters-subsidiary relationship in relation to MNEs' internationalization is discussed. Section 3.3 introduces the construct of relationship quality in different contexts in social science. Section 3.4 reviews the theoretical perspectives related to headquarters-subsidiary relationship studies, followed by the empirical studies that adopt these theoretical perspectives. In total, thirty empirical studies on different issues of headquarters-subsidiary relationship are examined. The theories are then compared and analysed in Section 3.5. Patterns in empirical studies are summarised in Section 3.6. Based on the literature review, research questions of this study are presented in Section 3.7. This chapter ends with a summary of previous sections in Section 3.8.

### **3.2 Firms' Internationalization and the Headquarters-Subsidiary Relationship**

Firms' growth and development can be achieved through different ways either within the firm's home country or in foreign countries, for example vertical integration of value chain, expansion of product market, and diversification of product and business activities. The growth and development path that takes place outside the home country, which is known as internationalization of firms, has become an increasingly prominent global trend since the 1980s (Bell, 1996). During the process of firms' internationalization, it also makes the industries in which the firms compete become more globalized (Roth & Nigh, 1992). This globalized industry context means that the management of the linkages between different business units is becoming more critical for firms' international competitiveness (Porter, 1986).

The management of different business units, in particular the management of vertical relationship between headquarters and subsidiary is one of the most critical corporate strategic concerns (Porter, 1987). It is central to an understanding of the functioning of MNEs (Johnston & Menguc, 2007), as the MNEs can be viewed as an inter-

organizational network (Ghoshal & Bartlett, 1990), and subsidiaries are organized and managed through interdependent exchanges (Birkinshaw, Holm, Thilenius, & Arvidsson, 2000). The headquarters-subsidiary relationship can impact on the ways that the headquarters internalize its global activities within the organization, and the inter-organizational resource flows that help the subsidiary to alleviate the disadvantages it face as a foreign entity (Luo, 2003). Furthermore, when firms operate overseas, it is difficult for the headquarters to rely solely on formal control and coordination mechanisms to manage the subsidiaries due to the geographic distance, and the economic, political, and cultural differences between the home and host countries. Therefore, the headquarters will need to rely on less formal mechanisms such as high quality inter-unit relationships to a greater extent for more effective coordination and control (Kostova, 1998).

Given that management of the headquarters-subsidiary relationship is one of the corporate strategic issues, the study of the headquarters-subsidiary relationship, in a broader sense, is the study of corporate strategy under strategic management. Hence, the corporate strategy study philosophies should also apply to the study of the quality of the headquarters-subsidiary relationship. Currently, there are three philosophies in the strategic management literature, namely the situation-specific view, the universal view and the contingency view, which are also known as the three views of strategy (Ekeledo & Sivakumar, 1998). The situation-specific view holds that the firm's unique situation explains how the firm's strategy is formed (Uyterhoven, Ackerman, & Rosenblum, 1973), whereas the universal view claims that there is a universal law of strategy that can be applied to some degree in all situations (Hambrick & Lei, 1985). The contingency view lies somewhere between the situation-specific view and the universal view, and it assumes that there is no universal set of strategy that suits all organizations and situations (Ginsberg & Venkatraman, 1985), and the optimal strategy is the one that is formed based on the firm's organizational and environmental conditions (Harvey, 1982). In this research, the author adopts the contingency approach of corporate strategy, meaning that the headquarters-subsidiary relationship is not subject to a universal set of rules and conditions, but is under the influence of a group of endogenous and exogenous factors surrounding the headquarters and subsidiary, both in the home and host countries (Gates & Egelhoff, 1986; Ghoshal & Nohria, 1989; Ito & Rose, 1994; Luo, 2003; Roth & Nigh, 1992).

Based on the contingency view of strategy, the core objective of this research will be the exploration and investigation of the critical impacting factors of quality of the headquarters-subsidary relationship in the context of Chinese MNEs.

### **3.3 Context of Relationship Quality**

The concept of relationship quality or quality of relationship originates from the field of relationship marketing (Crosby, Evans, & Cowles, 1990; Dwyer, Schurr, & Oh, 1987), and has been studied in various contexts in social science; its definition varies in different contexts. In the business context, relationship quality is defined as the overall depth and climate in the inter-firm relationship (Johnson, 1999), and it is a multi-dimensional construct that consists of commitment (Dorsch, Swanson, & Kelley, 1998; Hennig - Thurau & Klee, 1997; Kumar, Scheer, & Steenkamp, 1995; Moorman, Zaltman, & Deshpande, 1992), communication effectiveness (Johnston, 2005; Johnston & Menguc, 2007), trust (Bejou, Wray, & Ingram, 1996; Dorsch et al., 1998; Dwyer & Oh, 1987; Kumar et al., 1995; Moorman et al., 1992), and satisfaction (Crosby et al., 1990; Dwyer & Oh, 1987). The construct of relationship quality with these four dimensions are the most commonly used across different contexts in social science at both the organizational and individual levels, including relationship marketing (Crosby et al., 1990), business-to-business (buyer-supplier) (Rauyruen & Miller, 2007; Ulaga & Eggert, 2006; Woo & Ennew, 2004), leader-member exchange (Pellegrini & Scandura, 2006; Schriesheim, Castro, & Coglisier, 1999) and headquarters-subsidary relationship (Kostova, 1998). The construct of relationship quality studied in different contexts are presented in the following sections.

#### **3.3.1 Relationship Marketing**

In the relationship marketing context, exchange between buyers and sellers are generally categorized into two groups, i.e., discrete and relational exchanges. The discrete exchange is the economic transaction between two parties that merely involves money and commodity characterized by limited amounts of communication and narrow contents, and the relational exchange is based on the discrete exchange but transpires over time (Macneil, 1980). The discrete and relational exchanges are different in situational and process characteristics, including timing of exchange,

number of parties, obligations, expectations for relations, primary personal relations, contractual solidarity, transferability, cooperation, planning, measurement and specificity, power, and division of benefits and burdens (Dwyer et al., 1987). The relational exchange is a long-term exchange relationship, which can contribute to competitive advantage by creating product differentiation and barriers to switching (Day & Wensley, 1983) and this high switching cost can lead to buyer's interest in maintaining a high quality relationship (Dwyer et al., 1987).

Furthermore, the literature suggests that buyers face uncertainties that could lead to potential service failure and negative outcomes (Crosby et al., 1990), therefore buyers are willing to make long-term commitments to reduce the costs and uncertainties of future transactions (Schlenker, Helm, & Tedeschi, 1973; Williamson, 1979). From the social bonding perspective, the sellers can reduce buyers' perceived uncertainty by demonstrating their integrity and satisfactory past performance, which could foster a quality relationship, or a high relationship quality between buyers and sellers (Roloff & Miller, 1987; Zeithaml, 1981). This indicates that the construct of relationship quality consists of at least two components, i.e., trust (Swan, Trawick, & Silva, 1985) and satisfaction (Crosby & Stephens, 1987) between buyers and sellers. Later studies on buyer-seller relationship find that their relationship quality is subject to a range of factors, such as sellers' customer orientation/empathy (Saxe & Weitz, 1982), selling orientation and salespersons' pressure (Churchill, Ford, Hartley, & Walker, 1985; Szymanski, 1988), sellers' expertise (Swan et al., 1985), sellers' ethics (Whalen, Pitts, & Wong, 1991), conflict (Brown, Lusch, & Smith, 1991), expectation of continuity (Ganesan, 1994), disengagement and commitment (Morgan & Hunt, 1994), buyer-seller interaction (Harris & Rosenthal, 1985), friendliness (Rinehart & Page, 1992), question asking/communication/time spend talking (Anderson & Weitz, 1989; Dwyer & Walker, 1981), disagreement (Jap, Manolis, & Weitz, 1999), and compliance (Galinat & Müller, 1988). The relationship marketing literature also outlined the impact of relationship quality. In general, the relationship quality between the buyers and sellers can have a positive influence on the outcomes, including the probability of their future exchanges, i.e., future sales opportunities (Crosby et al., 1990), customer retention (Hennig-Thurau & Klee, 1997), and customer loyalty (Shamdasani & Balakrishnan, 2000).

### **3.3.2 Business-to-Business**

Following the same vein, scholars extend the studies of quality of relationship to business-to-business (B2B) context at the organizational level (e.g., Moorman et al., 1992; Rauyruen & Miller, 2007; Ulaga & Eggert, 2006; Woo & Ennew, 2004). The relationship marketing principal is applied to the B2B context and scholars suggest that firms could compete successfully in the market through development of cooperative relationships with some key partners (Morgan & Hunt, 1994). Amongst these studies, although there is no consensus on the dimensions of relationship quality, there are overlaps regarding to the conceptualization of the construct, and the frequently emphasized quality of relationship dimensions are commitment, trust and satisfaction (Crosby et al., 1990; Dwyer & Oh, 1987; Kumar et al., 1995).

Similar to the relationship marketing literature, the B2B studies also demonstrate the positive organizational outcomes of high quality relationship. Based on a sample of 779 provider-user dyads, Moorman et al. (1992) posit that the perceived relationship quality between market research providers and users could enhance the utilization of market information, where trust and perceived quality of interaction plays the most significant role in market information utilization. Dorsch et al. (1998) empirically examined the extent to which firms use perceived relationship quality as a mechanism to differentiate their vendors in order to reduce the number of vendors and focus on the small group of vendors for long-term B2B relationship. The results suggest that the perceived quality of relationship has a positive impact on the vendor status, which could potentially influence vendors' performance. Boles, Johnson, and Barksdale (2000) followed the early study of Crosby et al. (1990) and applied the framework in the B2B selling environment. The variable of equity is included as the additional antecedent of relationship quality. The study results are generally consistent with the results from Crosby et al. (1990), but the quality of relationship only has significant positive relationship with anticipation of future transactions, whereas the impact on sales effectiveness is negative and insignificant. In a more recent study, Rauyruen and Miller (2007) investigated 306 Australian small and medium enterprises, and they found that all the four relationship quality dimensions have a positive influence on the customer loyalty, in particular the attitudinal loyalty.

However, the behavioural loyalty (purchase intentions) can only be influenced by satisfaction and perceived service quality.

### **3.3.3 Leader-Member Exchange**

Organizational behaviour researchers have also examined the construct of quality of relationship in the leader-member exchange (LMX) context at the individual and work group levels (e.g., Dunegan, Duchon, & Uhl-Bien, 1992; Goodwin, Bowler, & Whittington, 2009; Liden, Erdogan, Wayne, & Sparrowe, 2006; Maslyn & Uhl-Bien, 2001). Researchers studied the exchange relationship between leader and members via the lens of social exchange theory (Blau, 1964). Similar to the buyer and seller exchange in the relationship marketing context, the LMX also has two levels of exchange/relationship. The lower quality exchange between the leader and the member is the economical or contractual exchange that only involves what is specified in the employment contract, whereas the higher quality exchange is regarded as the social exchange, which goes beyond what is required in the employment agreement (Sparrowe & Liden, 1997). The low-quality relationship is characterized as an out-group exchange, where the members have less access to the supervisor, information and resources, which can have a negative impact on their job satisfaction, organizational commitment, and employee turnover (Gerstner & Day, 1997). In contrast, the high-quality relationship is considered as an in-group exchange, and there are high levels of trust, respect and loyalty between the leader and members (Goodwin et al., 2009), they also have more open and honest communication, greater access to resources, as well as more extra-role behaviours (Gerstner & Day, 1997).

Empirical evidences also suggest that the quality of LMX has a positive impact on the job-related outcomes, which is consistent with the studies in other contexts showing that relationship quality has a positive effect on outcomes. Settoon, Bennett, and Liden (1996) studied 254 employees from 28 work groups in southern U.S., and they found that the quality of LMX has a positive impact on their in-role behaviours and citizenship behaviours. Wang, Law, Hackett, Wang, and Chen (2005) tested the impact of quality of LMX in 162 leader-follower dyads in China, the results are also consistent with the previous studies that high quality LMX leads to a high level of

followers' organizational citizenship behaviours and task performance. In a more recent study of 185 full-time employees from Turkish firms, Pellegrini and Scandura (2006) found that the quality of LMX has a positive impact on delegation and job satisfaction.

### **3.3.4 Multinational Enterprises**

Drawing on organizational theory in the context of MNEs, Kostova (1998) proposed that the quality of inter-organizational relationship is an important factor of the organization's competitive advantage. It is argued that when operating across national borders, the MNEs will rely more on the informal mechanisms such as constructive and cooperative intra-organizational relationships, in particular, the headquarters-subsidary relationship. A high quality inter-unit relationship, which is characterized by both attitudinal and structural dimensions of relationship, will have a positive impact on the success transfer of best practices from headquarters to subsidiary, which gives the subsidiary a competitive advantage that can subsequently influence the recipient unit's performance (Kostova, 1998). Although this pioneering study examined the construct of quality of headquarters-subsidary relationship and its performance implications in the context of practice transfer between headquarters and subsidiaries, the impacting factors of the quality of the headquarters-subsidary relationship in MNEs remain largely unknown, and this research gap will be addressed by this study.

### **3.3.5 Summary of Relationship Quality Construct**

As discussed above, the construct of relationship quality is a multi-dimensional construct that consists of more than one variable. The empirical evidences demonstrate that the relationship quality in different contexts consists of different dimensions, and it has a positive impact on the performance outcomes, such as future sales opportunities (Crosby et al., 1990), customer retention (Hennig-Thurau & Klee, 1997), customer loyalty (Rauyruen & Miller, 2007; Shamdasani & Balakrishnan, 2000), workers in-role and citizenship behaviours (Settoon et al., 1996), and job satisfaction (Pellegrini & Scandura, 2006). Table 3.1 provides a summary for above discussed construct of relationship quality in different contexts.

**Table 3.1 Summary of Relationship Quality Construct**

| Contexts and Major References                | Dimensions  |
|--|---|
| <i>Relationship Marketing:</i>               |   |
| Crosby et al., (1990)                        | Trust and satisfaction                              |
| Jap et al., (1999)                           | Trust, conflict and expectation of continuity       |
| Shamdasani & Balakrishnan (2000)             | Trust and satisfaction                              |
| <i>Business-to-Business:</i>                 |   |
| Moorman et al., (1992)                       | Trust   |
| Dorsch et al., (1998)                        | Trust, satisfaction and commitment                  |
| Woo & Ennew (2004)                           | Cooperation, adaptation and atmosphere              |
| Ulaga & Eggert (2006)                        | Trust, satisfaction and commitment                  |
| Rauyruen & Miller (2007)                     | Trust, satisfaction, commitment and service quality |
| <i>Leader-Member Exchange:</i>               |   |
| Settoon, Bennett, & Liden (1996)             | Loyalty, respect, contribution and effect           |
| Wayne, Shore & Liden (1997)                  | Trust and commitment                                |
| Aryee & Chen (2006)                          | Mutual understanding and effective relationship     |
| Pellegrini & Scandura (2006)                 | Loyalty, trust, commitment                          |
| Wang, Law & Chen (2008)                      | Affect, loyalty, contribution and respect           |
| Goodwin et al., (2009)                       | Trust and commitment                                |
| <i>Headquarters-Subsidiary Relationship:</i> |   |
| Kostova (1998)                               | Commitment, identity, trust, autonomy and control   |

The above review provides a thorough scan and analysis of the construct of relationship quality in different contexts in social science, emphasizing their major arguments and performance outcomes. Although Kostova's (1998) pioneering work has indicated that the quality of the headquarters-subsidiary relationship is a source of competitive advantage, the determinants of the quality of headquarters-subsidiary relationship remains largely unexamined. In the context of MNEs, theoretical perspectives that explain headquarters-subsidiary relationship can provide insights to the study of determinants of quality of headquarters-subsidiary relationship. They also form the theoretical foundations for the investigation of the quality of the headquarters-subsidiary relationship. Therefore, a review of different theoretical perspectives in the studies of headquarters-subsidiary relationship is presented in the next section.



### **3.4 Theoretical Perspectives on the Headquarters-Subsidiary Relationship**

As one of the most critical aspects of the study of firms' internationalization (Johnston, 2005), the topic of headquarters-subsidiary relationship has attracted research attention from international business and management scholars over the past few decades. Given its complexity and multi-dimensionality, scholars have studied different dimensions under the topic of the headquarters-subsidiary relationship, for example headquarters control (Doz & Prahalad, 1984; Prahalad & Doz, 1981), subsidiary autonomy (Ginsberg & Venkatraman, 1985), which focus on the locus of control and how much decision-making autonomy a subsidiary may have (Nohria & Ghoshal, 1994). In addition, the transfer of knowledge between the headquarters and subsidiary has also been studied (Gupta & Govindarajan, 2000). Amongst these studies, scholars have examined the issues via different theoretical frameworks and perspectives, which are applied to different empirical settings. It is necessary to have an understanding of these theories that are relevant to headquarters-subsidiary relationship for the purpose of conceptual framework construction in this study. The review of these theoretical frameworks and perspectives is reported in this section. After the review of each theoretical framework, a review of the prior empirical studies based on each of the theoretical framework is presented, including their patterns in terms of research methodology and major findings.

#### **3.4.1 Efficiency Perspective**

The transaction cost theory focuses on efficiency, in particular the costs of transactions in the market (Doz & Prahalad, 1991; Williamson, 1981). The unit of analysis is a single transaction, which is defined as the transfer of a good or service across a technological separable interface (Williamson, 1975, 1981). The transaction cost includes the cost associated with activities such as planning, searching, negotiating, adapting, implementing and monitoring. The amount and degree of transaction cost is influenced by three characteristics of the transaction, namely asset specificity, uncertainty or complexity, and frequency (Hennart, 1988; Williamson, 1975, 1992). The transaction cost theory has been applied to three levels of analysis, including the overall structure of the firm, deciding whether activities should be performed within and outside of the firm, and how the human assets are organized (Williamson, 1981). It provides a departure point to analyse the choice between

institutional forms (Doz & Prahalad, 1991), including a set of normative rules for choosing among alternative governance arrangements (Rubin, 1993). It is also proven as a powerful tool in analysing the inter-organizational relationship, especially in the North American context, such as vertical integration (Stockey, 1983) and joint ventures (Hennart, 1982).

The transaction cost perspective has been applied to study the headquarters-subsidary relationship by Roth and Nigh (1992). Under the assumption that there is transactional advantage for the central control over the separate control within the MNEs (Caves, 1982), and interdependence between headquarters and subsidiary is the fundamentals to the existence of MNEs, they suggest that the transactional advantage exists for the control of international operations, and the headquarters and subsidiary relationship is built upon the existence of transactions. They hypothesize that the effectiveness of the headquarters-subsidary relationship, including the effectiveness and productivity of headquarters-subsidary relationship, is determined by the coordination and control processes (Baliga & Jaeger, 1984; Cray, 1984). Data collected from 150 foreign subsidiaries in the United States representing 14 home countries indicate that coordination of primary activities and personal integrating mechanisms have a positive impact on the effectiveness of headquarters-subsidary relationship, whereas the level of conflict between headquarters and subsidiaries can negatively influence their relationship effectiveness.

Although the transaction cost perspective offers insights in inter-organizational relationships, it suffers certain limitations. First, the transaction cost is difficult to measure across different contexts, and therefore its applicability may be undermined in certain circumstances. Second, the transaction cost theory has been criticized by scholars for its primary focus on single transaction as the unit of analysis and its simplified assumption of bounded rationality and opportunism (Ghoshal & Moran, 1996), which limits its applicability to other contexts, such as the inter-organizational relationship that emphasizes mutual trust and joint benefits in contrast to self-interest in countries such as Japan (Dore, 1983). Based on the limitations mentioned above, other theoretical frameworks have been developed to provide complementary explanations to the transaction cost perspective.

### **3.4.2 Principal-Agent Perspective**

The principal-agent perspective stems from the economic stream of organizational theory. This perspective is widely used by scholars to study the relationship between headquarters and subsidiary, and it mainly concerns the issue of headquarters' control over subsidiary (Nohria & Ghoshal, 1994), i.e., the decision-making autonomy that the subsidiary should have. According to the principal-agent perspective, the headquarters plays the role of principal, which delegates work to the subsidiary, as the subsidiary (agent) to perform that work (Eisenhardt, 1985). The principal-agent perspective mainly concerns the resolving of agency problems, which originates from two difference sources. The first source of the agency problem is that the principal cannot verify if the agent has behaved appropriately, due to the goal incongruence and high cost associated with the verification process. The second source of agency problem is the difference between the principal and agent in terms of their risk preferences, which leads to different actions (Eisenhardt, 1989). Agency theorists suggested three primary types of controls to solve the agency problem, namely cultural, behavioural, and output controls (Eisenhardt, 1989; Ouchi, 1981; Ouchi & Maguire, 1975).

The principal-agent perspective offers some empirical testable propositions, which are effective in explaining the degree of headquarters control and subsidiary autonomy (e.g., Chang & Taylor, 1999). The principal-agent perspective has been widely applied in the headquarters-subsidiary relationship study in the 1990s and 2000s (e.g., Hennart, 1991; O'Donnell, 2000; Roth & O'Donnell, 1996). It has been employed to predict the headquarters-subsidiary relationship in both developed economy MNEs and developing economy MNEs (e.g., Chang & Taylor, 1999; O'Donnell, 2000). Scholars have also made modifications to the principal-agent perspective, as it suffers from 'reductive fallacy of reducing complexity to simplicity' (Fisher, 1970, p. 172). Given the differences in subsidiary contexts, Nohria and Ghoshal (1994) take the local market environment complexity and level of local resource possessed by the subsidiary into consideration and propose that the headquarters' control over subsidiary can be achieved via different levels of control, as well as creating shared values and beliefs amongst managers in both headquarters and subsidiary. The headquarters' control is a combination of centralization and

formalization, where centralization refers to the extent to which headquarters exert its hierarchical authority over subsidiary decisions (Pugh, Hickson, Hinings, & Turner, 1968; Williamson, 1985), and formalization is the extent to which decisions are made in accordance to formalized rules, routines and procedures (Nelson & Winter, 1982; Pugh et al., 1968). This modified framework shows that the differentiated fit and shared values are both effective in managing headquarters-subsidiary relationships in MNEs. Data collected from 54 multinational enterprises suggest that firms using differentiated formal structure to fit the subsidiaries' local contexts, is an effective way to manage the headquarters-subsidiary relationship, which can also positively influence the MNE's performance as a whole. A high degree of shared values between headquarters and subsidiary is another approach to govern the headquarters-subsidiary relationship, which can enhance the MNEs' overall performance. O'Donnell (2000) further tested the effectiveness of principal-agent perspective in explaining the headquarters' control over subsidiary. Although the principal-agent perspective can be used as a basis for a model that predicts the use of monitoring mechanism and incentive compensation, it is insufficient for managing the subsidiary in the complex multinational enterprises. It will be more effective when intra-organizational interdependence is taken into consideration and social control mechanism such as vertical and lateral integration are used. Primary and secondary data from U.S. based multinational enterprises suggest that the principal-agent perspective can only provide limited explanation to the subsidiary control, and the intra-organizational interdependence have a greater predictability.

Using Nohria and Ghoshal's (1994) study as a benchmark, the principal-agent perspective is also used by Mudambi and Navarra (2004) as a framework to study how the subsidiary's bargaining power influences the distribution of firm resources within the MNE. They suggest that subsidiaries are viewed as the agents of the headquarters, and their acquired knowledge gives them strategic independence and intra-firm bargaining power that can be exploited by subsidiary managers to explore their own goals. Based on a sample of 275 high-tech MNE subsidiaries in the U.K., data analysis showed strong support for the hypothesized relationship. They found that when the levels of research intensity of the subsidiary and knowledge inflow into the subsidiary increase, the subsidiary will have a higher level of knowledge output. The subsidiary's knowledge output, which is the determinant of the subsidiary's

bargaining power within the MNEs, can influence subsidiary's bargaining power in different ways depending on the quantity of knowledge output and direction of the knowledge flow. The greater the total knowledge output from the subsidiary, and the greater knowledge outflow from the subsidiary to the rest of the MNE, the greater bargaining power the subsidiary will have. However, the bargaining power is weaker when the subsidiary's knowledge outflows to the host country locals. In addition, the duration of the subsidiary's operation and the level of process control exercised by the subsidiary can also positively influence its bargaining power. Björkman, Barner-Rasmussen, and Li (2004) studied the influences of headquarters control mechanisms on outward knowledge transfer from the focal subsidiary from the principal-agent perspective and the socialization perspective. Drawing on the principal-agent perspective, it is hypothesized that outcome based behaviour control mechanisms will effectively reduce the agency problems in the headquarters-subsidiary relationship within the MNEs, which can contribute to the increasing level of knowledge transfer from the focal subsidiary to the rest of the MNE. In addition, the socialization theory suggests that corporate socialization mechanisms can establish a set of shared values, objectives and beliefs across different units within the MNE, which can facilitate the knowledge transfer between the focal subsidiary and headquarters. Data collected from 134 western MNE subsidiaries located in Finland and China show strong support for the framework, so that the knowledge transfer from the focal subsidiary can be enhanced when the knowledge transfer is incorporated in the performance evaluation criteria of the subsidiary, and when the corporate socialization mechanisms are extensively used.

Although the principal-agent perspective has been an effective tool to understand the headquarters-subsidiary relationship, this theory still has certain limitations. First, the principal-agent perspective only focuses on the internal factors within MNEs, such as a firm's goals and interests; it does not offer explanations on how a firm's external factors could affect the headquarters-subsidiary relationship. Since a firm's survival and success are also subject to its legitimacy that is conferred by the institutional environment it confronts (Kostova & Zaheer, 1999), the external institutional forces can therefore play a significant role in shaping the reaction from the headquarters and subsidiary, which could have impact on the headquarters-subsidiary relationship. Second, the focus of agency problems is on the firm's self-interest and goal

incongruence (Eisenhardt, 1989), hence it may have less explanatory power on the headquarters-subsidary relationship where both sides have similar interests and goals, such as in the highly socialized or clan-oriented firms (Ouchi, 1979). Scholars further criticize that the principal-agent perspective implicitly assume the centrality of headquarters, which is less capable of explaining the headquarters-subsidary relationships in the diversified MNEs that consist of a web of networked relationships rather than simple one-to-one relationships (Doz & Prahalad, 1991). Given these limitations, later theories have been developed to offer explanations to complement the principal-agent perspective.

### **3.4.3 Resource Perspective**

#### **3.4.3.1 Resource-Based View**

The resource-based view has emerged as one of the key developments in the strategic management and international business research (Peng, 2001). The focus of the resource-based view is on the firm's resource endowment and deployment perspective (Barney, 1989, 1991; Wernerfelt, 1984). The resource-based view sets it apart from the previous theories by seeing a firm as a unique bundle of tangible and intangible resources rather than through its market activities (Barney, 1989; Dierickx & Cool, 1989). Scholars argue that the firm's market activities are decided by the resources it possesses, which is an inside-out view instead of an outside-in view (Sharma & Erramilli, 2004). The underlying strategic management premise for resource-based view is that the *raison d'etre* of the firm is the ongoing search for, and sustainability of, economic rents (Bowman, 1974; Mahoney, 1995). The concept of rent can be referred to returns accruing to hard-to-copy, firm-specific resources and capabilities (Castanias & Helfat, 1991; Peteraf, 1993; Rumelt, 1987). In order to form the basis of competitive advantage (source of rent), such resources and capabilities must be valuable, rare imperfectly imitable, and non-substitutable (Barney, 1991). The resource-based view has implications on the firm's strategy, as the firm's strategy is constrained by, and dependent on, the current level of resources (Collis, 1991). The resource-based view can contribute to research in four areas of a firm's strategy, namely the limits to diversified growth, motivation for growth, direction of growth and firm performance (Mahoney & Pandian, 1992). First, a firm's resources can limit the choice of market the firm may enter, and the level of

profits it may expect (Wernerfelt, 1989). The reasons for this limitation is that the firm's managerial resources are constrained at any point in time for both expansion and training purposes due to the lack of managerial capacities (Mahoney & Pandian, 1992), which is referred to as the 'Penrose effect' (Marris, 1963). The firm's growth motivation can be understood via the resource-based view, since the excess capacity can drive the diversification process (Caves, 1980). The unused productive service, together with changing knowledge of management, can create unique productive opportunities for each firm (Chandler, 1977, 1990; Teece, 1980), which induces diversification for growth. In addition to firms' growth, the resource-based view can also offer insights into the direction of the growth, as the nature of firms' available resources and the market opportunities shape the direction of firms' diversification (Mahoney & Pandian, 1992). Econometric studies have indicated that the firm-specific resources and relatedness of activities are important variables in the diversification process (e.g., Lemelin, 1982; Montgomery & Hariharan, 1991). The performance implications of the resource-based view suggest that expansions by firms into activities where they have comparative advantages are most likely to yield rents (Penrose, 1959). The resource-based view is helpful in explaining the absolute performance of related diversification to unrelated diversification, and it also shows the narrowly diversified firms receiving higher rents than the widely diversified firms (Wernerfelt & Montgomery, 1988). The resource-based view can complement the transaction cost theory by analysing the nature of market failure, because the firm heterogeneity that contributed to the firm's idiosyncratic physical, human and intangible resources is the outcome of market failure (Mahoney & Pandian, 1992).

#### **3.4.3.2 Resource-Dependence Theory**

The resource-dependence theory is rooted in the resource-based view, which suggests that the market activity of a firm is decided by the resources it possesses (Barney, 1991). The resource-dependence theory views the firm as a coalition that alters its structure and patterns of behaviour to acquire and maintain external resources. The acquisition of external resources can decrease a firm's dependence on others and/or increase others' dependence on it, which alters the firm's power relation with others (Pfeffer & Salancik, 1978; Ulrich & Barney, 1984). In the context of headquarters-subsidiary relationship, the resource-dependence theory

emphasizes that inter-organizational link between different units within the MNEs is critical for the firm to reduce their dependence on external resources and thus alleviate market threats (Luo, 2003). The higher level of subsidiary's utilization of internal resources from the headquarters the lower its resource dependence from external resources, hence lower economic risks and transaction costs can be expected (Kobrin, 1991). This higher level of dependence on headquarters from the subsidiary also implies improvements in the headquarters-subsidiary relationship (Luo, 2003). The resource-dependence theory also has implications on organizational power and control, as this is a function of dependence on resource suppliers (Jacobs, 1974). The difference between the principal-agent perspective and the resource perspective in explaining the headquarters-subsidiary relationship is that the former focuses on how the agency problem influences the headquarters-subsidiary relationship, whereas the latter focuses on how the resource-possession/dependence between headquarters and subsidiary alter the relationship between the two parties. With this difference in focus, the two perspectives investigate different factors that affect the headquarters-subsidiary relationship. The resource-dependency theory posits that higher levels of resource support and commitment, as well as intra-network information flow could improve the headquarters-subsidiary relationship (Luo, 2003). This improved relationship can further reduce the subsidiary's dependence on external resources such as natural resources, infrastructure resources, marketing resources, information resources (Rosenzweig & Singh, 1991).

From the resource-dependence perspective, Ghoshal and Nohria (1989) argued that the levels of environmental complexity and host country local resource can influence the structural elements of headquarters-subsidiary relationship, namely centralization, formalization and normative integration. They collected survey data from 66 MNEs in Europe and North America, and they yielded 618 cases of headquarters-subsidiary relationships. They found that the centralization is negatively associated with the levels of environmental complexity and host country local resource, whereas the formalization and normative integration are positively associated with the levels of environmental complexity and host country local resources. Based on the three structural elements, they further divided the headquarters-subsidiary relationship into four categories, i.e., clans, integrative, hierarchy and federative. Ito and Rose (1994) studied the factors that influence the headquarters-subsidiary relationship in Japanese



multinational enterprises. Their data consists of 257 firms from the manufacturing sector and 85 firms from the service sector. The exploratory empirical analysis indicated that the subsidiary's new experiences, parent size and subsidiary profitability are positively related to the headquarters-subsidiary relationship in terms of the level of parent's ownership in subsidiary. But the parent's profitability is positively related to the parent's ownership in subsidiary.

The resource-based view is also employed to explain the knowledge transfer between headquarters and subsidiary. Gupta and Govindarajan (2000) collected data from 374 subsidiaries of 75 MNEs headquartered in the U.S., Europe and Japan, and empirically tested how the knowledge transfer can be influenced by different factors. The findings indicate that the knowledge transfer from subsidiary to headquarters is positively influenced by the subsidiaries' size and the subsidiary's reliance on formal mechanisms to integrate with the rest of the MNE. On the other hand, the level of knowledge transfer from the headquarters to subsidiary will be positively influenced by the greater level of the subsidiary's reliance on formal mechanisms to integrate with the rest of the MNE. Also, the greater the level of vertical socialization of the subsidiary president, the more it is likely that the subsidiary's president's bonus is subsidiary-focused rather than network focused; and the lower the level of the host country's economic development relative to the home country, the lower the level of decentralized decision making autonomy in the subsidiary, and greenfield entry mode. Using the resource-based view from the bargaining power perspective, Yan and Gray (2001) investigated the determinants of parent control over subsidiaries. Based on a sample of 90 U.S.-China manufacturing joint ventures, they found that management control, which includes strategic control, operational control and structural control over the joint venture subsidiary, is a function of negotiation and level of critical resource contribution. The results also suggest that the level of operational control exercised by the partner over the joint venture has a positive effect on the extent to which the partner's strategic objectives are achieved. Luo (2003) studied the headquarters-subsidiary relationship via the lens of resource-dependence theory in a new empirical setting, i.e., the emerging economies. Specifically, the study examined how the headquarters-subsidiary relationship will influence performance of subsidiaries. The regression analysis of 196 multinational enterprises subsidiaries in mainland China suggests that headquarters-subsidiary

relationship in terms of parent's control flexibility, resource commitment, and local responsiveness have strong positive influences on the subsidiary performance. This positive link can be strengthened by industrial opportunity, but weakened by regulatory interference.

Based on the resource-dependence theory, Andersson, Forsgren, and Holm (2007) used cross-industrial data from 13 multinational enterprises with 97 subsidiaries in both Europe and North America, and examined the subsidiary's influence from a bargaining power perspective. The result of a structural equation modelling analysis of primary data showed that the embeddedness perspective that derived from the resource-dependency theory is a powerful tool that can effectively explain and predict the headquarters-subsidiary relationship in terms of the subsidiary's influence on the MNE headquarters' strategic decisions such as investment in research and development, and investment in new product lines. Johnston and Menguc (2007) also applied resource-dependence theory to study the link between the subsidiary size and the headquarters-subsidiary relationship in terms of subsidiary autonomy. The empirical evidence from 313 MNE subsidiaries in Australia reveals that there is an inverted U-shaped relationship instead of linear relationship between the subsidiary's size and autonomy. The subsidiary size is positively associated with the subsidiary autonomy until it reaches an inflection point, then the larger subsidiary size will negatively influence the subsidiary autonomy, due to the increasing coordination complexity as a result of greater inputs of managerial experience and expertise, as well as the growing interdependence between the subsidiary and the rest of the MNE. Chen, Park, and Newburry (2009) examined the parent control in the context of international joint ventures. Drawing on the resource-dependence theory, they argue that the usage of control over the international joint venture from the parent firms is influenced by their level of resource contributions. Data analysis of an international joint venture sample in China suggests that the property-based resource contribution is associated with output and process control, whereas the knowledge-based resource contribution is related to process and social control. These findings suggest that the resource-dependence theory is an effective tool in studying the issues of headquarters control.

Although the resource perspective offers new pathways for scholars to understand headquarters-subsidary relationship, it still suffers several limitations. First, the resource perspective mainly focuses on possession and dependence of resources on one side of the headquarters-subsidary relationship (i.e., either the headquarters or the subsidiary), hence the headquarters-subsidary relationship is likely to be viewed as a unidirectional relationship, even though in reality, the headquarters-subsidary relationship is dyadic (Ambos, Andersson, & Birkinshaw, 2010; Gencturk & Aulakh, 1995). Second, the resource perspective has been challenged by scholars that it overlooked other environmental factors such as psychical locations and social class (Palmer, 1983; Palmer, Jennings, & Zhou, 1993), as a firm's physical location and managerial social class can also affect the inter-organizational relationship. Third, the shift from managerial capitalism to investor capitalism (Useem, 1996) also reduced the discretion of organizations and increased the role of markets (Pfeffer & Salancik, 2003), which makes the assumption of management discretion in resource perspective less important and relevant (Davis & McAdam, 2000).

#### **3.4.4 Institutional Perspective**

The institutional theory has been identified as one of the emerging theoretical lenses in strategic management studies (Peng, Sun, Pinkham, & Chen, 2009). Different from the previously discussed transaction cost theory that focuses on the economic efficiency, principal-agent perspective that focuses on the agency problem, and the resource perspective that focuses on the resources possession and dependence, which deal with the internal factors within the firms, the institutional theory focuses on the institutional perspective. It studies not only the internal factors of the firms, but also their external factors, i.e., firms' internal and external institutional environments (Kostova & Roth, 2002).

According to the institutional theory, firms' survival and success depend on the legitimacy that is conferred by the institutional environments they confront (DiMaggio & Powell, 1983; Kostova & Zaheer, 1999). Hence, the primary focus for institutional theory is to attain legitimacy rather than to achieve efficiency or resource possession. The institutional perspective explanation of the headquarters-subsidary relationship in the MNE context is derived from the institutional theory,

which suggests that the interaction between the headquarters and subsidiary is under the influence of both host country and home country institutional environments (Kostova & Roth, 2002). The institutional theory has identified three pillars of institutional environment, including the regulative pillar that refers to the formal rules and regulations, the normative pillar that includes social norms and values, as well as the cognitive pillar that pertains to the established cognitive structure that is taken for granted (Scott, 1995; Yiu & Makino, 2002). The institutional theory has also explained the influence of sub-unit's internal legitimacy within an organization in addition to the legitimacy from the external institution (Westney, 1993). The internal legitimacy refers to the acceptance and approval of one sub-unit by the other sub-units in the organization, especially by the headquarters (Kostova & Zaheer, 1999). The internal legitimacy also has implications on the interaction between headquarters and subsidiary, as the subsidiary's internal legitimacy allows it to access the organizational resources from other parts of the organization including the headquarters (Pfeffer & Salancik, 1978).

Institutional theory is increasingly used in management studies to offer explanations from the institutional perspective. When applying institutional theory to MNEs, it highlights the unique institutional complexity that the MNEs face and it also provides good opportunities to further develop the theory itself. Kostova and Roth (2002) investigated adoption of headquarters practice in subsidiary from the institutional perspective. Two contexts were identified in the study, i.e., institutional profile of the host country and the relational context between the headquarters and subsidiary. It is argued that favourable host country institutional profile in regulative, normative and cognitive institutions and relational factors such as dependence, trust and subsidiary's identification with headquarters can positively influence the adoption of headquarters' practice in the subsidiary. Data from 534 managers and 3238 non-managerial employees in 104 subsidiaries from ten countries showed general support for the hypothesized relationship. Through the lens of institutional theory, Fenton-O'Creevy, Gooderham, and Nordhaug (2008) explored the determinants of subsidiary autonomy in the context of human resource management in Europe and Australia from the MNEs which originated from the United States. They looked into the subsidiaries' strategic context and institutional location effects, and they suggest that the subsidiary's autonomy is not only determined by the

relationship to the headquarters, but also by the nature of the subsidiary's local institutional environment. The data analysis based on a survey of 441 U.S. owned MNEs revealed that there is increased centralization of control on human resource management when the subsidiaries face global markets, in coordinated market economies and low union densities. Feinberg and Gupta (2009) studied MNEs' headquarters-subsidiary relationship in terms of the subsidiary's operational integration within the MNE's global trading network. They suggest that when operating in high risk host countries, the subsidiaries face institutional hazards, and the subsidiary's operational integration within the MNE's global trading network immunize the MNE against the institutional hazards without dilution of ownership. The subsidiary's integration also increases its assets specificity, assurance of demand for the subsidiary's products and services, subsidiary managers' socialization with headquarters managerial network and ability of headquarters executives to monitor events and actions within the subsidiary on an ongoing basis. The analysis on a large sample of subsidiaries demonstrates that subsidiaries increase their operational integration by having more within-firm sales when they face institutional hazard, and such operational integration will be weaker when the MNEs are more experienced with deploying political strategies.

The institutional theory so far has been applied to studies focusing on the transfer of practices between headquarters and subsidiary (Björkman, Fey, & Park, 2007; Ferner, Almond, & Colling, 2005; Kostova & Roth, 2002) and headquarters-subsidiary integration (Feinberg and Gupta, 2009). It is yet to be applied to the other dimensions of headquarters-subsidiary relationship. The contribution from the institutional perspective is that it offers insights on how the external and internal institutional environments influence the headquarters-subsidiary relationship. As the institutional environment in one country is different from another, for MNEs, the different institutional environments between host country and home country create difficulties for them to understand the legitimacy requirements and to attain legitimacy (Kostova & Zaheer, 1999). Furthermore, the different legitimacy requirements in host country and home country can also create difficulties for the subsidiary to attain the external legitimacy in the host country while maintaining its internal legitimacy within the MNE. In this case, the legitimation process could have an impact on the

headquarters-subsidary relationship, which offers an alternative explanation to the efficiency, principal-agent and resource perspectives.

### **3.4.5 Social Exchange Perspective**

In addition to the aforementioned perspectives, scholars have also studied the headquarters-subsidary relationship from the social exchange perspective via social exchange theory (e.g., Ghoshal & Bartlett, 1990; Hewett & Bearden, 2001). The social exchange theory posits that social exchange involves a series of interactions (Emerson, 1976), and these interactions can impact on the quality of relationship (Cropanzano & Mitchell, 2005). In the MNE context, Ghoshal and Bartlett (1990) conceptualize the MNE as a network of exchange relationships among different organizational units, and the relationship between headquarters and subsidiary is regarded as a dyadic exchange that involves a series of resource exchanges (Ghoshal & Nohria, 1989). The exchange relationship in MNE can be either dependence or interdependence (Ghoshal & Nohria, 1989), where dependence means that one party's outcome is based entirely on another party's effort, and interdependence means that both parties' outcomes are based on the combination of efforts from both sides (Cropanzano & Mitchell, 2005). Contingent on the levels of environmental complexity and local resources, Ghoshal and Nohria (1989) proposed four types of headquarters-subsidary relationship consisting of three structural elements, namely centralization, formalization and normative integration. Centralization refers to the governance mechanism that the decisions are made according to the hierarchy, in which the headquarters usually make the important decisions (Gates & Egelhoff, 1986). Formalization means that there is a routine for both decision-making and allocation of resources (Nelson & Winter, 1982). Normative integration refers to domain consensus and shared value (Van Maanen & Schein, 1979). When the subsidiary faces low levels of environmental complexity and local resources, the headquarters-subsidary relationship is proposed to be high in centralization and low in formalization and normative integration, which is labelled as a hierarchy (Williamson, 1975). When the level of environment complexity is low and local resource is high, the headquarters-subsidary relationship is low in centralization and normative integration, but high in formalization, which has a federative nature (Provan, 1983). The high level of environmental complexity and low level of local

resource makes the headquarters-subsidary relationship a clan-like network (Ouchi, 1980), which has moderate centralization, low formalization and high normative integration. The headquarters-subsidary relationship is labelled integrative (Kanter, 1983) when environmental complexity and local resources are high, which has a low level of centralization, moderate level of formalization and high level of normative integration. The exchange relationship between headquarters and subsidiary also involves behaviours such as acquiescence and cooperation, which could impact on the subsidiary's performance (Hewett & Bearden, 2001). The performance implication of the social exchange theory has also been validated in other empirical studies (e.g., Li, Zhou, & Shao, 2009; Peng & Luo, 2000). In summary, the social exchange theory sheds light on the dyadic relational perspective, which complements the aforementioned perspectives.

Social exchange theory has also been employed by researchers to study the headquarters-subsidary relationship. Andersson and Forsgren (1996) examined the headquarters' control over subsidiary from a social exchange perspective. They view the subsidiaries' social exchange with actors outside the organizational entity as their external embeddedness, and subsidiaries' social exchange with actors inside the organizational entity as their corporate embeddedness. They suggest that subsidiaries' external embeddedness can determine the extent to which the subsidiaries' behaviours are influenced by the external counterparts, and this external embeddedness consequently influence headquarters' desire to exercise control to integrate subsidiary into the overall corporate strategy. Data collected from 78 subsidiaries of major Swedish MNEs reveal that subsidiaries perceived headquarters control can be determined by their external embeddedness, so that headquarters' control over the subsidiaries will be weaker when the subsidiaries' external embeddedness is higher. On the other hand, when the subsidiaries' corporate embeddedness is high, i.e., the subsidiaries' social exchanges with other sub-units within the MNEs, subsidiaries perceive higher level of control from the headquarters. Tsai and Ghoshal (1998) extended the application of social exchange perspective and studied how the different dimensions of social capital impact on the product innovation within the company. Based on the social exchange perspective, it is argued that the social interactions can create and diffuse innovations in complex multi-unit organizations. Analysis of data from 15 business units within a MNE

suggests that the level of social interaction and exchange can positively influence the trust and trustworthiness between different business units, which can enhance the resource exchange and combination between business units, and consequently improve the firms' production innovation. Hewett and Bearden (2001) explored how the MNEs foster a good headquarters-subsiary relationship, and how such relationship enhances the performance of their marketing operations via the lens of social exchange theory. They suggest that the subsidiary's trust and dependence on the headquarters can positively influence the subsidiary's relational behaviour such as acquiescence and cooperation, which can later improve the market performance of the subsidiary. A sample of 406 subsidiaries from 133 U.S. based MNEs supported the hypothesized relationship and indicates that trust is positively associated with both acquiescence and cooperation, and cooperation can enhance the subsidiary's market performance. Drawing on the social exchange perspective, Noorderhaven and Harzing (2009) investigated the influence of social interaction on knowledge sharing between different subsidiaries within the MNEs. It suggests that the knowledge is socially constructed through collaborative efforts instead of physically passed from one to another, and the knowledge flow can only be possible when the different units within of the MNEs engage in social interaction. The data collected from 169 MNE subsidiaries confirmed that social interaction is positively associated with intra-MNE knowledge flows, and the positive association between social interaction and knowledge flow can be enhanced when the subsidiary's workflow integration is high.

### **3.4.6 Upper Echelons Perspective**

The upper echelons perspective suggests that firm's top executives play a pivotal role in shaping major organizational outcomes, such as strategic behaviour and organizational performance (Carpenter, Geletkanycz, & Sanders, 2004), as the organizational outcomes reflect the values and cognitions of powerful actors in the firm (Hambrick & Mason, 1984). This implies that the headquarters-subsiary relationship, as one of the organizational outcomes, is not only subject to country- and organizational-level influences, but is also affected by factors at the managerial level, such as managerial cognition. The linkage between managerial cognition and organizational outcome is also captured by the cognitive view of information-processing theory, which suggests that the organizations' information-processing can



be largely influenced by the organizations' members, as the organizations' information-processing capabilities are mainly represented by the cognitive capabilities of organizational members (Wood & Bandura, 1989). The information-processing theory developed by Egelhoff (1982, 1991) originates from the population ecology perspective that explains the reasons of existence for certain structural-contextual relationship (Hannan & Freeman, 1977), and it offers cognitive theoretical perspective for the understanding of the headquarters-subsidary relationship. According to Egelhoff (1982), since information is the resource processed and/or exchanged between the headquarters and subsidiary, the headquarters-subsidary relationship can be viewed as an information-processing relationship rather than a psychological or social relationship. The information-processing theory emphasizes the fit between organizations' information requirements and their capacity to process information to reduce uncertainty (Egelhoff, 1993), which is the difference between the amount of information required to perform the task and the amount of information already processed by the organization (Galbraith, 1973). Based on the level of uncertainty, Galbraith (1973) suggests five mechanisms in organizational design with different levels of information-processing capacity, namely the employment of rules and programs, hierarchical referrals, goal-setting, vertical information system and lateral relations, and these organizational designs can impact on the inter-organizational relationships. In the context of MNEs, the need for information can arise at different stages, including strategy formulation, translation of strategy into operational objectives, translation of operational objectives to tasks, and perform tasks. In addition, different levels of product and geographic diversification and different organizational structures in the MNE also require different levels of coordination between the headquarters and subsidiary, which could impact the headquarters-subsidary relationship, such as subsidiary's autonomy in its decision-making (Vachani, 1999). Although the information-processing between different subunits in MNE is a critical aspect of macro-organizational behaviour and performance, its empirical studies suffer difficulties in terms of measurement and operationalization of detailed information-processing between the sub-units (Egelhoff, 1982).

As the competitive landscape changes, there are calls for a shift of focus from structural and administrative mechanisms to managerial cognition and mindset

capabilities in management research (Levy, Beechler, Taylor, & Boyacigiller, 2007). Researchers show that managerial cognition including managers' perceived psychic distance and their global mindset can influence different aspects of headquarters-subsidary relationship, such as the knowledge transfer within the MNE (Williams & Lee, 2009), headquarters control (Luo, Shenkar, & Nyaw, 2001) and management of the interdependent and complex global network of MNEs (Kedia & Mukherji, 1999). Ghoshal, Korine, and Szulanski (1994) studied the inter-unit communication within the MNEs via the lens of information-processing theory, which indicates that how organizations deal with increasing level of complexity and uncertainty is a function of managing their information-processing needs and information-processing capacity (Galbraith, 1973). Evidences from Japanese and European MNEs suggest that both subsidiary-headquarters and inter-subsidary communication can be enhanced by the interpersonal relationships developed via lateral networking mechanisms. Drawing on the information-processing theory, Vachani (1999) investigated the influence of MNEs' global diversification on the subsidiary's autonomy. It suggests that the information-processing needs can be significantly influenced by the environmental and company characteristics at different stages of international operation, and subsidiary's autonomy can be affected by the matching process between the information-processing needs stem from global diversification and the information-processing capability of the firm. The findings based on a sample of 63 MNEs reveal that MNEs' diversification components have significant impact on the autonomy of the subsidiary, and it also shows that marketing and personnel decisions enjoy more autonomy compared to the research and development and finance decisions. Luo et al. (2001) examined the moderating effect of cultural distance on the link between parents' control and satisfaction with the international joint venture performance. Cultural distance between nations implies differences in managerial mindsets, which can negatively impact on the managers' ability to adapt the host country environment and business and networking practices (Shenkar, 1990). Hence the difference in managerial mindset can hinder the positive association between foreign parent control and satisfaction with international joint venture performance, but have little or no influence on the local parent's side. Based on data from 121 joint ventures in China, the results suggest that the link between foreign parents' control and their satisfaction with international joint venture performance will be weaker when perceived difference in managerial mindset increases.

### **3.4.7 Springboard Perspective**

Another explanation for the headquarters-subsidary relationship is offered by the springboard perspective. Luo and Tung (2007) use ‘springboard’ as the metaphor to describe the internationalization of emerging economies (EE) MNEs. It is an effective tool in studying the EE MNEs internationalization, especially for their entry modes as they are not path dependent or evolutionary in entry modes and host country location selection. It suggests that EE MNEs use internationalization to aggressively seek strategic resources and alleviate home country institutional and market constraints. This unique pattern is driven by push factors such as their late mover disadvantage, presence of global leading firms in their home markets, and domestic institutional constraint. Meanwhile, it can also attribute to pull factors such as home government incentives and higher levels of integration in terms of global economy and production (Luo & Tung, 2007). The springboard perspective incorporates the idea of institutional constraints on the EE MNEs, which not only has implications for EE MNEs’ entry strategies, it also has implications for post-entry organizational structures and relationship within the EE MNEs, such as autonomy delegation (Wang, Luo, Lu, Sun, & Maksimov, 2014). According to the springboard perspective, EE MNEs subsidiaries can reduce their negative social image by distancing themselves from the headquarters via a higher degree of autonomy delegation. It enables them to gain credibility and confidence in the host country, as well as inside the EE MNEs, which will encourage the headquarters’ resource commitment to the subsidiary (Bartlett & Ghoshal, 2000), and influence the headquarters-subsidary relationship. The springboard strategy highlights the impacts of EE MNEs’ strategy related factors on the headquarters-subsidary relationship, and it is complementary to the existing theoretical approaches.

### **3.4.8 Other Empirical Studies Using Multiple Theoretical Perspectives**

While most of the researchers have employed single theoretical perspectives in their headquarters-subsidary relationship studies, some researchers have explored the issue by applying multiple theoretical frameworks in their studies.

Drawing on the principal-agent perspective, the transaction cost theory and organizational theory, Gencturk and Aulakh (1995) studied the internal and external sources of uncertainty and how these sources of uncertainty influence the headquarters' control over subsidiary in terms of process control and output control. The findings based on hierarchical multiple regression analysis of 78 business units from 42 U.S. based firms supported that the types of control can be determined by both the internal and external sources of uncertainty. The process control can be determined by degrees of internationalization and perceived host market attractiveness, whereas the output control can be determined by unit size, degree of internationalization and perceived host market attractiveness. In addition, the output control can also positively influence the subsidiary's performance in terms of the degree to which headquarters managers were satisfied with the subsidiary's performance in the host country. Chang and Taylor (1999) used both principal-agent perspective and cultural frameworks to investigate the factors determining the headquarters-subsidiary relationship in terms of the degree and types of control used by U.S. and Japanese MNEs on their Korean subsidiaries. The results from 61 U.S. subsidiaries and 52 Japanese subsidiaries suggest that the higher the degree of ownership in the subsidiary, the higher the degree of output and staffing control will be exerted. In comparison to the U.S. subsidiaries, Japanese MNE headquarters exert a higher degree of staffing control. This reveals that both principal-agent perspective and cultural frameworks are effective tools in predicting the levels of control over subsidiary from the headquarters.

Birkinshaw et al. (2000) applied multiple theories including theories of perception, attribution theory, and procedural justice theory to examine the influence of managers' perception gaps on the headquarters-subsidiary relationship. Data collected from 89 headquarters-subsidiary dyads analysed by LISREL model reveal that subsidiary managers' overestimation of their role lead to greater control from headquarters over subsidiary, which is also associated with a lower level of cooperation between headquarters and subsidiary. Hewett, Roth, and Roth (2003) developed a framework based on the industrial organization theory and institutional theory to study the factors that influence the headquarters and subsidiary roles in their marketing activities, and how these roles will affect the subsidiary's performance in the foreign market. Both the industrial organization theory and the

institutional theory are complementary to each other as they both suggest that organizations adopt similar practice over time under the environmental pressure. The industrial organization theory focuses on the technical efficiency, whereas the institutional theory emphasizes the organizational legitimacy. A survey of 128 subsidiary managers representing 35 different country markets from U.S. based firms indicates that vertical dependence, market concentration and technological turbulence will be more positively related to the headquarters' role, and participation in goal setting for the product and market turbulence will be more positively related to the subsidiaries' role.

Ambos et al. (2010) studied the consequences of subsidiaries' initiative-taking within the MNEs. Through the lenses of resource dependence theory and self-determination theory, they argue that the basic goals of subsidiaries are to achieve autonomy from headquarters and influence over other units. In addition, the subsidiaries' initiative-taking can also attract headquarters' attention and monitoring, which may affect the two goals of subsidiaries. Data from 257 subsidiaries located in Australia, Canada and the United Kingdom shows that subsidiaries' influence over other units can only be increased when the subsidiaries get attention from the headquarters. The initiative-taking increases subsidiaries' autonomy, but it also attracts headquarters monitoring, which can subsequently reduce the subsidiaries' autonomy. Wang et al. (2014) examined the subsidiaries' autonomy delegation in the context of emerging economy MNEs by using the springboard perspective and institutional perspective, as they argue that current theory on subsidiary autonomy is inadequate to address the issues when the MNEs are inexperienced in the international market. The hypotheses were tested by using samples of 240 Chinese MNEs, and the results suggest that the autonomy delegation to subsidiary is higher when: the firms rely on foreign market as a springboard to seek strategic assets, headquarters top managers perceive high level of institutional constraints at home country, and firms do not depend on government assistance for their international expansion. These links can be further strengthened by greater inward FDI cooperation experience and using merger and acquisition entry modes.

### **3.5 Summary of Theoretical Perspectives on Headquarters-Subsidiary Relationship**

The review of theoretical perspectives on headquarters-subsidiary relationship in this chapter presents seven different theoretical perspectives, and each of them has a different focus on the relationship between headquarters and subsidiary, with different impacting factors. The efficiency perspective focuses on the efficiency of each transaction, measured by transaction cost. It offers limited explanation to the headquarters-subsidiary relationship, particularly for the issue of headquarters' control over subsidiary. Its application suffers from a number of limitations, mainly due to its pure focus on efficiency. It has been used as a tool to understand firms' behavioural issues, such as choice of institutional forms, but it has limited usefulness when addressing managerial or relational issues, where mutual trust and joint benefits are involved. The principal-agent perspective stems from efficiency perspective, and its main focus is on the agency problem that lies in firms' self-interest and goal incongruence. Therefore, it has less explanatory power when it is applied to the context where both headquarters and subsidiary have similar interests and goals. Moreover, the principal-agent perspective mainly focuses on organizations' internal factors, while overlooking the external factors, such as culture and organizations' external institutional environment. This further limits the applicability of principal-agent perspective in headquarters-subsidiary relationship studies. The resource perspective focuses on the possession of resources, and it emphasizes that the power belongs to the party who has control over resources, rather than its hierarchical position. However, this emphasis on the possession of resources has its limitations. Since the focus of resource possession is usually on one side of the relationship, the headquarters-subsidiary relationship may be viewed as an unidirectional relationship, and it may not fully reflect the dyadic nature of the headquarters-subsidiary relationship. The springboard perspective, which describes the EE MNEs using internationalization as a springboard, explains how the springboard intent of EE MNEs direct their behaviours. Although it offers a new theoretical angle to study the headquarters-subsidiary relationship, especially in the context of EE MNEs, it still has certain limitations. Similar to the resource perspective, the springboard perspective is more focused on the headquarters' side of the relationship, because the springboard intent in the EE MNEs originated from the

headquarters rather than the subsidiary. Therefore, the springboard perspective may only focus on one side of the headquarters-subsidiary relationship, instead of focusing on both sides. The four theoretical perspectives discussed above offer different angles when studying the headquarters-subsidiary relationship, and although they have been applied to examine the behavioural issues such as the locus of control and subsidiary decision-making autonomy, they offered limited explanatory power to the relational issues such as the quality of the headquarters-subsidiary relationship. Furthermore, these four theoretical perspectives mainly examine internal impacting factors at the organizational level, while overlooking the impacting factors both inside and outside of the organization at different levels, including the managerial level and country/institutional level.

As the headquarters-subsidiary relationship is under the influences of a group of endogenous and exogenous factors surrounding the headquarters and subsidiary both in the home and host countries, it requires a group of theories instead of one single theory to provide a better understanding of this issue. Three theoretical perspectives are identified to provide a better explanation on the headquarters-subsidiary relationship, i.e., the institutional perspective, social exchange perspective, and upper echelons perspective. These theoretical perspectives not only consider endogenous and exogenous factors, they also examine factors at different levels. The institutional perspective is regarded as one of the most useful theoretical perspectives when studying business strategies in EE MNEs (Wright, Filatotchev, Hoskisson, & Peng, 2005). The institutional perspective focuses on the organizations' legitimacy rather than efficiency or resource possession, and it suggests that organizations' survival and success depends on the legitimacy that is conferred by the institutional environments they confront (DiMaggio & Powell, 1983; Kostova & Zaheer, 1999), including both external and internal institutions at country and organizational levels. Therefore, under the institutional perspective, the headquarters-subsidiary relationship can be influenced by their pursuit of organizational legitimacy, which includes legitimacy from both external and internal institutions at country and organizational levels. Furthermore, since the MNE can be conceptualized as a network of exchange relationships amongst different organizational units (Ghoshal & Bartlett, 1990), the social exchange perspective is also considered to be a suitable theoretical lens to study the headquarters-subsidiary relationship. It complements the

prior theories by offering an explanation from the social exchange perspective, so that the level of interaction between headquarters-subsidary is contingent upon their relational behaviour, such as exchanges at organizational and managerial levels. In addition, the upper echelons perspective offers a new theoretical lens to understand the headquarters-subsidary relationship at the managerial level, indicating that the organizational outcome reflects the idiosyncracies of the decision makers (Hambrick & Mason, 1984). The upper echelons perspective is captured by the cognitive view of information-processing theory, which suggests managerial cognition can play an important role in the organization's information-processing, because organizations' information-processing capacities are mainly represented by the cognitive capabilities of organizational members (Wood & Bandura, 1989). The information-processing theory views the headquarters-subsidary relationship as an information-processing relationship instead of psychical or social relationship, as information is the resource processed and/or exchanged between the headquarters and subsidiary (Egelhoff, 1982). Hence, it provides another analytical framework that explains the influence of managerial cognition on the headquarters-subsidary relationship. In summary, the institutional perspective, social exchange perspective and upper echelons perspective can provide multiple theoretical angles and implications in studying headquarters-subsidary relationship at different levels, and they will be included in the conceptual framework of this study. A summary of aforementioned theories, with their major variables and references are presented in Table 3.2.



**Table 3.2 Summary of Headquarters-Subsidiary Relationship Theoretical Perspectives**

| Theories and Major References       | Major Variables  |
|-------------------------------------|--|
| <i>Efficiency Perspective:</i>      |  |
| Roth & Nigh (1992)                  | Coordination, bureaucratic and personal integrating mechanisms                                     |
| <i>Principal-Agent Perspective:</i> |  |
| Eisenhardt (1985)                   | Task characteristics, information system, uncertainty  |
| Nohria & Ghoshal (1994)             | Differentiated fit, shared value   |
| O'Donnell (2000)                    | Lateral centralization, outcome measurability, autonomy, interdependence                           |
| Björkman et al., (2004)             | Performance evaluation criteria, subsidiary management compensation, number of expatriate managers |
| <i>Resource Perspective:</i>        |  |
| Andersson & Forsgren (1996)         | Subsidiary embeddedness (external/corporate)   |
| Luo (2003)                          | Resource commitment, information flow  |
| Chen et al., (2012)                 | Resource availability, access to resource  |
| <i>Institutional Perspective:</i>   |  |
| Kostova & Roth (2002)               | Host country institutional profile   |
| Björkman et al., (2007)             | Host country effects   |
| Lawler et al., (2011)               | Restrictiveness of host country legislation  |
| <i>Social Exchange Perspective:</i> |  |
| Ghoshal & Bartlett (1990)           | Environmental complexity, local resources  |
| Hewett & Bearden (2001)             | Perceived dependence, trust  |
| <i>Upper Echelons Perspective:</i>  |  |
| Egelhoff (1991)                     | Managerial cognition   |
| <i>Springboard Perspective:</i>     |  |
| Wang et al., (2014)                 | Springboard intent   |

### 3.6 Patterns in Empirical Studies

A total of twenty-nine empirical studies on headquarters-subsidiary relationship were reviewed in this section. The review process has revealed some patterns of the empirical studies in terms of the methodology and major findings.

The resource-dependence framework is the analytic framework that is most frequently employed by scholars in the empirical studies. Seven studies have directly employed this framework (Andersson et al., 2007; Ghoshal & Nohria, 1989; Gupta & Govindarajan, 1991; Ito & Rose, 1994; Johnston & Menguc, 2007; Luo, 2003; Yan & Gray, 2001), and another study has applied the resource-dependence framework together with self-determinacy theory (Ambos et al., 2010). The principal-agent perspective is the second most popular framework that appeared in four studies (Björkman et al., 2004; Mudambi & Navarra, 2004; Nohria & Ghoshal, 1994; O'Donnell, 2000), and appeared in studies with other theories such as transaction theory and organizational theory (Gencturk & Aulakh, 1995), as well as with cultural frameworks (Chang & Taylor, 1999). The social exchange theory is also directly adopted by four studies (Andersson & Forsgren, 1996; Hewett & Bearden, 2001; Noorderhaven & Harzing, 2009; Tsai & Ghoshal, 1998), followed by institutional theory (Feinberg & Gupta, 2009; Fenton-O'Creevy et al., 2008; Hewett et al., 2003; Kostova & Roth, 2002; Wang et al., 2014) and information-processing theory (Ghoshal et al., 1994; Luo et al., 2001; Vachani, 1999), which are increasingly regarded as the new theoretical lenses to study the headquarters-subsidiary relationships. The springboard perspective is adopted by one recent study in conjunction with institutional theory (Wang et al., 2014).

The home and host countries of the MNEs studied in the prior empirical studies also show an unequal distribution between the developed and developing economies. Only four out of the twenty-nine studies have included MNEs from developing economies, one study did not specify the sample firms' home country, and the remaining twenty-four studies are based on the developed economies MNEs. In terms of the host countries, five studies did not specify the sample firms' host country, twenty studies have included subsidiaries located in developed economies, and fourteen studies collected data from subsidiaries located in developing economies.

Amongst the reviewed empirical studies, the data source and data collection methods are generally consistent. A majority of the studies used primary data for their data analysis, twenty-two out of the twenty-nine studies conducted surveys to collect their primary data. Two studies collected their primary data via face-to-face interview.

Another two studies used a mixed source of data for their data analysis, which collected primary data via survey and later complemented by secondary data. The remaining three studies carried out their data analysis purely based on the secondary data source, i.e., established database. The survey response rate varied from eight percent to fifty percent. The number of usable observations for data analysis ranged from sixty-three to over five hundred. Since the data collection via survey has a resource consuming nature, the number of usable observations is usually less than the ones from archival data. In general, a total number of usable responses of one hundred or higher was regarded as adequate in the studies using the survey data collection method.

Table 3.3 reports the different aspects examined in the empirical studies. According to Table 3.3, the three most examined aspects of the headquarters-subsidary relationship are headquarters control (fourteen studies), subsidiary autonomy (five studies), and inter-unit knowledge transfer (four studies). Other aspects of headquarters-subsidary relationship are also examined in empirical studies, including inter-unit communication and resource transfer, quality of inter-unit relationship, subsidiary behaviour, practice adoption in subsidiary, roles of headquarters and subsidiary, as well as subsidiary integration. Amongst the empirical studies, Kostova (1998) pioneered quality of headquarters-subsidary relationship research, and suggests that the quality of inter-unit relationship in MNEs is a source of firms' competitive advantage. The study based on 104 dyadic headquarters-subsidary relationships in U.S. MNEs reveals that the quality of inter-unit (headquarters-subsidary) relationship has a positive impact on firms' competitive advantage, which improves the subsidiary's performance. Given the importance of the quality of the headquarters-subsidary relationship, no study has examined the important factors that impact on the quality of the headquarters-subsidary relationship, and this indicates a significant literature gap. Table 3.4 reports the influence of the independent variables examined in the empirical studies. Synonymous independent variables are combined before being counted in this summary table.

**Table 3.3 Summary of Headquarters-Subsidiary Relationship Empirical Studies**

| References                    | Aspect of Headquarters-Subsidiary Relationship |
|-------------------------------|--|
| Ghoshal & Nohria (1989)       | Headquarters control                           |
| Roth & Nigh (1992)            | Headquarters control                           |
| Ito & Rose (1994)             | Headquarters control                           |
| Nohria & Ghoshal (1994)       | Headquarters control                           |
| Gencturk & Aulakh (1995)      | Headquarters control                           |
| Andersson & Forsgren (1996)   | Headquarters control                           |
| Chang & Taylor (1999)         | Headquarters control                           |
| Birkinshaw et al. (2000)      | Headquarters control                           |
| O'Donnell (2000)              | Headquarters control                           |
| Luo et al. (2001)             | Headquarters control                           |
| Yan & Gray (2001)             | Headquarters control                           |
| Luo (2003)                    | Headquarters control                           |
| Anderson et al. (2007)        | Headquarters control                           |
| Chen et al. (2009)            | Headquarters control                           |
| Vachani (1999)                | Subsidiary autonomy                            |
| Johnston & Menguc (2007)      | Subsidiary autonomy                            |
| Fenton-O'Creevy et al. (2008) | Subsidiary autonomy                            |
| Ambos et al. (2010)           | Subsidiary autonomy                            |
| Wang et al. (2014)            | Subsidiary autonomy                            |
| Gupta & Govindarajan (2000)   | Inter-unit knowledge transfer                  |
| Björkman et al. (2004)        | Inter-unit knowledge transfer                  |
| Mudambi & Navarra (2004)      | Inter-unit knowledge transfer                  |
| Noorderhaven & Harzing (2009) | Inter-unit knowledge transfer                  |
| Ghoshal et al. (1994)         | Inter-unit communication                       |
| Kostova (1998)                | Quality of inter-unit relationship             |
| Tsai & Ghoshal (1998)         | Inter-unit resource transfer                   |
| Hewett & Bearden (2001)       | Subsidiary behaviour                           |
| Kostova & Roth (2002)         | Practice adoption in subsidiary                |
| Hewett et al. (2003)          | Roles of headquarters and subsidiary           |
| Feinberg & Gupta (2009)       | Subsidiary integration                         |

**Table 3.4 Summary of Independent Variables**

| Independent variables                              | Roth & Nigh (1992) | Nohria & Ghoshal (1994) | O'Donnell (2000) | Mudambi & Navarra (2004) | Björkman et al. (2004) | Ghoshal & Nohria (1989) |
|--|--------------------|-------------------------|------------------|--------------------------|------------------------|-------------------------|
| Degree of subsidiary embeddedness                  |                    |                         |                  |                          |                        |                         |
| Perceived difference in managerial mindset         |                    |                         |                  |                          |                        |                         |
| Subsidiary's internationalization                  |                    |                         |                  |                          |                        |                         |
| Subsidiary's horizontal interdependence            |                    |                         |                  |                          |                        |                         |
| Perceived host market attractiveness               |                    |                         |                  |                          |                        |                         |
| Headquarters control                               |                    |                         |                  |                          |                        |                         |
| Use of integrating mechanism/social interaction    | +                  |                         |                  |                          | +                      |                         |
| Host/home country institution                      |                    |                         |                  |                          |                        |                         |
| Subsidiary size                                    |                    |                         |                  |                          |                        |                         |
| Headquarters' resource contribution                |                    |                         |                  |                          |                        |                         |
| Subsidiary autonomy                                |                    |                         | +                |                          |                        |                         |
| Subsidiary exercise process control                |                    |                         |                  | +                        |                        |                         |
| Knowledge outflow                                  |                    |                         |                  | +                        |                        |                         |
| Subsidiary diversification                         |                    |                         |                  |                          |                        |                         |
| Subsidiary manager's overestimation of their roles |                    |                         |                  |                          |                        |                         |
| Headquarters' attention                            |                    |                         |                  |                          |                        |                         |
| Share values among headquarters and subsidiary     |                    | +                       |                  |                          |                        |                         |
| Subsidiary's trust in headquarters                 |                    |                         |                  |                          |                        |                         |
| Conflict between headquarters and subsidiary       | -                  |                         |                  |                          |                        |                         |
| Differentiated formal structure                    |                    | +                       |                  |                          |                        |                         |
| Duration of subsidiary operation                   |                    |                         |                  | +                        |                        |                         |
| Perceived importance of knowledge transfer         |                    |                         |                  |                          | +                      |                         |
| Environmental complexity/Local resource level      |                    |                         |                  |                          |                        | +/-                     |
| Subsidiary's experience to function on its own     |                    |                         |                  |                          |                        |                         |
| Headquarters' local responsiveness                 |                    |                         |                  |                          |                        |                         |
| Headquarters' network knowledge                    |                    |                         |                  |                          |                        |                         |
| Subsidiary's perceived dependence on headquarters  |                    |                         | +                |                          |                        |                         |
| Subsidiary's identification with headquarters      |                    |                         |                  |                          |                        |                         |
| Headquarters' degree of ownership in subsidiary    |                    |                         |                  |                          |                        |                         |
| Springboard intent                                 |                    |                         |                  |                          |                        |                         |

+ : positive influence on headquarters-subsidary relationship  
 - : negative influence on headquarters-subsidary relationship  
 +/- : mixed influences on headquarters-subsidary relationship

**Table 3.4 Summary of Independent Variables Continued**

| Independent variables                              | Ito & Rose (1994) | Gupta & Govindarajan (2000) | Yan & Gray (2001) | Luo (2003) | Anderson et al. (2007) | Johnston & Menguc (2007) |
|--|-------------------|-----------------------------|-------------------|------------|------------------------|--------------------------|
| Degree of subsidiary embeddedness                  |                   |                             |                   |            | +                      |                          |
| Perceived difference in managerial mindset         |                   |                             |                   |            |                        |                          |
| Subsidiary's internationalization                  |                   |                             |                   |            |                        |                          |
| Subsidiary's horizontal interdependence            |                   |                             |                   |            |                        |                          |
| Perceived host market attractiveness               |                   |                             |                   |            |                        |                          |
| Headquarters control                               |                   |                             | +                 | +          |                        |                          |
| Use of integrating mechanism/social interaction    |                   | +                           |                   |            |                        |                          |
| Host/home country institution                      |                   |                             |                   |            |                        |                          |
| Subsidiary size                                    |                   | +                           |                   |            |                        | +/-                      |
| Headquarters' resource contribution                |                   |                             | +                 | +          |                        |                          |
| Subsidiary autonomy                                |                   | +                           |                   |            |                        |                          |
| Subsidiary exercise process control                |                   |                             |                   |            |                        |                          |
| Knowledge outflow                                  |                   |                             |                   |            |                        |                          |
| Subsidiary diversification                         |                   |                             |                   |            |                        |                          |
| Subsidiary manager's overestimation of their roles |                   |                             |                   |            |                        |                          |
| Headquarters' attention                            |                   |                             |                   |            |                        |                          |
| Share values among headquarters and subsidiary     |                   |                             |                   |            |                        |                          |
| Subsidiary's trust in headquarters                 |                   |                             |                   |            |                        |                          |
| Conflict between headquarters and subsidiary       |                   |                             |                   |            |                        |                          |
| Differentiated formal structure                    |                   |                             |                   |            |                        |                          |
| Duration of subsidiary operation                   |                   |                             |                   |            |                        |                          |
| Perceived importance of knowledge transfer         |                   |                             |                   |            |                        |                          |
| Environmental complexity/Local resource level      |                   |                             |                   |            |                        |                          |
| Subsidiary's experience to function on its own     | +                 |                             |                   |            |                        |                          |
| Headquarters' local responsiveness                 |                   |                             |                   | +          |                        |                          |
| Headquarters' network knowledge                    |                   |                             |                   |            | -                      |                          |
| Subsidiary's perceived dependence on headquarters  |                   |                             |                   |            |                        |                          |
| Subsidiary's identification with headquarters      |                   |                             |                   |            |                        |                          |
| Headquarters' degree of ownership in subsidiary    |                   |                             |                   |            |                        |                          |
| Springboard intent                                 |                   |                             |                   |            |                        |                          |

+ : positive influence on headquarters-subsidiary relationship  
 - : negative influence on headquarters-subsidiary relationship  
 +/- : mixed influences on headquarters-subsidiary relationship

**Table 3.4 Summary of Independent Variables Continued**

| Independent variables   | Chen et al. (2009) | Kostova & Roth (2002) | Fenton-O'Creedy et al. (2008) | Feinberg & Gupta (2009) | Andersson & Forsgren (1996) | Tsai & Ghoshal (1998) |
|---|--------------------|-----------------------|-------------------------------|-------------------------|-----------------------------|-----------------------|
| Degree of subsidiary embeddedness                             |                    |                       |                               |                         | +/-                         |                       |
| Perceived difference in managerial mindset                    |                    |                       |                               |                         |                             |                       |
| Subsidiary's internationalization                             |                    |                       |                               |                         |                             |                       |
| Subsidiary's horizontal interdependence                       |                    |                       |                               |                         |                             |                       |
| Perceived host market attractiveness                          |                    |                       |                               |                         |                             |                       |
| Headquarters control  |                    |                       |                               |                         |                             |                       |
| Use of integrating mechanism/social interaction               |                    |                       |                               |                         |                             | +                     |
| Host/home country institution                                 |                    | +                     | -                             | +                       |                             |                       |
| Subsidiary size   |                    |                       |                               |                         |                             |                       |
| Headquarters' resource contribution                           | +                  |                       |                               |                         |                             |                       |
| Subsidiary autonomy   |                    |                       |                               |                         |                             |                       |
| Subsidiary exercise process control                           |                    |                       |                               |                         |                             |                       |
| Knowledge outflow   |                    |                       |                               |                         |                             |                       |
| Subsidiary diversification                                    |                    |                       |                               |                         |                             |                       |
| Subsidiary manager's overestimation of their roles            |                    |                       |                               |                         |                             |                       |
| Headquarters' attention                                       |                    |                       |                               |                         |                             |                       |
| Share values among headquarters and subsidiary                |                    |                       |                               |                         |                             |                       |
| Subsidiary's trust in headquarters                            |                    | +                     |                               |                         |                             |                       |
| Conflict between headquarters and subsidiary                  |                    |                       |                               |                         |                             |                       |
| Differentiated formal structure                               |                    |                       |                               |                         |                             |                       |
| Duration of subsidiary operation                              |                    |                       |                               |                         |                             |                       |
| Perceived importance of knowledge transfer                    |                    |                       |                               |                         |                             |                       |
| Environmental complexity/Local resource level                 |                    |                       |                               |                         |                             |                       |
| Subsidiary's experience to function on its own                |                    |                       |                               |                         |                             |                       |
| Headquarters' local responsiveness                            |                    |                       |                               |                         |                             |                       |
| Headquarters' network knowledge                               |                    |                       |                               |                         |                             |                       |
| Subsidiary's perceived dependence on headquarters             |                    | +                     |                               |                         |                             |                       |
| Subsidiary's identification with headquarters                 |                    | +                     |                               |                         |                             |                       |
| Headquarters' degree of ownership in subsidiary               |                    |                       |                               |                         |                             |                       |
| Springboard intent  |                    |                       |                               |                         |                             |                       |
| + : positive influence on headquarters-subsidary relationship |                    |                       |                               |                         |                             |                       |
| - : negative influence on headquarters-subsidary relationship |                    |                       |                               |                         |                             |                       |
| +/- : mixed influences on headquarters-subsidary relationship |                    |                       |                               |                         |                             |                       |

**Table 3.4 Summary of Independent Variables Continued**

| Independent variables                              | Hewett & Bearden (2001) | Noorderhaven & Harzing (2009) | Ghoshal et al. (1994) | Vachani (1999) | Luo et al. (2001) | Gencturk & Aulakh (1995) |
|--|-------------------------|-------------------------------|-----------------------|----------------|-------------------|--------------------------|
| Degree of subsidiary embeddedness                  |                         |                               |                       |                |                   |                          |
| Perceived difference in managerial mindset         |                         |                               |                       |                | -                 |                          |
| Subsidiary's internationalization                  |                         |                               |                       |                |                   | +                        |
| Subsidiary's horizontal interdependence            |                         |                               |                       |                |                   | +                        |
| Perceived host market attractiveness               |                         |                               |                       |                |                   | +/-                      |
| Headquarters control                               |                         |                               |                       |                |                   |                          |
| Use of integrating mechanism/social interaction    |                         | +                             | +                     |                |                   |                          |
| Host/home country institution                      |                         |                               |                       |                |                   |                          |
| Subsidiary size                                    |                         |                               |                       |                |                   | +                        |
| Headquarters' resource contribution                |                         |                               |                       |                |                   |                          |
| Subsidiary autonomy                                |                         |                               |                       |                |                   |                          |
| Subsidiary exercise process control                |                         |                               |                       |                |                   |                          |
| Knowledge outflow                                  |                         |                               |                       |                |                   |                          |
| Subsidiary diversification                         |                         |                               |                       | +              |                   |                          |
| Subsidiary manager's overestimation of their roles |                         |                               |                       |                |                   |                          |
| Headquarters' attention                            |                         |                               |                       |                |                   |                          |
| Share values among headquarters and subsidiary     |                         |                               |                       |                |                   |                          |
| Subsidiary's trust in headquarters                 | +                       |                               |                       |                |                   |                          |
| Conflict between headquarters and subsidiary       |                         |                               |                       |                |                   |                          |
| Differentiated formal structure                    |                         |                               |                       |                |                   |                          |
| Duration of subsidiary operation                   |                         |                               |                       |                |                   |                          |
| Perceived importance of knowledge transfer         |                         |                               |                       |                |                   |                          |
| Environmental complexity/Local resource level      |                         |                               |                       |                |                   |                          |
| Subsidiary's experience to function on its own     |                         |                               |                       |                |                   |                          |
| Headquarters' local responsiveness                 |                         |                               |                       |                |                   |                          |
| Headquarters' network knowledge                    |                         |                               |                       |                |                   |                          |
| Subsidiary's perceived dependence on headquarters  | +                       |                               |                       |                |                   |                          |
| Subsidiary's identification with headquarters      |                         |                               |                       |                |                   |                          |
| Headquarters' degree of ownership in subsidiary    |                         |                               |                       |                |                   |                          |
| Springboard intent                                 |                         |                               |                       |                |                   |                          |

+ : positive influence on headquarters-subsidiary relationship

- : negative influence on headquarters-subsidiary relationship

+/- : mixed influences on headquarters-subsidiary relationship



**Table 3.4 Summary of Independent Variables Continued**

| Independent variables  | Chang & Taylor (1999) | Birkinshaw et al. (2000) | Hewett et al. (2003) | Ambos et al. (2010) | Wang et al. (2014) |
|--|-----------------------|--------------------------|----------------------|---------------------|--------------------|
| Degree of subsidiary embeddedness                              |                       |                          |                      |                     |                    |
| Perceived difference in managerial mindset                     |                       |                          |                      |                     |                    |
| Subsidiary's internationalization                              |                       |                          |                      |                     |                    |
| Subsidiary's horizontal interdependence                        |                       |                          |                      |                     |                    |
| Perceived host market attractiveness                           |                       |                          |                      |                     |                    |
| Headquarters control   |                       |                          |                      |                     |                    |
| Use of integrating mechanism/social interaction                |                       |                          |                      |                     |                    |
| Host/home country institution                                  |                       |                          |                      |                     | -                  |
| Subsidiary size  |                       |                          |                      |                     |                    |
| Headquarters' resource contribution                            |                       |                          |                      |                     |                    |
| Subsidiary autonomy  |                       |                          |                      |                     |                    |
| Subsidiary exercise process control                            |                       |                          |                      |                     |                    |
| Knowledge outflow  |                       |                          |                      |                     |                    |
| Subsidiary diversification                                     |                       |                          |                      |                     |                    |
| Subsidiary manager's overestimation of their roles             |                       | +                        |                      |                     |                    |
| Headquarters' attention  |                       |                          |                      | +/-                 |                    |
| Share values among headquarters and subsidiary                 |                       |                          |                      |                     |                    |
| Subsidiary's trust in headquarters                             |                       |                          |                      |                     |                    |
| Conflict between headquarters and subsidiary                   |                       |                          |                      |                     |                    |
| Differentiated formal structure                                |                       |                          |                      |                     |                    |
| Duration of subsidiary operation                               |                       |                          |                      |                     |                    |
| Perceived importance of knowledge transfer                     |                       |                          |                      |                     |                    |
| Environmental complexity/Local resource level                  |                       |                          |                      |                     |                    |
| Subsidiary's experience to function on its own                 |                       |                          |                      |                     |                    |
| Headquarters' local responsiveness                             |                       |                          |                      |                     |                    |
| Headquarters' network knowledge                                |                       |                          |                      |                     |                    |
| Subsidiary's perceived dependence on headquarters              |                       |                          | +                    |                     |                    |
| Subsidiary's identification with headquarters                  |                       |                          |                      |                     |                    |
| Headquarters' degree of ownership in subsidiary                | +                     |                          |                      |                     |                    |
| Springboard intent   |                       |                          |                      |                     | +                  |
| + : positive influence on headquarters-subsidiary relationship |                       |                          |                      |                     |                    |
| - : negative influence on headquarters-subsidiary relationship |                       |                          |                      |                     |                    |
| +/- : mixed influences on headquarters-subsidiary relationship |                       |                          |                      |                     |                    |

According to Table 3.4, the relational variables (e.g., degree of subsidiary embeddedness, headquarters control, subsidiary autonomy, use of integrating mechanism and social interaction, subsidiary's horizontal dependence and perceived dependence on headquarters, subsidiary's trust in headquarters) and organizational capability variables (e.g., subsidiary size, headquarters' resource contribution, knowledge outflow) are the most frequently studied variables in the prior empirical studies, followed by the institutional variables (e.g., host and home country institutions), with a moderate level of frequency. The table also indicates the mixed findings on the influences of some independent variables, and this inconsistency can be explained by the difference in the empirical studies in terms of their context of research, methodology, and data analysis model.

### **3.7 Research Questions**

The literature review in this chapter shows that the headquarters-subsi-dary relationship is regarded as one of the most important issues in understanding the internationalization of firms (Johnston, 2005). Given the importance of the headquarters-subsi-dary relationship, scholars have adopted different theoretical perspectives to study various aspects of the headquarters-subsi-dary relationship, such as headquarters control (e.g., Doz & Prahalad, 1984; Prahalad & Doz, 1981) and subsidiary autonomy (e.g., Ginsberg & Venkatraman, 1985), which focus on the locus of control and how much decision-making autonomy a subsidiary may have (Nohria & Ghoshal, 1994). Although the pioneer study on quality of headquarters-subsi-dary relationship indicates that the quality of this relationship is a source of firms' competitive advantage, and it has a positive impact on the subsidiary's performance (Kostova, 1998), the critical factors that impact the quality of the headquarters-subsi-dary relationship remain largely untapped, which indicates a significant literature gap.

The issue of the quality of the headquarters-subsi-dary relationship is particularly important for Chinese MNEs because they are still at their early stages of internationalization, and they lack knowledge and experience in managing their headquarters-subsi-dary relationship compared to their developed economy counterparts. Their unfamiliarity with host country may create further difficulties in

dealing with this complex issue. Furthermore, a high quality headquarters-subsiary relationship can act as a less formal mechanism for coordination and control within the MNEs (Kostova, 1998). Hence, an understanding of the critical factors that shape the quality of the headquarters-subsiary relationship could enable Chinese managers to foster a better relationship between headquarters and subsidiary, which could later assist them to achieve a better performance. Therefore, both literature gap and the internationalization of Chinese MNEs call for the academic research on the critical factors that impact on the quality of the headquarters-subsiary relationship in Chinese MNEs. As the first attempt to address this issue, this research is conducted to investigate the quality of the headquarters-subsiary relationship in Chinese MNEs, and it focuses on identifying the critical factors and their impacts on the quality of headquarters-subsiary relationship in Chinese MNEs, which leads to this study's major research question, i.e., what are the important factors that impact on the quality of the headquarters-subsiary relationship in Chinese MNEs?

As discussed earlier, given the multi-dimensional nature of the headquarters-subsiary relationship in MNEs, no single theory will be able to provide a full picture on the determinants of quality of the headquarters-subsiary relationship in Chinese MNEs. Following the contingency approach of corporate strategy study, this study focuses on a group of critical endogenous and exogenous impacting factors of the headquarters-subsiary relationship both in the home and host countries from different theoretical perspectives. After a review of theoretical perspectives related to the headquarters-subsiary relationship, three theoretical perspectives have been identified to examine the critical factors and their impacts on the quality of the headquarters-subsiary relationship in Chinese MNEs at different levels, including an institutional perspective, a social exchange perspective and an upper echelons perspective. Accordingly, this study will investigate the determinants of the quality of the headquarters-subsiary relationship from the three theoretical perspectives, which leads to thirteen specific research questions:

**Guiding research question:** What are the important factors that impact on the quality of the headquarters-subsiary relationship in Chinese MNEs?

- Sub-research question 1:** What is the impact of difference in formal institutions between host and home countries on the quality of the headquarters-subsidiary relationship in Chinese MNEs?
- Sub-research question 2:** How is the impact of difference in formal institutions between host and home countries on the quality of the headquarters-subsidiary relationship in Chinese MNEs contingent upon the level of headquarters' practices institutionalized in the subsidiary?
- Sub-research question 3:** What is the impact of difference in informal institutions between host and home countries on the quality of the headquarters-subsidiary relationship in Chinese MNEs?
- Sub-research question 4:** How is the impact of difference in informal institutions between host and home countries on the quality of the headquarters-subsidiary relationship in Chinese MNEs contingent upon the level of headquarters' practices institutionalized in the subsidiary?
- Sub-research question 5:** What is the impact of organizational exchange between headquarters and subsidiary on the quality of the headquarters-subsidiary relationship in Chinese MNEs?
- Sub-research question 6:** How is the impact of organizational exchange between headquarters and subsidiary on the quality of the headquarters-subsidiary relationship in Chinese MNEs contingent upon the Chinese parent ownership in subsidiary?
- Sub-research question 7:** How is the impact of organizational exchange between headquarters and subsidiary on the quality of the headquarters-subsidiary relationship in Chinese MNEs contingent upon the entry mode of the subsidiary?

- Sub-research question 8:** What is the impact of managerial exchange between headquarters and subsidiary on the quality of the headquarters-subsidiary relationship in Chinese MNEs?
- Sub-research question 9:** How is the impact of managerial exchange between headquarters and subsidiary on the quality of the headquarters-subsidiary relationship in Chinese MNEs contingent upon the level of subsidiary manager's organizational identity with the subsidiary?
- Sub-research question 10:** What is the impact of subsidiary managers' global mindset on the quality of the headquarters-subsidiary relationship in Chinese MNEs?
- Sub-research question 11:** How is the impact of subsidiary managers' global mindset on the quality of the headquarters-subsidiary relationship in Chinese MNEs contingent upon the subsidiary managers' personality flexibility?
- Sub-research question 12:** How is the impact of subsidiary managers' global mindset on the quality of the headquarters-subsidiary relationship in Chinese MNEs contingent upon the subsidiary managers' overseas study experience?
- Sub-research question 13:** What is the impact of subsidiary managers' perceived differences between host and home countries on the quality of the headquarters-subsidiary relationship in Chinese MNEs?

### **3.8 Summary**

This chapter presents an extensive review of literature related to the topics of relationship quality and the headquarters-subsidary relationship, as well as the research questions of this study. The review of relationship quality construct in different contexts of social science reveals the position and importance of the quality of the headquarters-subsidary relationship in the management of multinational enterprises. Theoretical perspectives related to headquarters-subsidary relationship studies are also reviewed, which shows the diversity of theoretical development in this area of research. The summary of headquarters-subsidary relationship related theories shows seven theoretical perspectives and the major variables under each of these perspectives. The review of each theoretical perspective is followed by the review of empirical studies on the headquarters-subsidary relationship under that theoretical perspective. In total, thirty empirical studies are reviewed in this chapter, and their brief summaries, as well as the patterns in their research methodology and research findings, are reported. The review of empirical studies shows that most aspects of headquarters-subsidary relationship studied are related to the management of the headquarters-subsidary relationship, in particular, how much decision-making autonomy a subsidiary may have (Nohria & Ghoshal, 1994). The quality of the headquarters-subsidary relationship, which is a source of firm's competitive advantage, only received limited attention (Kostova, 1998). More importantly, the critical factors that impact on the quality of the headquarters-subsidary relationship remain unknown, which reveals a significant theoretical gap in the headquarters-subsidary relationship literature. This theoretical gap leads to the research questions for this study, which investigate the important factors that impact on the quality of the headquarters-subsidary relationship in Chinese MNEs from three different theoretical perspectives. The literature on theoretical perspectives related to the headquarters-subsidary relationship offers the theoretical foundation of this study, from which the development of the conceptual framework can be initiated. Given the multi-dimensional nature of the headquarters-subsidary relationship within MNEs, three theoretical perspectives are regarded as appropriate for the development of conceptual framework in this study, and the development of the conceptual framework of this study is introduced in the next chapter.

## **CHAPTER 4 CONCEPTUAL FRAMEWORK AND HYPOTHESES**

### **4.1 Introduction**

This chapter develops a conceptual framework for this research. The development of the conceptual framework is based on the literature review and it functions as an analytic basis for the research questions. Several hypotheses derived from the conceptual framework are theoretically developed. Based on analysis of literature, three theoretical perspectives that explain the impacting factors of the quality of the headquarters-subsidary relationship are justified and incorporated into a conceptual framework. The development of this framework is discussed and presented in Section 4.2. The conceptual framework includes six independent variables and six moderating variables. Each of these independent variables is discussed in connection with its impact on the quality of the headquarters-subsidary relationship in Chinese MNEs, followed by how the direct impacts of these independent variables on quality of headquarters-subsidary relationship are altered by the moderating variables. As a result of the discussion, hypotheses are developed and stated in Section 4.3. A summary of research hypotheses is provided in Section 4.4.

### **4.2 Conceptual Framework**

Based on the literature review, a conceptual framework is developed for this research as the analytic base for examining the research questions. The conceptual framework incorporates multiple theoretical perspectives and offers explanations from different angles rather than a single theory at one level, due to the multifaceted and complex nature of the headquarters-subsidary relationship. First, MNEs face unique institutional complexity (Kostova & Roth, 2002). It is crucial for subsidiaries to conform to the host country institutional environment, and achieve legitimacy in order to survive. At the same time, the subsidiaries need to conform to its internal institutional environment within the MNE to have access to organizational resources. Hence, it suggests that factors which relate to home and host country institutions at country level, as well as factors which relate to MNE internal institution at organizational level, can influence the responses of headquarters and subsidiary to institutional environments, and the way they interact with each other. Second, the

MNE's internal structure is not homogeneous throughout the organization, but is systematically differentiated in order to fit the environmental and resource contingencies. Therefore, the headquarters-subsidary relationship is treated as a reciprocal exchange relationship involving a series of resources transactions (Ghoshal & Nohria, 1989). This indicates that headquarters-subsidary relationship is also under the influence of factors related to the dyadic exchange between organizations and their members. Furthermore, scholars also suggest that the organizational outcome can be predicted by managerial background characteristics (Hambrick & Mason, 1984), and manager's sense-making can shape firms' response to the external environment (Thomas, Clark, & Gioia, 1993). It implies that the managerial cognition can also impact on the interaction between headquarters and subsidiary. This discussion suggests that the development of a conceptual framework requires multiple theoretical perspectives at different levels.

As discussed earlier, institutional environments put pressure on MNEs to justify their activities and outputs, which motivates them to enhance their legitimacy in order to appear in agreement with the constituents (DiMaggio & Powell, 1983). The legitimization process involves adaptation to the institutional requirement, which requires extra resources from the subsidiary. This can lead to the increased levels of interaction and collaboration between the headquarters and subsidiary, which influence the quality of headquarters-subsidary relationship. Therefore, institutional theory could offer a suitable theoretical lens for this study, as it focuses on the dynamic interaction between institution and organization, and considers action of organization as an outcome of such interaction (Peng, 2002). It overcomes the limitations of efficiency and resource perspectives, i.e., lacking attention to context (Peng et al., 2009), and examines factors at the institution and country level.

Furthermore, the literature suggests that inter-organizational relationship can be formed via reciprocity (Oliver, 1990). Since MNE can be conceptualized as a network of exchange relationships amongst different organizational units (Ghoshal & Bartlett, 1990), the social exchange theory is regarded as a suitable theoretical perspective for this study. Social exchange theory is based on the rule of reciprocity, which suggests that the social exchange process involves a series of interdependent interactions (Emerson, 1976), and these interactions can lead to high quality



relationships (Cropanzano & Mitchell, 2005). This is particularly relevant to the context of Chinese firms, as relationship building that involves social exchange is widespread in China. A prior study showed that social ties cultivated via exchanges at organizational and personal levels can act as a means to overcome uncertainties and risks in unfamiliar or uncertain institutional environments (Park & Luo, 2001). Therefore, the social exchange theory can offer explanations on how the exchanges between headquarters and subsidiary at both organizational and managerial levels can influence the quality of their relationship.

The upper echelons perspective suggests that a firm's behaviour is a reflection of its top management team's idiosyncratic characteristics (Hambrick & Mason, 1984); how managers make sense of their environment shape a firm's response to environmental change (Thomas et al., 1993). This is evident in the Chinese OFDI context, in which the MNE's action is largely influenced by the intention of their senior managers (Cui et al., 2013). Scholars suggest that decision makers with different cognitive decision-making style may have different strategic orientations and risk preferences (Herrmann & Datta, 2002). Hence, the managerial cognition such as their mindsets may enable managers to filter and process information, to navigate and respond to opportunities in the global marketplace, and to tackle the challenges in order to gain a competitive advantage for their organization. This may have an impact on how the headquarters and subsidiary interact with each other when operating overseas, and it can subsequently influence the quality of the headquarters-subsidiary relationship.

In summary, the institutional perspective, social exchange perspective, and upper echelons perspective offer explanations from different angles at three levels, i.e., country level, organizational level, and managerial level. The following sections provide discussions of detailed justification for the three theoretical perspectives based on the results of the literature review.

#### **4.2.1 Institutional Perspective**

Institutional theory postulates that an organization must obtain legitimacy through isomorphism with the institutional environment in which it is embedded in order to survive (DiMaggio & Powell, 1983), and it focuses on how the social and political

aspects of organizations' embeddedness influence firms' internationalization (Child & Rodrigues, 2005). Institutions are defined as the 'rules of the game', categorized into three dimensions, including regulative, normative and cognitive pillars or institutions (Scott, 1995). Institutions can also be broadly divided into formal and informal institutions (North, 1990), in which the formal institution includes the regulative pillar comprised of regulations and laws, and the informal institution includes the normative and cognitive pillars comprised of norms, values, and beliefs (Peng et al., 2009). In a given organizational field, the institution may determine socially acceptable patterns of organizational structures and practices (DiMaggio & Powell, 1983). For a firm to survive in the host country, it must obtain external legitimacy by conforming to established institutional rules, such as business models, structures and practices. Therefore, MNEs are subject to institutional pressures, which refer to the various demands for firms to conform to in a given field which stem from differences in institutional environments between home and host countries, i.e., institutional distance (Pache & Santos, 2010). Formal institutional distance is captured by the regulative distance that stems from the variance in regulatory environment between host and home countries, and the informal institutional distance stems from variance in normative and cognitive institutions that are mainly captured by cultural distance (Chao & Kumar, 2010). Larger regulative and cultural distances indicate increased liability of foreignness (Eden & Miller, 2004; Kostova & Zaheer, 1999), which also impedes MNEs' understanding of their local markets (Salomon & Wu, 2012). The increased liability of foreignness increases the institutional pressures on MNEs to conform to host-country institutions to obtain legitimacy. The legitimization process rests heavily on both organizational communication and commitment (Suchman, 1995), influencing the level of trust (Morgan & Hunt, 1994) and satisfaction (Selnes, 1998) among different organizational units. In summary, the literature suggests that in the context of MNEs, institutional distances that consist of regulative and cultural distances, can influence both the institutional pressures faced by MNEs and their legitimization process, which can influence the quality of the headquarters-subsiary relationship in terms of levels of communication effectiveness, commitment, mutual trust and satisfaction (Johnston & Menguc, 2007).

In addition, MNEs' subsidiaries often face challenges not only in seeking to achieve legitimacy within their external operating environments but also in seeking to obtain internal legitimacy within the MNEs themselves (Westney, 1993). A subsidiary's internal legitimacy refers to its degree of acceptance and approval by other parts of the MNE, particularly its headquarters, which is achieved through the subsidiary's institutionalization of headquarters' practices. Such activities may include the adoption of headquarters' organizational structures, policies and organizational practices (Kostova & Zaheer, 1999). A high level of internal legitimacy allows a subsidiary to access organizational resources such as capital and knowledge (Pfeffer & Salancik, 1978), which enables it to implement various strategies to respond to external institutional pressures instead of merely conforming to them (Oliver, 1991; Suchman, 1995). Therefore, it indicates that subsidiaries' internal institutionalization activities in achieving internal legitimacy can affect their responses to external institutional pressures, and this may alter the influence of institutional distance on the quality of the headquarters-subsidiary relationship.

The firms' external and internal institutional factors discussed earlier are all relevant to the Chinese MNEs, as they are subject to influences from both external and internal institutional environments. The Chinese MNEs invested in more than 170 countries by the end of 2012 (MOFCOM, 2013); the host countries of Chinese FDI range from the least developed countries to the most developed countries, and the institutional environments in these countries differ significantly from one another and from that of China. Furthermore, Chinese MNE subsidiaries are also subject to pressure from internal institution, as they need to conform to the internal institution in order to access headquarters' capital and resources to operate (Buckley et al., 2007). Therefore, the Chinese MNEs are under institutional pressures from external and internal institutional environments, which requires headquarters and subsidiaries of Chinese MNEs to work together in order to attain legitimacy and achieve their goals. This implies that the institutional distances can influence the interactions between headquarters and subsidiary, which can impact on the quality of the headquarters-subsidiary relationship. In conclusion, the institutional perspective is fully applicable in this research context.

#### **4.2.2 Social Exchange Perspective**

The theories that explain the influence of social exchange on the quality of the relationship is social exchange theory (Blau, 1964) and leader-member exchange theory (LMX) (Dienesch & Liden, 1986) in the management context. Social exchange theory is based on the rule of reciprocity, which suggests that the social exchange process involves a series of interdependent interactions (Emerson, 1976), and these interactions can lead to high quality relationships (Cropanzano & Mitchell, 2005). Derived from social exchange theory, the leader-member exchange theory focuses on the amount of interactions between leader and subordinates. It contends that the outcome of leadership relies on the amount of interaction that exists between leader and subordinates (Duchon, Green, & Taber, 1986); it also suggests that the greater the perceived value of exchange leads to a higher quality of leader-member relationship (Wayne et al., 1997). In the context of MNEs, there are two levels of exchange, namely managerial exchange and organizational exchange. The managerial exchange refers to the exchange between headquarters and subsidiary managers at the personal level, and the organizational exchange refers to the exchange between headquarters and subsidiary at the firm level. Although the two levels of exchange are similar, the areas of focus are different. The managerial exchange focuses on the informal interactions such as affect, loyalty, contribution and professional respect between the headquarters and subsidiary managers (Liden & Maslyn, 1998), whereas the organizational exchange focuses on the formal interactions such as information exchange (Kozlowski & Doherty, 1989) and negotiation latitude (Liden & Graen, 1980) between the headquarters and subsidiary. From a contingent point of view, the influence of the levels of headquarters-subsubsidiary exchange on the quality of the headquarters-subsubsidiary relationship can be influenced by a number of factors, such as manager's organizational identity, headquarters' ownership in the subsidiary and the subsidiary's entry mode. The manager's organizational identity reflects the psychological merging between the manager and the organization (Haslam, 2001; Van Knippenberg & Sleebos, 2006), which could influence social exchange and inter-organizational relationship because the identification process may trigger either hostile or cooperative relationships (Richter, West, Van Dick, & Dawson, 2006). Headquarters' ownership in subsidiary can be viewed as the parent firm's commitment and control over the subsidiary

(Zhang, Li, Hitt, & Cui, 2007), which can affect on the interdependence and exchange process between the headquarters and subsidiary. The subsidiary's entry mode can also alter the influence of organizational exchange on quality of headquarters-subsidiary relationship, as the different subsidiary's entry modes are used by headquarters for acquiring competitive resources (Belderbos, 2003), which has different implications for headquarters-subsidiary exchanges, and it can alter the impact of organizational exchange on quality of headquarters-subsidiary relationship.

The social exchange perspective is particularly relevant to the Chinese context for several reasons. First, relationship building which involves exchange is widespread in China, and most Chinese including Chinese managers cultivate Guanxi, i.e., the intricate and pervasive personal ties (Peng & Luo, 2000) that direct their attitude toward social and business relationships (Tsui & Farth, 1997). Second, for hundreds of years Chinese people have used personal ties as conduits to do business. Given that China is governed by people in power rather than formal rules, people have little trust in the legal frameworks (Luo, 2003a) and rely heavily on personal ties. Third, China is undergoing a transition stage from a planned economy to a market economy, and the constantly changing institutional environment means uncertainties for businesses in China, which encourages more dependence on personal ties to minimize the risks. Hence, the social exchange perspective is fully applicable in the Chinese MNE context to examine the impacts of different social exchanges on the quality of the headquarters-subsidiary relationship.

#### **4.2.3 Upper Echelons Perspective**

The upper echelons perspective states that organizational outcomes can be predicted by managerial background characteristics (Hambrick & Mason, 1984), as the organizational outcome is a reflection of the values and cognitive bases of powerful actors within the organization. The later study also found that managerial cognition, i.e., how managers make sense of their environments, can shape firms' response to environmental change (Thomas et al., 1993). This is consistent with the cognitive view of information-processing theory, which suggests that the information-processing of an organization is primarily represented in terms of managers' cognitive capabilities, and it influences decision making of organizations (Egelhoff,

1991). Managers' global mindset and perceived psychic distance are two managerial cognition variables identified in the literature. Managers' global mindset captures managers' cognitive capabilities, which is viewed by increasing numbers of scholars as a critical factor that affects a wide range of organizational behaviours, such as international strategy (Murtha, Lenway, & Bagozzi, 1998) and globalization efforts (Levy, 2005). Managers' global mindset relates to the cognitive capabilities that can influence decision making in an organization (Egelhoff, 1991; Levy et al., 2007) and refers to managers' ability to understand, recognise, and integrate information across complex global dynamics (Jeannet, 2000; Tichy, Brimm, Charan, & Takeuchi, 1992). It is also viewed as the 'cognitive process that balances competing country, business and functional concerns' (Murtha et al., 1998, p. 97). Managers' global mindset can influence inter-organizational relationships, particularly headquarters-subsi-dary relationships, since managers with a global mindset can better understand the environmental complexity and manage an MNE as an interdependent global network (Kedia & Mukherji, 1999). Managers with a more global mindset are more capable of reconciling conflicts and paradoxes during their firms' globalisation process (Carpenter & Fredrickson, 2001; Murtha et al., 1998). Their capability of reconciling conflicts can alleviate institutional pressure from both the home and the host country and can align the goals of both the headquarters and the subsidiary, which could influence the quality of the headquarters-subsi-dary relationship.

The literature suggests that managers' global mindset is enhanced and sustained via knowledge such as international knowledge and technology, as well as via skills that include acculturation and leadership (Kedia & Mukherji, 1999). Therefore, managers' global mindset can be subjected to the influence of certain factors that may impact on how the knowledge and skills are enhanced and sustained. Managers' personality traits, such as their level of personality flexibility, are also relevant to the development of managers' global mindset (Rhinesmith, 1992). Thus, managers' personality flexibility, i.e., the adaptability of managers' thinking and social behaviour (Gough, 1960), is one of the key requirements for addressing the strategic dilemmas that arise related to globalisation (Bücker & Poutsma, 2010). Prior studies reveal that managers' personality flexibility can influence firms' strategies, structures, and decision-making methods (Miller & Toulouse, 1986). For instance, managers with flexible personalities tend to seek out new information and to emphasise

reacting and adapting to changing conditions (Wissema, Van der Pol, & Messer, 1980). They also have multiple modes of understanding (Nutt, 1993), such as sensing, intuition, thinking, and feeling (Jung, 1923). A flexible personality enables managers to achieve their goals by utilising different knowledge and skills to address different and even conflicting demands in the international market. Moreover, managers' use of their knowledge and skills can enhance and sustain such knowledge and skills and thus influence the development of a global mindset. From a contingency perspective, managers' global mindset could be enhanced and sustained by international knowledge and technology, as well as by skills such as acculturation and leadership (Kedia & Mukherji, 1999). Managers' global mindset is therefore subject to factors that enhance and sustain managers' knowledge and skills. Researchers also suggest that managers' cognitive representations are typically based on their past experiences (Kiesler & Sproull, 1982), and overseas study is one such experience that may facilitate the development of knowledge and skills for managers (Kedia & Mukherji, 1999). Overseas study experience can reduce perceived uncertainty and increase cultural knowledge (Sambharya, 1996), as well as increase managers' ability to adjust to foreign cultures (Takeuchi, Tesluk, Yun, & Lepak, 2005). When studying overseas, managers are exposed to a different culture through personal experiences such as observing the behaviour of foreign nationals and learning foreign customs and norms (Bandura, 1997). These experiences can facilitate the development of cognitive frameworks in managers, which can enhance their adaptability to new environments (Takeuchi et al., 2005). Hence, overseas study experience can facilitate managerial learning of the global business environment and operations, which can help to build a reservoir of expertise and thereby enhance managers' global mindset (Sambharya, 1996). Therefore, managers' personality flexibility and overseas study experience are important factors that can influence managerial cognition, and they can interact with managers' global mindset in influencing the quality of the headquarters-subsidary relationships.

Furthermore, the Uppsala internationalization model based on the Nordic MNEs encapsulates that managers' lack of experience and knowledge are crucial factors in the internationalization process of firms, and these factors which prevent or disturb the flow of information between potential and actual suppliers and customers are regarded as psychic distance (Vahlne & Wiedersheim-Paul, 1973). The concept of

psychic distance refers to managers' perceived differences to a given foreign country, and it reflects managers' knowledge, familiarity and sense of understanding of the foreign country (Dichtl, Koeglmayr, & Mueller, 1990). It is a reflection of managers' perceived degree of uncertainty about a foreign market (Kogut & Singh, 1988), and it can influence the way that managers process and interpret information about a foreign market during the decision-making process (O'Grady & Lane, 1996). Given that the organizations' information-processing capacities are represented by the cognitive capabilities of its organizational members (Wood & Bandura, 1989), organizations' information-processing capabilities need to match its information-processing needs when it faces uncertainties (Egelhoff, 1991). Different organizational structures, including vertical information systems and lateral relations mechanisms (Galbraith, 1973) can be established to enhance the organizations' information-processing capabilities to meet the information-processing needs when uncertainty is high, which can influence the inter-organizational relationships.

The above discussed upper echelons perspective is applicable to the Chinese MNEs, as Chinese managers' intention can exert heavy influence on firms' strategic behaviour (e.g., Cui et al., 2013). As China is transitioning from a centrally planned system to a market-based system, the Chinese managers face more uncertainties in the domestic market incurred from this transition than their developed economy counterparts that is operating in a well-developed market environment. This implies that the Chinese managers may have different mindsets that give them different levels of information-processing capabilities. Furthermore, China's outward FDI has been dominated by state-owned or controlled enterprises (Cui & Jiang, 2012), which indicates significant government influence over China's outward FDI. Such government influence may give them different motivations to conduct their FDI and more importantly, may cause them to perceive market uncertainty in a different way, hence leading to different managerial cognition. In addition, China is one of the leading emerging economies and has the largest FDI outflow of any emerging economy (UNCTAD, 2012), but with a relatively short history of outward FDI. The limited exposure to the international market environment may also influence managerial cognition compared to their experienced developed economy counterparts. Therefore, the social cognitive approach is fully applicable in the current research context.



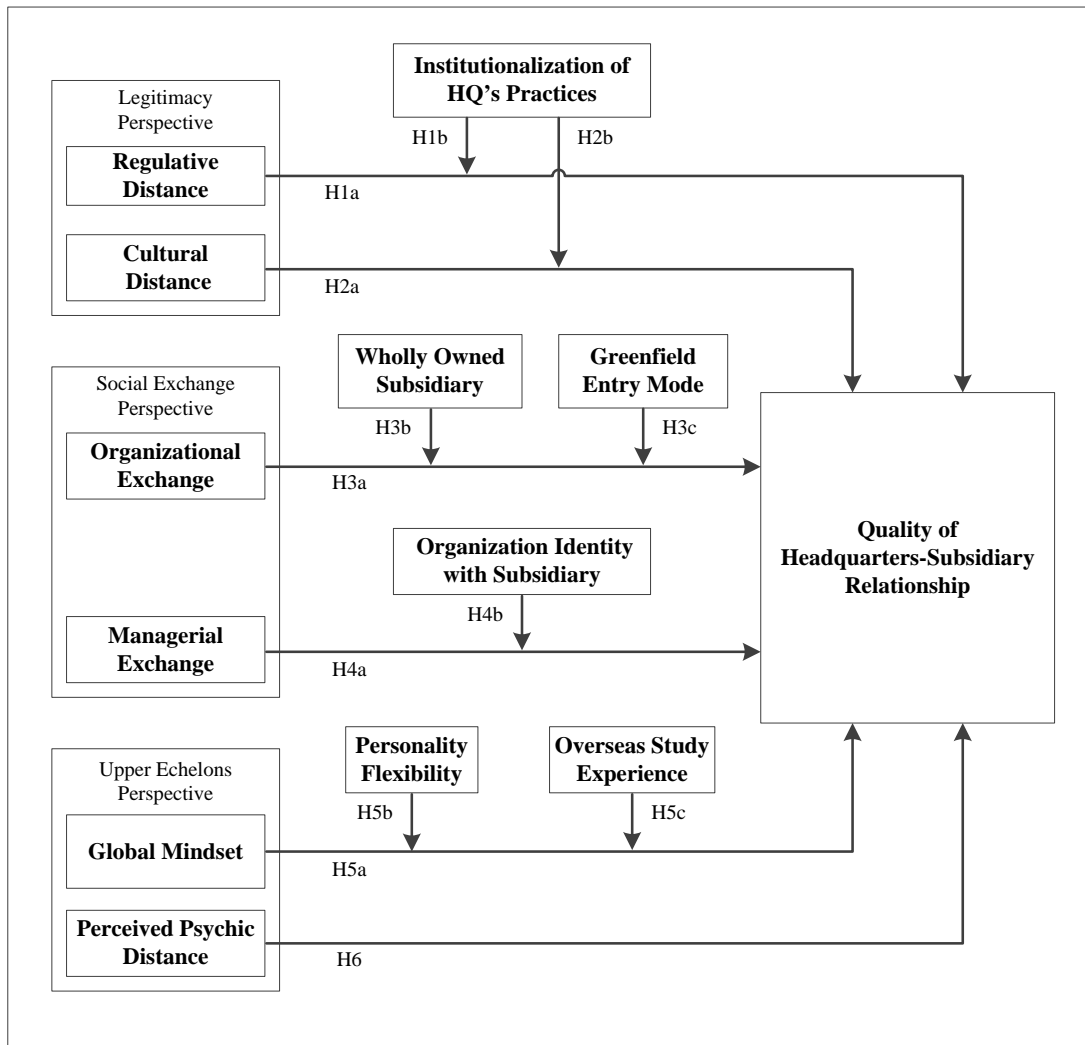
In conclusion, this section discusses the three theoretical perspectives by comparing the major arguments from the literature. The results of the above discussion on theory justification are summarized in Table 4.1.

**Table 4.1 Conceptual Framework Construction**

| <i>Theories</i>             | <i>Independent Variables</i> | <i>Moderators</i>  | <i>Dependent Variable</i>      |
|-----------------------------|------------------------------|--|--------------------------------|
| Institutional perspective   | Regulative distance          | Institutionalization of HQ's practices                           | Quality of HQ-Sub relationship |
|                             | Cultural distance            | Institutionalization of HQ's practices                           |                                |
| Social exchange perspective | Organizational exchange      | Parent's ownership in subsidiary                                 | Quality of HQ-Sub relationship |
|                             | Managerial exchange          | Greenfield entry mode<br>Organizational identity with subsidiary |                                |
| Upper echelons perspective  | Global mindset               | Personality flexibility  | Quality of HQ-Sub relationship |
|                             | Psychic distance             | Overseas study experience  |                                |

As shown in Table 4.1, all three theoretical perspectives are justified as applicable and they are incorporated into the conceptual framework of this research. Regulative and cultural distances from institutional perspective are included in the conceptual framework, moderated by the institutionalization of headquarters' practices. From the social exchange perspective, organizational exchange and managerial exchange are included. Organizational exchange is moderated by Chinese parent's ownership in the subsidiary and greenfield entry mode of the subsidiary, and managerial exchange is moderated by the subsidiary manager's organizational identity with subsidiary. Two upper echelons perspective factors - global mindset and perceived psychic distance - are included into the framework, and global mindset is moderated by manager's personality flexibility and manager's overseas study experience. As a result, a conceptual framework is developed and presented in Figure 4.1.

**Figure 4.1 Conceptual Framework**



### 4.3 Hypotheses

In total, there are twelve variables included into the conceptual framework (see Figure 4.1) as the major factors that directly or indirectly influence the quality of headquarters-subsidiary relationship in Chinese MNEs. In order to test the conceptual framework, hypotheses are developed based on the twelve variables and stated under a *ceteris paribus* situation. The hypotheses development based on the twelve variables from the three theoretical perspectives are discussed in detail in this section, and the control variables in this research are also discussed in the later part of this section.

### **4.3.1 Institutional Perspective Variables**

#### ***4.3.1.1 Regulative Distance and Quality of Headquarters-Subsidiary Relationship***

Formal institution is captured by the regulative pillar, which refers to the rules and laws that exist to safeguard social stability and order (North, 1990). When MNEs invest in a foreign country, their subsidiaries are subject to the host country's regulatory restrictions (Gatignon & Anderson, 1988), which include legal systems, information systems, regulatory regimes and enforcement systems related to institutional practices (Meyer, Estrin, Bhaumik, & Peng, 2009). Because firms must comply with the regulatory system's explicitly stated requirements to be considered legitimate (Murtha & Lenway, 1994), subsidiaries therefore experience coercive pressure from their host countries.

When operating in a regulatory distant host country where coercive pressure is high, subsidiaries must comply with the host country's regulatory framework, and any violations of regulations and laws can have significant negative consequences. This regulatory demand can influence firms at the ideological level, which outlines goals that are legitimate to pursue (Pache & Santos, 2010). Therefore, regulatory demand operates at the goal level, and thus its degree of negotiability for subsidiaries is low. Moreover, different host countries' regulatory demands can receive strong internal representation within subsidiaries via organization members, such as legal advisors or board members who adhere to the templates of the regulatory institutions (D'Aunno, Sutton, & Price, 1991; Pache & Santos, 2010). In this situation, a subsidiary must fully comply with its host country's regulatory demands by actively obeying regulatory requirements to achieve legitimacy, which will have an impact on headquarters-subsidiary relationships in MNEs. For example, to strengthen their market position, the executives of Chinese MNEs may discuss pricing and carving up markets with rival firms in China, due to the underdevelopment of the Chinese regulatory and legal system. However, U.S. law regards this practice as 'collusion' in violation of the anti-trust laws, prosecutable by the U.S. anti-trust authority and carrying heavy legal and financial penalties (Peng, Wang, & Jiang, 2008). Chinese MNEs subsidiaries operating in the U.S. market therefore are placed under heavy coercive pressure to fully comply with U.S. law. In this case, the best way to respond to regulatory demands is through compliance, which is characterized by conscious

obedience to institutional requirements (Oliver, 1991; Suchman, 1995). It is argued that subsidiaries' responses to regulatory demands require cooperation with headquarters and devotion of a substantial amount of energy to learn and understand the host country's regulatory requirements, which involve high levels of communication effectiveness and commitment between headquarters and subsidiary. Effective communication between headquarters and subsidiaries entails information exchange, which can assist in resolving disputes and aligning perceptions and expectations (Etgar, 1979). A reduced level of disputes and more closely aligned expectations can foster trust (Morgan & Hunt, 1994). The commitment of managerial and financial resources between headquarters and subsidiaries can also improve the learning outcome with respect to host-country regulations, and this improved outcome will better fulfill expectations, which leads to a higher level of satisfaction (Selnes, 1998). Therefore, compliance with host-country regulatory demands requires a higher level of communication effectiveness and commitment between headquarters and subsidiaries, which can promote their mutual trust and satisfaction, resulting in an expectation of a higher quality headquarters-subsidary relationship.

When subsidiaries operate in a regulatory adjacent host country with lower coercive pressures, they are more likely to be governed by regulatory institutions that are similar to those in their home countries. In this case, regulatory institutional demands are more negotiable in the host country, and fewer compliance efforts are required from the subsidiaries to achieve legitimacy. Furthermore, subsidiaries that operate in a host country with lower coercive pressure can operate effectively in the host country, given their familiarity with a similar market context (Buckley et al., 2007). Thus, subsidiaries can easily adapt to their host countries' regulatory institutions and attain regulatory legitimacy with less resource dependence on their headquarters. As a result, the requirement for levels of commitment and communication effectiveness between headquarters and subsidiaries are not as high as those operating in regulatory distant host countries with high levels of coercive pressures, as well as the levels of trust and satisfaction between headquarters and subsidiaries, and consequently a lower-quality headquarters-subsidary relationship. Therefore, it is hypothesized as follows:

**Hypothesis 1a (H1a):** *In Chinese MNEs, the regulative distance between home and host countries is positively associated with the quality of the headquarters-subsidiary relationship.*

Firms experience institutional demands as a function of the interplay of external and internal pressure (Greenwood & Hinings, 1996). In line with this logic, it is argued that the quality of the headquarters-subsidiary relationship is not only influenced by the pressure to achieve external legitimacy but also is subject to the pressure to achieve internal legitimacy. Achieving internal legitimacy via institutionalizing headquarters' practices enables subsidiaries to access organizational resources (Pfeffer & Salancik, 1978), which can ease their dependence on the resources of the host-country environment. Prior studies of the resource dependence view suggest that firms can use their resources to undertake different strategies that address external institutional pressures rather than merely complying with them (Pfeffer, 1982).

In a regulatory distant host country where subsidiaries experience high coercive pressure, regulatory institutional demands are well represented within subsidiaries via organization members, such as legal advisors or board members (D'Aunno et al., 1991; Pache & Santos, 2010). The institutionalization of headquarters' practices, on the other hand, could also enhance the internal representation of headquarters' norms and values that reflect MNEs' home regulatory environments. In this case, both host- and home-country regulatory environments are represented internally with the nature of the institutional demand resting at the ideological level and prescribing which goals are legitimate to pursue. It is suggested that firms adopt pacifying tactics that compromise with competing institutional demands (Oliver, 1991; Pache & Santos, 2010). A pacifying tactic exerts a low level of resistance and involves partial compliance with one or more constituent demands, so that organizations only comply with minimum requirements or standards. When subsidiaries operate in regulatory distant host countries with high levels of coercive pressure, pacifying tactics may require more resources to meet the minimum requirements of both the home- and host-country regulatory institutions. Pacifying tactics also enable a subsidiary to reduce the likelihood of conflict between the demands of the two countries. Given that subsidiaries attain internal legitimacy by institutionalizing their headquarters'

practices to gain access to its resources, the subsidiary is therefore more likely to depend on resources from headquarters than on resources from the host country. A higher level of resource dependence on headquarters can enhance commitment and communication effectiveness between headquarters and subsidiaries, which leads to higher levels of trust and satisfaction. The lower likelihood of conflict could further promote satisfaction between headquarters and subsidiaries, and therefore, a higher quality headquarters-subsidiary relationship is expected. Thus, it is hypothesized as follows:

**Hypothesis 1b (H1b):** *In Chinese MNEs, the relationship between regulative distance and the quality of the headquarters-subsidiary relationship is stronger when the level of subsidiaries' institutionalization of headquarters' practices is higher.*

#### **4.3.1.2 Cultural Distance and Quality of Headquarters-Subsidiary Relationship**

Informal institution consists of normative and cognitive pillars, which is associated with social norms, values and beliefs (Selznick, 1984). When operating in a foreign country, firms are expected to behave appropriately, as determined by the host country's normative and cognitive systems (DiMaggio & Powell, 1983). If firms do not conform to their host countries' normative and cognitive systems, they may suffer from the liability of foreignness (Zaheer, 1995). As a result, firms may be more likely to be scrutinized and attacked by local interest groups and may experience discrimination in comparison to their local counterparts (Kostova & Zaheer, 1999). For MNEs to attain normative and cognitive legitimacy they must conform to the norms, values and beliefs that are characteristic of organizations in the host country (Parsons, 1960), as well as imitate organizational practices and structures of other firms (Haunschild & Miner, 1997). Therefore, firms are subject to normative and mimetic pressures.

Because informal institutions are tacit and primarily culturally driven (Eden & Miller, 2004), and the normative and cognitive pillars of institution are conceptually close to culture (Chao & Kumar, 2010), cultural distance is regarded as a major factor that impedes MNEs from achieving normative and cognitive legitimacy. The greater the

cultural distance between the host and home countries, the more difficult it is for MNEs to establish normative and cognitive legitimacy. When operating in culturally distant countries, MNEs are subject to normative pressure and can obtain normative legitimacy by aligning their organizational values to the societal values of the host country (Parsons, 1960). Norms and values outline whether an activity is ‘the right thing to do’ (Suchman, 1995, p. 579), thus, they exert pressures on MNEs at the functional level, thus requiring organizations to adopt appropriate courses of action (DiMaggio & Powell, 1983; Oliver, 1991). Given that Chinese MNEs are at an early stage of the internationalization process, they have less market experience with customer preferences and suppliers (Miller & Eden, 2006), it is more difficult for the subsidiaries of Chinese MNEs to interpret and understand established norms, values and beliefs. Accordingly, Chinese MNEs could respond to normative pressure by using habit tactics that unconsciously follow the host country’s socially accepted values and rules (Oliver, 1991), which could impact the relationship between headquarters and subsidiaries. Furthermore, Chinese MNEs are often stereotyped as lacking sophisticated technology or advanced manufacturing know-how (Luo & Tung, 2007), and this competitive disadvantage may create a negative social image for Chinese MNEs, a situation which might make resource-seeking in the host country a difficult task for a Chinese MNE. Because firms will seek and depend on alternative sources when resources are scarce (Sherer & Lee, 2002), it is argued that Chinese MNE subsidiaries rely on alternative sources - i.e., their headquarters - when it is difficult to obtain the necessary resources to achieve normative legitimacy in the host country. Resource dependency encourages effective communication between headquarters and subsidiaries (Hillman & Dalziel, 2003), leading them to be better informed. As a result, headquarters and subsidiaries are more confident about and committed to their relationship. Communication also improves trust, reduces ambiguity, and enhances coordination, all of which improve relationship quality (Anderson & Weitz, 1989).

When operating in culturally distant countries, MNEs are also subject to mimetic pressure to follow the ‘taken for granted’ routines of their host countries (Scott, 2001) to attain cognitive legitimacy, which lies at the functional level. It is suggested that firms can use imitative tactics (Oliver, 1991) to mimic or model the most prominent local firms (DiMaggio & Powell, 1983; Tolbert & Zucker, 1983). Three different

modes of imitation can be used by firms to attain their cognitive legitimacy, namely frequency-based imitation, trait-based imitation, and outcome-based imitation (Haunschild & Miner, 1997). In frequency-based imitation, subsidiaries imitate actions or practices that have been widely implemented by other organizations (Tolbert & Zucker, 1983). Subsidiaries can also adopt trait-based imitation, which entails imitating the actions and practices of organizations with traits or statuses regarded as legitimate and successful (Fombrun & Shanley, 1990). With the outcome-based imitation, subsidiaries can imitate actions and practices that have produced positive outcomes for other organizations (Haunschild & Miner, 1997). In the example of Chinese MNE - Huawei, it implements various measures to imitate Western firms to gain cognitive legitimacy in the international market. For instance, Huawei conducts trait-based imitation by following its western counterparts and adopting western corporate governance practices that are widely used in the international market, including practices such as the use of independent external auditors (KPMG) to audit annual financial statements using accounting standards and audit procedures. Huawei also employs prestigious human resource management firms such as the Hays Group to improve its internal management system (Cooke, 2012). The implementation of these trait-based imitations, which involves hiring new practices and systems by the younger subsidiaries, requires a high level of resource commitment that involves collaboration and effective communication between headquarters and subsidiaries. Commitment and effective communication can also improve mutual trust (Morgan & Hunt, 1994) and satisfaction (Selnes, 1998) between headquarters and subsidiaries. Hence, a higher quality headquarters-subsidiary relationship during such an imitation process can also be expected.

Given that the nature of normative and cognitive institutional demands is material and peripheral, it is more flexible and negotiable (Pache & Santos, 2010). When Chinese MNEs operate in culturally adjacent countries, they face less normative and mimetic pressures, because it is easier for them to interpret and understand local normative institutions, as well as to imitate the local cognitive structures. Thus, it is easier for them to achieve normative and cognitive legitimacy. Under these circumstances, Chinese MNEs may adopt avoidance strategies to dismiss or ignore host-country normative and cognitive institutions because they are similar to the ones at home (Oliver, 1991). Thus, the subsidiaries require lower levels of resource



dependence on headquarters to achieve normative legitimacy, which leads to a lower intensity of knowledge and resource transfers between headquarters and subsidiaries. As a result, levels of communication effectiveness and commitment are expected to be lower than those that operate in culturally distant host countries, and the levels of trust and satisfaction between headquarters and subsidiaries will also be lower, which leads to a relatively lower quality of the headquarters-subsidiary relationship. Therefore, it is hypothesized that:

**Hypothesis 2a (H2a):** *In Chinese MNEs, the cultural distance between home and host countries is positively associated with the quality of the headquarters-subsidiary relationship.*

Subsidiaries' institutionalization of headquarters' practices could enhance the internal representation of home-country norms, values and beliefs in subsidiaries because the institutionalization process makes organization members adhere to the home country's normative templates, as well as cognitive structures (D'Aunno et al., 1991; Pache & Santos, 2010). In a culturally distant host country where subsidiaries face high levels of normative pressure, enhanced internal representation of home-country norms, values and beliefs may create a negative social image that will cast more suspicion onto the subsidiaries and place them under more scrutiny by host-country interest groups. Moreover, subsidiaries are expected to expend extra effort to establish a positive social image and to build reputation and goodwill superior to those of local firms (Kostova & Zaheer, 1999). In this case, firms can use bargaining tactics (Oliver, 1991) and alleviate host-country normative pressures by employing alternative legitimating mechanisms such as negotiation, association with highly legitimate entities, and establishment of a positive image through engagement in socially desirable practices in the culturally distant country, such as corporate social responsibility programs (Kostova, Roth, & Dacin, 2008). For example, Chinese MNE Huawei has actively engaged in alternative legitimating mechanisms in normatively distant host countries such as Australia. Huawei Australia has implemented a wide range of measures to acquire normative legitimacy, such as retaining high-profile Australians to serve as local board directors, teaming with major Australian telecommunications providers, building research-and-development

partnerships with local universities, organizing fundraising campaigns for local charity organizations, and publishing an annual corporate social responsibility report via an external assurance provider to promote a positive social image (Huawei, 2012). These actions allow Huawei Australia to promote a positive social image, which makes it easier to achieve normative legitimacy. It is argued that to implement such alternative legitimating mechanisms, more resource commitment and effective communication between headquarters and the subsidiary are required, which can foster their mutual trust (Morgan & Hunt, 1994) and satisfaction (Selnes, 1998) and ultimately, enhance the quality of the headquarters-subsidiary relationship.

When subsidiaries institutionalize headquarters' practices in a culturally distant host country, it is a highly likely that there will be a conflict between the subsidiary and the host country's cognitive institutions. Under these circumstances, it is suggested that subsidiaries employ compromise strategies to achieve partial conformity with the two conflicting institutional demands (Pache & Santos, 2010). Balancing is a tactic that helps organizations to achieve partial conformity by accommodating multiple constituent demands (Oliver, 1991). Implementing a balancing tactic requires headquarters and subsidiaries to collaborate, which may involve negotiation, decision-making and joint action (Phillips, Lawrence, & Hardy, 2000). These activities could enhance the levels of commitment and communication effectiveness between headquarters and subsidiaries, which could further foster trust (Morgan & Hunt, 1994) and satisfaction (Selnes, 1998), leading to a higher quality headquarters-subsidiary relationship. Therefore, it is hypothesized as follows:

**Hypothesis 2b (H2b):** *In Chinese MNEs, the relationship between cultural distance and the quality of headquarters-subsidiary relationship is stronger when the subsidiary's level of institutionalization of headquarters' practices is higher.*

### **4.3.2 Social Exchange Perspective Variables**

#### ***4.3.2.1 Organizational Exchange and Quality of Headquarters-Subsidiary Relationship***

The MNEs, by definition, have subsidiaries that operate in different locations across national boundaries (Roth & Nigh, 1992). The fundamental to the subsidiary's existence is the interdependence between headquarters and subsidiary, which then necessitates the integration of subsidiary's activities, which involves two major processes, i.e., coordination and control (Baliga & Jaeger, 1984; Cray, 1984). The coordination and control processes require organizational exchange between headquarters and subsidiary as the subsidiary faces environmental, strategic and operational complexities in the host countries (Roth & Nigh, 1992). In this research, it posits that the relationship between Chinese MNE headquarters and subsidiary is similar to the leader-member relationship within an organization, where headquarters is the leader and subsidiary is the subordinate, because the headquarters formulate overall strategy for the entire organization and the subsidiary is established by headquarters to perform certain designated tasks to achieve the firm's strategic goals.

The high level of exchange between Chinese MNE headquarters and subsidiary at the organizational level is expected to be similar to the in-group exchange, which is characterised by reciprocal influence, mutual trust, and a sense of common fate. It is argued that the organizational exchange between the headquarters and subsidiary can enhance the quality of headquarters-subsidiary relationship for the following reasons. First, the Chinese MNE headquarters and the subsidiary that operates overseas can be exposed to the situation of mutual vulnerability (Ghoshal & Nohria, 1989), due to the constantly changing home institutional environment and the limited international experience, which means a great deal of uncertainties at both home and abroad. The high level of organizational exchange enables headquarters and subsidiary to be more prepared for unpredicted contingencies, which makes their goal attainment more predictable (Ghoshal & Nohria, 1989), and promotes mutual trust between headquarters and subsidiary in the future operations (Anderson & Narus, 1990). Second, the organizational exchange between headquarters and subsidiary could enhance the ideological agreement and goal compatibility, which consequently reduces the direct influences such as control and intervention from the headquarters

(Frazier, 1983). This leads to a higher level of satisfaction of relationship between headquarters and subsidiary. Third, the organizational exchange can mitigate the intra-firm conflict by bridging the perception gaps between headquarters and subsidiary due to the information asymmetry (Schotter & Beamish, 2011). Therefore, the communication effectiveness can be enhanced by the frequent flow of information between headquarters and subsidiary. In addition, this intra-firm exchange leads to a synergy of joint effort from the headquarters and subsidiary to achieve higher levels of corporate outcome such as better financial performance (Cray, 1984), and this can subsequently encourage more commitment from both headquarters and subsidiary to their future operations. The discussion above illustrates that the high level of organizational exchange can promote headquarters-subsidiary relationship to an in-group relationship with higher levels of communication effectiveness, mutual trust, commitment, as well as satisfaction between the two parties. Therefore, it is hypothesized that:

**Hypothesis 3a (H3a):** *In Chinese MNEs, the level of organizational exchange between headquarters and subsidiary is positively associated with the quality of the headquarters-subsidiary relationship.*

Headquarters' ownership in subsidiary indicates the extent to which headquarters can control and coordinate the subsidiary's actions with the rest of the organization, and it also has implications for the subsidiary's emphasis on local responsiveness over global integration (Yu, Subramaniam, & Cannella, 2009). Prior study suggests that when the Chinese MNEs expanding overseas their ownership strategy is either a wholly owned subsidiary or a joint venture (Cui & Jiang, 2012). It is argued that the different types of ownership strategy will moderate the influence of organizational exchange on the quality of the headquarters-subsidiary relationship.

Empirical evidence suggests that Chinese MNEs are motivated to invest overseas to either seek strategic assets to address their competitive disadvantages, or to exploit firm-specific advantages, which leads to different FDI ownership strategies (Cui & Jiang, 2010). In the case of asset-seeking FDI, Chinese MNEs tend to establish a subsidiary that is jointly owned with the local partner firm, as the joint venture

provides good opportunity for knowledge spillover (Lane, Salk, & Lyles, 2001; Steensma & Lyles, 2000), so it is easier for them to acquire the strategic assets owned by their partner firms. This role of subsidiary is called the integrated player, which engages in high levels of information inflow and outflow, and the rest of the firm can utilize the knowledge it acquired (Gupta & Govindarajan, 1991). During the knowledge spillover process in the subsidiary, the Chinese MNE headquarters will have access to the local partner firm's proprietary knowledge and try to internalize this knowledge (Spencer, 2008). It is argued that the internalization process of local partner's proprietary knowledge will increase the vertical interdependence (Hewett, Roth, & Roth, 2003) and facilitate the organizational exchange between the Chinese MNE headquarters and subsidiary. Therefore, the Chinese MNE headquarters can absorb the new knowledge and address its competitive disadvantage more quickly. As a result of the organizational exchange between headquarters and subsidiary, both sides can achieve higher levels of commitment, communication effectiveness, trust and satisfaction, which lead to a higher quality of headquarters-subsidiary relationship. Furthermore, in a subsidiary jointly owned by Chinese MNE and local partner firm, it is also reasonable to expect that the local partner will require a certain level of local responsiveness. This difference in goal configuration is likely to result in less integrated efforts (Child, 1974). In order to minimize the potential conflict generated by the goal incongruence between the Chinese MNE and host country partner firm, it is reasonable to argue that there will be a higher level of organizational exchanges between the Chinese MNE headquarters and host country partner firm via subsidiary for goal reconciliation and reconfiguration. The increased level of organizational exchange will bridge the ideological gaps between the Chinese MNE headquarters and the host country partner firm, which consequently leads to less conflict between the Chinese MNE headquarters and the host country partner firm, as well as between the Chinese MNE headquarters and the subsidiary, and therefore leads to a higher quality of headquarters-subsidiary relationship.

When MNEs entering a host country to exploit their firm-specific advantage, they prefer to establish a wholly owned subsidiary to safeguard their proprietary knowledge, and it also minimizes the unwanted dissemination (Demirbag, Glaister, & Tatoglu, 2007). Therefore, the subsidiary is playing the role of implementer, which has a low level of information outflow (Gupta & Govindarajan, 1991).

Although the subsidiary has a high level of information inflow at the initial stage of its establishment, it is argued that the information inflow from headquarters will be lower as the subsidiary's operation moves into a maturer stage, where only a small amount of information is required from the headquarters. Therefore, the level of organizational exchange will decrease, which leads to a lower quality of relationship between headquarters and subsidiary. Based on the discussion above, it is hypothesized that:

**Hypothesis 3b (H3b):** *In Chinese MNEs, the relationship between organizational exchange and quality of the headquarters-subsidiary relationship is weaker when the subsidiary is wholly owned by the Chinese parent compared to a jointly owned venture.*

Subsidiary's entry mode is considered as an important issue for the MNEs when expanding into overseas markets and it has implications for the headquarters-subsidiary relationship because it influences the way the subsidiary is managed (Harzing, 2002). The greenfield entry mode involves the establishment of brand new facilities in the host country by the MNE headquarters, whereas in the merger and acquisition (M&A) entry mode, MNE headquarters partially or fully merge or takeover both assets and liabilities of the established local firm (UNCTAD, 2013). Following the same logic of discussions above, it is argued that the entry mode will also moderate the influence of organizational exchange on the quality of the headquarters-subsidiary relationship, due to the cultural difference between the headquarters and subsidiary (Chakrabarti, Gupta-Mukherjee, & Jayaraman, 2008), as well as the differences in the spillover effect between greenfield and M&A (Liu & Zou, 2008).

Compared to the greenfield entry mode that entails establishment of new facilities in the host country by the headquarters, the merger and acquisition entry mode needs to integrate an established host country firm into the organization, which will face the integration issue between the headquarters and subsidiary. The cultural disparity between the headquarters and the newly merged or acquired subsidiary is regarded as one of the major sources of poor post-acquisition performance and failure, as it poses

serious challenges to organizational integration (Chakrabarti et al., 2008). However, it is argued that the cultural collisions between the headquarters and subsidiary will assist rather than hinder the inter-organizational exchange between the headquarters and subsidiary, as the national cultural distance brings attractiveness instead of stress (Very, Lubatkin, & Calori, 1998). Because of the cultural difference, both the headquarters and the subsidiary will be more prepared and more willing to work together and to bridge these cultural differences (Goulet & Schweiger, 2006). Hence it is more likely to have a high level of organizational exchange between the headquarters and subsidiary. In a subsidiary established via greenfield mode, where most of the values, norms and practices are coming from the headquarters, the cultural differences between the headquarters and the subsidiary will be much smaller, and therefore, the level of organizational exchange required will be much lower compared to the ones established by merger and acquisition mode. In addition, to the Chinese MNEs, merger and acquisition entry mode is considered as the best channel for learning and innovation, especially in the high-tech industry, where the target firm possesses certain scarce resources that are not owned by the acquirer firm (Liu & Zou, 2008). It is therefore argued that the level of organizational exchange between headquarters and subsidiary will be much higher in those subsidiaries established via merger and acquisition modes compared to the ones established through greenfield entry mode.

For the Chinese MNEs, their subsidiary is the key source for the acquisition of strategic assets including research and development capacity, innovation capability, technological knowledge, market knowledge and management know-how. It is expected that there will be a higher level of information and resource outflow from the newly merged or acquired subsidiary, i.e., the transfer of strategic assets to the rest of the organization. As mentioned earlier, there will also be a higher level of information inflow to the newly established subsidiary, given that the subsidiary may need to adapt or acculturate part of MNEs' norms, values and systems to achieve certain degree of congruence with the headquarters (Nahavandi & Malekzadeh, 1988). However, in the subsidiary that is established via greenfield mode, there will be a higher level of information outflow from the headquarters only at the early stage of establishment, so that the technological knowledge can be transferred to the subsidiary. Once the subsidiary is fully established, there will be a much lower level

of information outflow from the headquarters. Hence a lower level of organizational exchange can be expected in comparison to the ones that are established via merger and acquisition. Based on the discussions above, it is hypothesized that:

**Hypothesis 3c (H3c):** *In Chinese MNEs, the relationship between organizational exchange and quality of the headquarters-subsidary relationship is weaker when the subsidiary is established via greenfield compared to the ones that are established via merger/acquisition entry mode.*

#### ***4.3.2.2 Managerial Exchange and Quality of Headquarters-Subsidiary Relationship***

In the context of MNEs, the subsidiary is established to fulfil headquarters' certain goals and objectives, which is characterized as the principal-agent relationship (Mudambi & Navarra, 2004). This relationship is even more salient in the Chinese MNEs that use overseas foreign direct investment (OFDI) as a 'springboard', which enables them to overcome their latecomer disadvantage by acquiring strategic resources overseas (Luo & Tung, 2007). In this relationship, the headquarters managers are responsible for formulating the overall strategies of the entire firm, and subsidiary managers are in charge of the implementation of headquarters' strategy and achieving its strategic goal. Therefore, the headquarters managers are the leaders and the subsidiary managers are the subordinates. The exchange between managers at headquarters and subsidiary is similar to the exchange relationship encapsulated in the Leader Member Exchange theory (LMX), which describes a dyadic relationship that exists in the organization context (Aryee & Chen, 2006).

The LMX theory focuses on the interaction between leader and individual member, and it contends that the outcome of leadership relies on the amount of interaction which exists between leader and members, i.e., the quality of leader-member relationship is determined by the level of exchange between leader and subordinates (Duchon et al., 1986). Dansereau, Graen, and Haga (1975) classified LMX into two categories as in-group exchange and out-group exchange. The in-group exchange is described as a partnership and the member from in-group usually go beyond their



expected roles and receive special attention from the leader. It is characterised by reciprocal influence, extra-contractual behaviour exchange, mutual trust, respect and liking, as well as a sense of common fate, which is a high quality relationship. On the other hand, the out-group exchange is more like a contractual relationship, and the member only tries to fulfil their contractual obligations, which indicates a low quality relationship. It is argued that the increased level of exchange between headquarters managers and subsidiary managers is likely to form an in-group exchange where extra-contractual behaviour exchange can be expected in addition to the duties stated on their job description. This is particularly evident in emerging economies such as China, where people tend to cultivate close interpersonal ties commonly known as Guanxi (Peng & Luo, 2000), and the Chinese managers rely heavily on their cultivated personal ties to deal with contingencies (Child, 1994).

In Chinese MNEs, managerial exchange is fortified by Guanxi between headquarters managers and subsidiary managers, which can impact on the headquarters-subsidiary relationship quality based on its operating principle of dynamic reciprocity (Chen & Chen, 2004). As the cornerstone of Chinese society, Guanxi that involves reciprocity of favour exchanges has a profound influence on Chinese social and economic interactions (Yang, 1967). The Chinese reciprocity is characterised by long-term orientation, i.e., the payback or return of favour is not immediate (Yang, 1994). This means that if headquarters manager and subsidiary manager exchange develops Guanxi, it will last for a long period of time, which indicates that they need to keep in touch with each other so they can have effective long-term communication. The reciprocity is also characterised by unequal exchange that return of favour will be more than what has been received (Hampden-Turner & Trompenaars, 1997). This unequal payback of favours enables the relationship to become sustainable in two dimensions. First, this means that people in this relationship sincerely value this relationship and take care of the other's wellbeing (Chen & Chen, 2004). Therefore, if there is good Guanxi between headquarters and subsidiary managers developed via a high level of managerial exchange, both headquarters and subsidiary manager are very likely to have higher levels of commitment in this relationship, and a high level of trust between each other. Second, the payback of favour leads to the feeling of gratitude and indebtedness on the receiving party's side. It helps the receiving party to return the favour in the future whenever it is needed (Chen & Chen, 2004). This

indicates that the receiving party is satisfied and will be more committed in this trustworthy relationship. Therefore, the high levels of managerial exchange between headquarters and subsidiary cultivate good Guanxi, which leads to a high quality relationship between the headquarters and subsidiary managers.

Given the long Confucian tradition of collectivism in China (Earley, 1993), it is argued that exchange between headquarters and subsidiary managers has strong implications not just for interpersonal dynamics, but also for inter-organizational dynamics such as the headquarters-subsidary relationship. When the personal exchange is used by the organization for whatever purpose, the personal exchange will have an impact at the organizational level (Luo, 1997). The personal networks and ties will not only facilitate the exchange of favours at the individual level between the managers in subsidiary and headquarters, but also stimulate the exchange of information and resources at an organizational level between subsidiary and headquarters when the networks and ties between managers in subsidiary and headquarters are used for organizational purposes. As discussed by Peng and Luo (2000), the good managerial relationships with other firms may facilitate inter-firm collaboration and implicit collusion at the organizational level. It is argued that during the exchange between Chinese MNE headquarters manager and subsidiary manager, they can exchange not only personal information, but also work-related information with each other, which develops a high quality relationship, i.e., in-group relationship between headquarters and subsidiary. For instance, subsidiary managers can pass their in-depth local market knowledge to headquarters managers during their exchange of personal information. This will help the headquarters managers to make a more informed decision, and to commit adequate resources to the subsidiary to achieve their financial and strategic goals. This exchange of information or resources can be viewed as a reciprocal exchange of favours at the managerial level which will benefit both headquarters and subsidiary at the organizational level, and this will again lead to the development of Guanxi between the headquarters managers and subsidiary managers at an organizational level. Therefore, the managerial exchange could have an impact at the organizational level, and it helps to promote the communication effectiveness, trust, commitment and satisfaction at the organizational level between headquarters and subsidiary, thus achieving a higher quality of headquarters-subsidary relationship. As a result, a high

level of exchange between managers at headquarters and subsidiary via their close ties, or Guanxi, can have a positive impact on the quality of the headquarters-subsidiary relationship, and it is hypothesized that:

**Hypothesis 4a (H4a):** *In Chinese MNEs, the level of managerial exchange between headquarters and subsidiary key managers is positively associated with the quality of the headquarters-subsidiary relationship.*

The subsidiary manager's identification with subsidiary is defined as the degree to which the subsidiary manager experiences a state of attachment to the subsidiary. Social identity theory suggests that the individual who identifies with a social group will adopt the group's norms as well as values, and acts according to the prototype of that social group (Hogg & Terry, 2000). When the subsidiary manager has a weaker organizational identity with the subsidiary but a stronger organizational identity with the headquarters, it may change his/her perception of headquarters managers from 'us' and 'them' to a more inclusive 'we'. The subsidiary manager is more likely to share a common organizational membership with the headquarters managers, and to become more cooperative in terms of dealing with headquarters managers. This is particularly evident in the context of Chinese MNEs for two reasons. First, the higher level of association with headquarters in the home country means more resource endorsement, which can increase their power and prestige, as well as compensation (Jensen & Murphy, 1990; Shleifer & Vishny, 1989). Second, under the heavy influence of Confucius ideology, being more identified with Chinese headquarters (especially for the SOEs) shows the loyalty of the subsidiary manager to the home country (in this case - China), together with his/her overseas working experience, can weigh heavily in their career such as promotion in the future. As a result, this could lead to a more salient subsidiary manager's dual-organizational identity with both the headquarters and subsidiary, which is the key to form the cooperative inter-organizational relationship (Ashforth & Mael, 1989; Gaertner, Dovidio, Rust, Nier, Banker, Ward, Houlette, 1999; Hogg & Terry, 2000). As a result, less conflict between headquarters and subsidiary managers during their exchange process can be expected, and this could make the relationship between headquarters and subsidiary

managers to become more harmonious and more productive, which consequently enhances the quality of the headquarters-subsidary relationship.

On the other hand, when the subsidiary manager has a strong organizational identity with the subsidiary, they feel their oneness and belongingness to the subsidiary, which later contributes to their organizational membership (Kostova & Roth, 2002). The strong organizational identity also increases the cooperation between organizational members as they share the same identification, thus more competition with non-members (Dutton, Dukerich, & Harquail, 1994). The organizational identification process can lead to either hostile or cooperative intergroup relations (Ashforth & Mael, 1989), and it can also impact the link between managerial exchange and quality of headquarters-subsidary relationship. In the case where the subsidiary manager has a strong organizational identity with the subsidiary, it means the subsidiary manager is more closely associated with the subsidiary and other subsidiary managers. This is likely to form an in-group relationship, so the subsidiary manager will share the same organizational membership with other managers at the subsidiary, as well as adopt subsidiary norms and values. Furthermore, this organizational identity with subsidiary will differentiate the subsidiary manager from the headquarters and headquarters managers, and the subsidiary manager will be labeled as out-group. As a result, the subsidiary manager's bond with headquarters managers will be weaker, and this may even foster hostile attitudes, disagreement, and even rivalry, which is also likely to undermine the establishment of cooperative inter-organizational relations (Richter et al., 2006). Based on discussions above, it is argued that subsidiary manager's organizational identity with subsidiary will have a negative impact on the relationship between managerial exchange and quality of the headquarters-subsidary relationship. Therefore, it is hypothesized that:

**Hypothesis 4b (H4b):** *In Chinese MNEs, the relationship between managerial exchange and quality of headquarters-subsidary relationship is weaker when the level of subsidiary manager's organizational identity with the subsidiary is higher.*

### **4.3.3 Upper Echelons Perspective Variables**

#### ***4.3.3.1 Global Mindset and Quality of Headquarters-Subsidiary Relationship***

The construct of managers' global mindset, which represents managers' cognitive capabilities, has received an increasing amount of attention from scholars, as it has become a critical factor in determining organizational outcomes (Levy, 2005; Murtha et al., 1998). Bartlett and Ghoshal (1990) indicate that the intensified competition in the international market requires that the focus of research shift from structural and administrative mechanisms to cognitive capabilities, such as mindset. Managers' global mindset is defined as 'a highly complex cognitive structure characterized by an openness to and articulation of multiple cultural and strategic realities on both global and local levels and the cognitive ability to mediate and integrate across this multiplicity' (Levy et al., 2007, p. 244). It is regarded as a proxy for firms' information-processing capabilities, as theorists suggest that firms' information-processing capacities are represented by the cognitive abilities of their organizational members (Wood & Bandura, 1989).

When operating overseas, MNEs face a less familiar market environment and thus a high level of uncertainty. Under these circumstances, managers' global mindset is critical for firms' strategic response because managers' information-processing capabilities affect how they interpret and react to the environment (Daft & Weick, 1984; Smircich & Stubbart, 1985). Two elements are identified as the underpinnings of global mindset: conceptualisation and contextualisation. Conceptualisation is how a person comprehends or thinks about himself/herself as a part of the global environment, whereas contextualisation refers to a person's ability to act and adapt his or her ideas to the local environment (Arora, Jaju, Kefalas, & Perenich, 2004). The elements of conceptualisation and contextualisation are manifested in managers' knowledge and skills. Managers' knowledge includes the mastery of technology and the understanding of social-political factors and cross-cultural issues, and knowledge is put into action via managers' skills, which involves acculturation and leadership (Kedia & Mukherji, 1999).

Managers with a more global mindset have a rich reserve of knowledge and a diverse set of skills. Knowledge increase managers' cognitive complexity by allowing managers to be more open to different ideas and to be more aware of social-cultural dynamics. Moreover, diversity in skills enhances managers' cognitive complexity by mediating and integrating ideas and actions from both local and global environments (Levy et al., 2007). Managers with diversified knowledge and skills are creative and nimble in solving strategic problems, such as global integration versus local adaptation (Dutton & Duncan, 1987). This high level of cognitive complexity also renders managers less likely to be influenced by 'groupthink' (Bantel & Jackson, 1989) or subject to 'domestic myopia' (Barkema & Vermeulen, 1998). Therefore, it is argued that subsidiary managers with a more global mindset foster procedural justice among MNE headquarters and subsidiaries, as they can offer a more holistic approach in their decision-making process instead of being biased. Such procedural justice, which involves a nonbiased decision-making process, will be perceived by both the headquarters and the subsidiary and will subsequently enhance commitment and trust between the two entities. In addition, higher levels of cognitive complexity allow subsidiary managers to handle complex situations and even conflicting demands, which enable them to both solve difficult issues and reconcile conflicts and paradoxes (Murtha et al., 1998). Thus, a higher level of satisfaction between the headquarters and the subsidiary in organizations with such managers can be expected. Based on the discussion above, subsidiary managers with a more global mindset will develop a higher level of cognitive complexity, which enables them to make less biased decisions and to promote procedural justice among headquarters and subsidiaries. This sense of fairness will then enhance the commitment and trust between the two parties. Higher levels of cognitive complexity also render subsidiary managers better able to solve conflicts and paradoxes, which leads to a higher level of satisfaction between the headquarters and the subsidiary, and thus a higher quality headquarters-subsidiary relationship. Therefore, it is hypothesized that:

**Hypothesis 5a (H5a):** *In Chinese MNEs, the level of subsidiary managers' global mindset is positively associated with the quality of the headquarters-subsidiary relationship.*

Based on the cognitive view of information-processing theory, organizations' information-processing capacities can be influenced by their managers' personal characteristics (Egelhoff, 1991). In today's dynamic international market environment, managers are required to be flexible and responsive in order to address complexity and contradiction (Kedia & Mukherji, 1999). Researchers suggest that personality flexibility refers to the adaptability of individuals' thinking and social behaviour (Miller & Toulouse, 1986), can influence their decision making and the focus of their communication (McGuinness, 2004). Personality flexibility is also associated with individuals' level of tolerance for ambiguity and uncertainty. Prior research suggests that managers with a flexible personality are open to multiple modes of understanding (Nutt, 1993), whereas managers with a non-flexible personality are not only more rigid, formal, and methodical in their thinking, they are also more likely to conform to authority, custom, and tradition (Gough, 1960).

It is argued that subsidiary managers with a non-flexible personality are less willing to acquire new knowledge and new skills during business operations, as they are less likely to react and adapt to uncertain and changing conditions (Wissema et al., 1980). When operating overseas, managers face uncertainties due to unfamiliarity with the host-market environment. Subsidiary managers with non-flexible personality are less likely to engage in open-ended communication (McGuinness, 2004); thus, they are less likely to explore and to seek out new information from different sources. Subsidiary managers with a non-flexible personality are also unwilling to embrace new technologies, such as information systems and telecommunication, or to improve their mastery of these technologies (Kedia & Mukherji, 1999). Therefore, conceptualisation by subsidiary managers with non-flexible personality could be undermined by their lack of knowledge compared to managers with flexible personalities. Subsidiary managers with a non-flexible personality are also less likely to be influenced by their intuition and external events in determining a course of action (Isenberg, 1984). Furthermore, subsidiary managers with a non-flexible personality are less inclined to seek change and transformation (Nutt, 1993). Therefore, it is more difficult for them to understand and adapt to a foreign culture than managers with a flexible personality; thus, managers with a non-flexible personality will have lower acculturation skills. In addition, understanding different cultures and possessing acculturation skills enable subsidiary managers to leverage

the differences between cultures, which can improve their leadership skills in managing diversity. Therefore, subsidiary managers with a non-flexible personality are less likely to have high acculturation and leadership skills. Further, such managers are less capable of adapting their strategies to the local market to achieve their goals, which indicates a lower level of contextualisation. In summary, subsidiary managers with a non-flexible personality are less likely to increase their knowledge and less likely to develop their acculturation and leadership skills, which undermines the development of a global mindset and leads to a lower quality headquarters-subsidiary relationship. This discussion leads to the next hypothesis:

**Hypothesis 5b (H5b):** *In Chinese MNEs, the relationship between the level of managers' global mindset and quality of the headquarters-subsidiary relationship is weaker when the managers have a non-flexible personality.*

The existing literature suggests that managers' global mindset can be enhanced and sustained by sufficient knowledge and skills, whereby knowledge enables the manager to better understand the world from different perspectives, and skills enable managers to work more effectively to achieve firm goals (Kedia & Mukherji, 1999). Research also indicates that several strategies can be used to develop global leaders, one of which is to expose managers to a foreign environment by sending them overseas (Gregersen, Morrison, & Black, 1998). Such research suggests that overseas study is a direct immersion experience (Vance, 2005), during which managers are exposed to a foreign environment. Accordingly, it is argued that overseas study experience can enrich managers' knowledge, which enables them to better understand the world, as well as to comprehend themselves as part of the world. This understanding then leads to a higher level of conceptualisation. Overseas study experience can also increase managers' skills, such as communication skills, interpersonal skills, language skills, and problem-solving skills. Subsidiary managers with a broader set of skills will be more capable of acting on their ideas and adapting them to the local environment. Thus, subsidiary managers with overseas study experience will have higher levels of contextualisation, and overseas study experience could therefore enhance managers' global mindset in terms of



conceptualisation and contextualisation, leading to a higher quality headquarters-subsidary relationship. Therefore, it is hypothesized that:

**Hypothesis 5c (H5c):** *In Chinese MNEs, the relationship between the level of subsidiary managers' global mindset and quality of headquarters-subsidary relationship is stronger when the subsidiary manager has more overseas study experience.*

#### ***4.3.3.2 Perceived Psychic Distance and Quality of Headquarters-Subsidiary Relationship***

According to the process perspective, firm internationalisation is a learning process (O'Grady & Lane, 1996), and perceived psychic distance is associated with factors that prevent or disturb information flow between firms and the market (Johansson & Wiedersheim-Paul, 1975), which impede firms' ability to learn about and understand foreign markets (Nordström & Vahlne, 1994). Therefore, psychic distance plays a key role in this learning process, and it is an important factor in explaining firms' internationalisation behaviour. The psychic distance construct is regarded as a manager's perceived degree of uncertainty about a foreign market (Kogut & Singh, 1988) and is a proxy for the costs that are incurred in learning and overcoming the uncertainty created by differences between the home and the host country in terms of culture and business practices (Ellis, 2008). For MNEs from emerging economies such as China, one major motivation for outward FDI is the acquisition of strategic assets in developed countries, such as technological and management know-how, to address competitive disadvantages and to enhance firms' competitiveness in the international market (Buckley et al., 2007), as such firms typically lag behind other firms in firm-specific advantages (Nolan, 2004). This lack of firm-specific advantage in terms of management skills (Caves, 1996), technological knowledge, and efficient production processes (Wernerfelt, 1984) in EE MNEs and their limited experience in the international market are likely to create a high level of uncertainty for EE MNEs, which lead to a high level of perceived psychic distance between home and host countries among subsidiary managers.

In the psychically distant host country, EE MNE subsidiary managers are more likely to face reciprocal nonroutine information-processing needs involving unique, infrequent, and heterogeneous information that flows back and forth between business units. These information-processing requirements must be matched with higher information-processing capabilities (Egelhoff, 1991). One of the measures to improve firms' information-processing capabilities is to implement lateral coordination mechanisms, such as allowing direct contact and establishing a liaison between different business units (Galbraith, 1973). It is argued that the implementation of lateral coordination mechanisms can lead to better strategic decision making, and enhanced commitment between the headquarters and the subsidiary through activities such as extensive research and planning. Such mechanisms also improve the effectiveness of communication between the headquarters and subsidiary by improving information gathering and transfer. More effective communication will then reduce goal incongruence and information asymmetry between an EE MNE's headquarters and subsidiary and thus reduce the likelihood of agency problems (Roth & O'Donnell, 1996). The reduced likelihood of agency problem will accordingly increase the mutual trust and satisfaction between the headquarters and the subsidiary. Hence, a higher quality headquarters-subsidiary relationship can be expected. Based on the discussion above, it is hypothesised that:

**Hypothesis 6 (H6):** *In Chinese MNEs, the subsidiary managers' perceived psychic distance is positively associated with the quality of the headquarters-subsidiary relationship.*

#### 4.3.4 Control Variables

Five control variables relating to firms' capability and demographics are included to avoid alternative explanations of the finding. The control variables are percentage of MNE's sales to overseas market, subsidiary size, percentage of Chinese parent's ownership in subsidiary, Chinese state ownership in the MNE, subsidiary manager's nationality.

*Percentage of MNE's sales to overseas market* is used to capture the multinationality of MNEs, in particular, the market diversification of MNEs (Tallman & Li, 1996),

indicating the strategic importance of the foreign operations, firm's level of involvement in foreign markets, as well as the dependence of firm on its overseas market for sales revenues (Gomes & Ramaswamy, 1999). The level of involvement and dependence in MNE's operations overseas can be expected to have impact on the headquarters-subsidary relationship as the higher level of involvement and dependence on the overseas operations can be a significant predictor of superior performance (Geringer, Beamish, & DaCosta, 1989).

*Subsidiary size* has been commonly used as a control variable in organization studies for the past few decades (Björkman et al., 2004; Delios & Beamish, 2001; Erramilli, 1996; Li, 1995; Minbaeva, Pedersen, Björkman, Fey, & Park, 2003). From the resource-based perspective, subsidiary size indicates the firms' assets, resources and capabilities (Penrose, 1959). The larger size of the subsidiary is not only associated with higher value of subsidiary to the headquarters, it is also related to the inter-organizational coordination complexity that involves inputs of managerial expertise and experience, as well as interdependence between headquarters and subsidiary, which is expected to have an influence on the headquarters-subsidary relationship (Johnston & Menguc, 2007).

*The percentage of Chinese parent ownership in the subsidiary* is also included as a control variable, since ownership ties reflect the 'weight' of a subsidiary to the headquarters. The more 'weight' the subsidiary has, the more attention it receives from the headquarters (Bouquet & Birkinshaw, 2008). It is also suggested that the larger size of the subsidiary, the more likely it will inherit the administrative heritage from the headquarters (Bartlett & Ghoshal, 1989), which has the implications for internal legitimacy within the MNE, and it can impact quality of headquarters-subsidary relationship.

*State ownership in the Chinese MNEs headquarters* is a dummy variable which is used to separate the state-owned Chinese MNEs from the non-state-owned Chinese MNEs. The state-owned Chinese MNEs have distinctive features from the non-state-owned Chinese MNEs, as the state-owned MNEs receive strong support and favourable treatment such as access to low cost finance from the Chinese government in their internationalization process (Buckley et al., 2007). The state-

owned Chinese MNEs are also known as inefficient and protected by the state government, so that they are poor candidates for internationalization when they enter competitive international markets (Rugman & Li, 2007). In addition, from the political perspective, the Chinese state ownership is an indicator of dependence on resource and political support from the home government, which makes the state-owned Chinese MNEs politically affiliated with the home government (Cui & Jiang, 2012). This political affiliation and dependence on the home government may alter their response to host country institutional pressure, which may affect the headquarters-subsidary relationship differently in comparison to those of the non-state-owned Chinese MNEs.

*Subsidiary manager's nationality* is also used as a dummy variable which distinguishes the mainland Chinese managers from the foreign national managers. Early evidence suggests that the national background of managers indicates significant differences in managerial perspectives (Zeira, 1986). Exploratory studies reveal that the manager's nationality is associated with their organizational involvement (Banai & Reisel, 1993). Prior studies also suggest that the nationality of a subsidiary manager has significant managerial implications (Gupta & Govindarajan, 1991), as the host country nationals are more familiar with the local environment and are more identified and committed to the subsidiary than the home country nationals. This identification and commitment to the subsidiary could influence how they deal with headquarters and headquarters managers, which may have a different impact on the quality of the headquarters-subsidary relationship.

#### **4.4 Summary**

In this chapter, the conceptual framework and hypotheses development based on the literature review are discussed and presented. The conceptual framework covers multiple theoretical perspectives at different levels and offers explanations from different angles, including institutional, social exchange, and upper echelons perspectives to the factors that influence the quality of the headquarters-subsidary relationship in Chinese MNEs. In total, six independent variables and six moderating variables are incorporated into the conceptual framework as the potential factors that will have an impact on the quality of the headquarters-subsidary relationship in

Chinese MNEs. The impact of these twelve variables are discussed and stated in research hypotheses, which are subject to the empirical test in the later part of the research. Table 4.2 presents the summary of hypothesized impacts of variables on quality of headquarters-subsidary relationship in Chinese MNEs.

**Table 4.2 Summary of Hypotheses**

| Hypothesis | Independent Variables      | Moderators                                      | Impact |
|------------|----------------------------|---|--------|
| H1a        | Regulative distance        |   | +      |
| H1b        | Regulative distance        | Institutionalization of headquarters' practices | +      |
| H2a        | Cultural distance          |   | +      |
| H2b        | Cultural distance          | Institutionalization of headquarters' practices | +      |
| H3a        | Organizational exchange    |   | +      |
| H3b        | Organizational exchange    | Subsidiary wholly owned by Chinese parent       | -      |
| H3c        | Organizational exchange    | Subsidiary established by greenfield mode       | -      |
| H4a        | Managerial exchange        |   | +      |
| H4b        | Managerial exchange        | Subsidiary managers' organizational identity    | -      |
| H5a        | Global mindset             |   | +      |
| H5b        | Global mindset             | Personality flexibility                         | -      |
| H5c        | Global mindset             | Overseas study experience                       | +      |
| H6         | Perceived psychic distance |   | +      |

*Note: a positive sign (+) indicates a positive impact*

*a negative sign (-) indicates a negative impact*



## CHAPTER 5 METHODOLOGY

### 5.1 Introduction

This chapter describes the methodology applied in the research. This research employs a quantitative empirical study to test the conceptual framework and hypotheses that are derived from it. The quantitative method used in this research is introduced in this chapter. Section 5.2 introduces the definition of population in this research as determined by the research objectives and research questions stated in the previous chapters. Section 5.3, 5.4, 5.5, 5.6 and 5.7 describe the sample frame, survey approach, development of instrument, survey process and data analysis methods respectively. Section 5.8 provides a conclusion remark for the contents to end this chapter.

### 5.2 Population Definition

Population is the entire group under study as determined by research objectives and research questions. The current research investigates determinants of quality of headquarters-subsidiary relationship in Chinese MNEs. Therefore, in this research, the population under investigation is the Chinese OFDI firms that own at least one foreign affiliate outside mainland China and their foreign affiliates, or in other words, the parent firms of Chinese firms' foreign affiliate and their corresponding foreign affiliates. As stated in Chapter 1, a Chinese OFDI firm is defined as a firm that is Chinese owned and located in mainland China that is engaged in outward FDI activities in countries and territories outside mainland China (including Hong Kong, Macau and Taiwan).

The Chinese Ministry of Commerce (MOFCOM) and the National Bureau of Statistics (NBS) of China jointly publish the '*Statistical Bulletin of China's Outward Foreign Direct Investment*', and it is used as the official source of information for the population of this research. By the time the data collection process was conducted for this research, there has been seven issues of the statistical bulletin published, which covers the period from 2003 to 2009 and shows some characteristics of the population. According to the statistical bulletin, the size of population has increased more than 400% from 2003 to 2009. Given the heavy influence from the Chinese

government, at the earlier stage of this period, the state-owned enterprises (SOEs) play a major role in Chinese OFDI and the proportion of SOEs is 43% by the end of 2003, which continuously declined over the period to 13.4% by the end of 2009 as shown in Table 5.1. This indicates a sharp increase of the private firms' and public firms' contribution to the Chinese OFDI activities, which implies that they are becoming a more active and dominant force in China's OFDI development.

**Table 5.1 Population Size and SOE Proportion 2003-2009**

| Year | Population Size (number of firms) | SOE Proportion (%) |
|------|-----------------------------------|--------------------|
| 2003 | N.A.                              | 43                 |
| 2004 | 2,965                             | 35                 |
| 2005 | 4,021                             | 29                 |
| 2006 | 5,000                             | N.A.               |
| 2007 | 7,000                             | 19.7               |
| 2008 | 8,557                             | 16.1               |
| 2009 | 12,072                            | 13.4               |

According to the statistical bulletin, the population's geographic distribution is uneven across China, with a majority of the firms from provinces with better developed economy, i.e., mainly located in the eastern and southeast coastal areas of mainland China. Amongst all the Chinese OFDI firms, 71% of the population is located in the seven coastal provinces of Zhejiang, Jiangsu, Shandong, Guangdong, Fujian, Shanghai, and Heilongjiang by the end of 2009 (see Figure 5.1). The province of Zhejiang has the largest number of Chinese OFDI firms, accounted for 21.4% of the population, while 70% of the private-owned Chinese OFDI firms are located in the provinces of Zhejiang and Fujian (MOFCOM, 2010).



**Figure 5.1 Location Distribution of Population in 2009**



71% of the population concentrated in the seven provinces marked with ★

Map Source: *The China Report*

URL: [http://www.drben.net/ChinaReport/Sources/China\\_Maps/Provinces/China\\_Provinces\\_Capitals-All-Map1.html](http://www.drben.net/ChinaReport/Sources/China_Maps/Provinces/China_Provinces_Capitals-All-Map1.html) (accessed 16 August 2014)

Although the statistical bulletin provides an overview for the development of Chinese OFDI, it only contains brief and aggregate information of the population at the national and provincial level, without detailed information at the firm level. This inadequate information on the population at the firm level can be explained by a number of reasons. First, as discussed in Chapter 2, the continuous fast growth of Chinese OFDI in terms of volume and number of investment projects, as well as the constantly changing composition of OFDI firms makes the population very dynamic. Secondly, the Chinese government has restricted access to the official list of OFDI firms, which is kept confidential from the public. This restriction on accessibility aims to protect OFDI firms' legal rights and business interest. Thirdly, Chinese firms are reluctant to disclose their business information, and the information related to

their foreign investment activities is also well guarded. According to MOFCOM (2010), less than half of the Chinese OFDI firms are publicly listed, and disclose their information under the stock market regulations. Therefore, the majority of Chinese OFDI firms' information is not available to the public. In addition, compared to China's inward FDI, which has attracted attention from scholars and business practitioners, Chinese firms' OFDI is a relatively new phenomenon, a directory produced by a third party was not yet published at the time this research was conducted.

### 5.3 Sample Frame

As discussed in Section 5.2, a list of Chinese OFDI firms was not available at the time this research was conducted, which means there is not a complete and correct list of population members and this is not an ideal sample frame (Cooper & Schindler, 2003). In this study, a sample frame was constructed by using the publicly available information, i.e., government publication and information services at state, province and municipal levels, Chinese stock market listed company database and various other sources. This method of sample frame construction has also been used by international business scholars for their data collection (Yang, Wang, & Su, 2006). Table 5.2 shows the sample frame composition of this study.

**Table 5.2 Sample Frame Composition**

| Sample Source                          | Number of Firms |
|--|-----------------|
| 1. MOFCOM statistics bulletin appendix | 72              |
| 2. Provincial government website       | 914             |
| 3. Stock market database               | 45              |
| 4. Related newspaper publications      | 350             |
| Total                                  | 1,381           |

At the state level, '*Statistical Bulletin of China's OFDI*' is the only official source of information. It is published every September by the government, and by the time the research was conducted, the latest version was '*2009 Statistical Bulletin of China's OFDI*' published in September 2010. In the 2010 issue, the statistical bulletin includes an appendix with a list of top fifty OFDI firms ranked by their FDI stock volume, total foreign assets size, and foreign revenue. After combining the three lists

and eliminating the overlaps, a total of seventy-two firms were extracted from the 2010 issue of statistical bulletin. At the provincial level, the information service website from provincial government also provides a list of OFDI firms. Some provinces such as Beijing, Tianjin, Chongqing, Henan, Shandong and Fujian, have a partial list of OFDI firms that are located within the province. A total number of 914 firms were identified from these websites after eliminating the overlaps from the previous sources. The author also used databases for listed companies in Chinese stock markets as the third information source for sample frame construction. In total, there are over 1300 Chinese firms listed in the Shanghai and Shenzhen stock exchange. After scanning their annual report, 45 firms with ten per cent of equity ownership or more in their overseas affiliates were extracted. Lastly, the search engines were used to capture the online contents that contain key words such as ‘Chinese FDI firms’ and ‘Chinese outward investment’. In total, 350 OFDI firms were identified from this web search. To ensure the reliability of this web search result, the author crosschecked the result by verifying the firms with business yellow page and telephone directory service, and only the ones with valid contact numbers and emails were included into the sample frame. After searching from the four sources of information, the sample frame were expanded to 1,381. A comparison between the sample frame and population is shown in Table 5.3.

**Table 5.3 Comparison between Population and Sample Frame**

|                                   | Population | Sample Frame |
|-----------------------------------|------------|--------------|
| Number of firms                   | 12,072     | 1,381        |
| Number of provinces covered       | 31         | 28           |
| Proportion of top seven provinces | 71%        | 79.29%       |

According to Table 5.3, the sample covers 11.44 percent of the population and 28 provinces, which is comparable to the population in terms of geographic distribution.

#### **5.4 Survey Approach**

This research used mail survey approach as the major data collection method, and this approach is adopted due to the following reasons. First, as stated in Section 5.2, there is limited information available regarding Chinese OFDI at the firm level, and

these currently available secondary data were unable to answer the research questions of this study. Therefore, the use of primary data rather than secondary data is required to achieve the objectives of this research. Furthermore, the researcher argues that managers' decision making is based on both the objective data and their subjective judgement (Bell, 1996), and the primary data is superior to secondary data in capturing managers' perception. Hence, the mail survey will provide primary data which offers more insightful information (Luo, 2003; Mudambi & Navarra, 2004). Secondly, as described in Section 5.3, there are 1,381 Chinese OFDI firms identified in the sample frame and they are located in 28 provinces in the country. Given that this is a large-scaled study with geographically dispersed sample, self-administered survey via email or mail will be more feasible than other data collection methods as it is less time consuming and costs are lower (Cooper & Schindler, 2003). Thirdly, the mail survey is more likely to achieve a higher response rate compared to the other forms of data collection methods. Since the survey subjects are senior executives in charge of OFDI operations in the Chinese MNEs, they are usually occupied by busy work schedules that involve frequent business meetings and travels. Moreover, it is a common scene that in Chinese firms there are secretaries, personal assistants and office managers that act as corporate gatekeepers for executives at senior managerial positions. Many of them are instructed to directly reject interview requests from media and researchers, as the interviews are regarded as non-beneficial to their business and time consuming. In addition, in countries with high power distance culture like China, hierarchy of power is valued, and people with different status are treated differently (Tse, Pan, & Au, 1997). A researcher without strong government endorsement or strong personal connections is unlikely to obtain an interview opportunity. In comparison, a survey questionnaire with cover letter and introductory letters demonstrating government endorsement is much more likely to be accepted and passed to the senior executives for their consideration, instead of being rejected in the first place. Lastly, mail survey also has higher data reliability over other forms of survey. Compared to interviews, respondents have more time to consider their answers to the survey questions, which can give respondents flexibility that they can complete the questions in more than one attempt. This also allows them to collect additional information and change their answers to better reflect their opinions when it is necessary. Mail survey method is also regarded as impersonal, thus providing more anonymity than the other communication methods (Cooper & Schindler, 2003).

Higher levels of anonymity can reduce the likelihood of common method variance (Chang, van Witteloostuijn, & Eden, 2010), as the respondents are less likely to provide biased answers. In conclusion, the mail survey approach is selected based on the nature and objective of this research, the consideration for time and financial cost, as well as its effectiveness in collecting a large amount of high quality information.

## **5.5 Instrument Development**

In this research, a pair of questionnaires was sent to senior executives in Chinese OFDI firms' headquarters and overseas subsidiary separately as the instrument for data collection. These questionnaires were designed and developed by the author, reviewed by management and economics scholars and Chinese business practitioners, then was pre-tested by a small group of senior executives in one Chinese OFDI firm.

### **5.5.1 Questionnaire Design**

A pair of questionnaires was designed and developed in English based on the conceptual framework of the research, termed slightly different for senior executives in headquarters and subsidiary, and then translated into Chinese. The Chinese version questionnaires were sent to three reviewers for linguistic advice and translation modification. The first reviewer is a professor in management from Curtin University who is a Chinese born Australian citizen with more than twenty years living and working in Australia, and he is a native speaker of Chinese and proficient in English. The second reviewer is a PhD student in Economics from Southwestern University of Finance and Economics in China. She is a Chinese citizen who has a high level of bi-lingual skills in both Chinese and English. The two reviewers focused on the accuracy of translation from the English version to the Chinese version, especially for the meanings of words and expressions. The third reviewer is a department manager in charge of overseas operation and expansion from one of the Chinese SOEs current engaged in OFDI. She is native Chinese speaker with a high level of proficiency in English reading. She is also familiar with business, economic, political and cultural terms in both academic and business practices. Her revision was focused on the appropriateness of the language and layout of the Chinese version questionnaire. After revision was completed by the three reviewers, the author modified the Chinese version accordingly with a better structure and easier language

that is suitable for the targeted respondents, i.e., the senior executives in both headquarters and overseas subsidiary of Chinese OFDI firms. Short explanations for terminologies were also added to aid the respondents' understanding of the question wherever is needed.

The questionnaires include a brief introduction to respondents for layout of the questionnaires. The main body of the questionnaires is divided into two large parts, the first part focused on the managers' perceptions on issues that are related to the quality of the headquarter-subsidiary relationship, the second part collects the firm's background information and demographic information of the respondent. The questionnaires are designed to take approximately thirty-five minutes to complete. Most of the questions that are related to managers' perceptions ask respondents to mark their answers on a five-point scale, and questions that are related to a firm's background information and a respondent's demographic are single or multiple choice questions, as well as open-ended questions. Both English and Chinese versions of the questionnaire for headquarters and subsidiary are attached in the appendix of this thesis (see Appendix 1: Survey Documents).

### **5.5.2 Questionnaire Pre-test**

A questionnaire pre-test was carried out prior to the formal delivery. The three participants for the pre-test are managers in charge of overseas operations chosen from one Chinese OFDI firm that have personal connections with the author. Firstly, the questionnaires were emailed and faxed to the participants, and the participants responded promptly within three working days. Ambiguities in some of the questions were pointed out. The author rephrased the questions accordingly with more accurate wording and better structured questions. The revised version of the questionnaire was sent to the three managers one week later for a second round pre-test, and the author followed up by phone calls. The feedback from the three managers indicated that they are generally satisfied with the contents and length of the questionnaire and three of them completed the whole questionnaire within the designed thirty-five minutes time frame.

## **5.6 Survey Process**

After receiving approval from the Human Research Ethics Committee of Curtin University (protocol SOM-33-11), the questionnaire survey was carried out from January 2012 to July 2012. Being a large-scaled research involving Chinese MNEs headquarters and overseas subsidiaries, the author expected a high level of difficulty. Prior studies of Chinese OFDI at firm level predominately used case study method (e.g., Liu & Li, 2002; Young, Huang, & McDermott, 1996), or by using secondary data from available publications (e.g., Buckley et al., 2007; Yang, 2005), which is mainly due to the difficulties in accessing reliable data. Compared to the questionnaire survey in western society, there are several reasons that contribute to the difficulties in accessing reliable data in mainland China. Firstly, although the academic research has gained increasing levels of acknowledgement in terms of significance and value by the business sector in China, most business practitioners still perceived academic research with little relevance to their daily operations. This perception directly leads to the lower level of willingness to participate and respond. Secondly, the reputation of academic researchers has been tarnished by both academic and non-academic individuals and organizations who abuse the name of academic research to collect company information for non-academic uses. As a result, there is mistrust between the business sector and academic researchers, which makes the respondents unwilling to provide unbiased and accurate information, hence reducing the reliability of information provided by respondents. Thirdly, as discussed previously, in a high power distance country like China, people are treated differently based on their status (Tse et al., 1997). The academic researchers are usually perceived as a group with a low level of power by the business sector, which receives less attention from the business sector compared to the more powerful players such as government authorities. Thus, the business is less likely to cooperate with academic researchers without government endorsement when it comes to academic research. Moreover, the traditional Confucian ideology also emphasizes the doctrine of Mean, which means to remain neutral, to avoid extreme and low levels of exposure (Fu & Tsui, 2003). This doctrine of Mean also implies that people should seek closure or concealment when others want to gather their information. Therefore, the doctrine of Mean could further contribute to the business sectors' reluctance in the survey process, which could undermine the response rate and data reliability.

Lastly, given the fast developing Chinese economy, the business environment is increasingly dynamic and sometimes volatile. It is very common that businesses change their names, addresses and contact methods, without formal and public notification. These changes will increase the difficulty for researchers to identify, contact and track respondents, and this could put additional pressure on researchers to collect reliable and accurate data at firm level. In order to address the aforementioned difficulties, the author adopted several measures to enhance firms' participation for the questionnaire survey. These measures include obtaining an official endorsement from local government, employing Hong Kong-based professional data-collection company, and initiating a telephone pre-screening process prior to the delivery of questionnaires.

### **5.6.1 Official Endorsement and Hong Kong-Based Data-Collection Company**

As discussed in Section 5.4 and 5.6, it is very difficult for researchers to have access to senior executives of the Chinese OFDI firms without government endorsement. Therefore the author utilised his personal ties and contacted senior officials in Chengdu Municipal Commission of Economy and Informatization (CMCEI) under Chengdu Municipality Government of Sichuan province for the questionnaire delivery to Chinese OFDI firms located in Sichuan Province, providing the information and purpose of the research, as well as the potential benefits of the research. The CMCEI is the governing body for OFDI in municipality of Chengdu under Chengdu Municipality Government, and it is responsible for the implementation of national laws, regulations and policies, as well as for formulation of special development programs and annual plans for industries. Sichuan Province was chosen as it has the largest stock of OFDI amongst the provinces located in central and western regions of China, with USD 1,253.52 million by the end of 2010 (MOFCOM, 2011). After consultation and discussion with the senior officials in CMCEI, the author received strong support and endorsement for data collection in not only Chengdu Municipality, but also the rest of Sichuan Province via the equivalent government bodies of CMCEI in other parts of Sichuan Province. An introductory letter in Chinese was issued by CMCEI stating the aim and purpose of this survey, with emphasis on anonymity and confidentiality for the information provided by the respondents. Names and contact numbers of the author and an



official from CMCEI was provided at the bottom of the letter as proof of authenticity, and it also enables the respondents to report any issues that occurred during the survey process.

The questionnaire survey was also strongly supported by a Hong Kong-based professional data-collection company that the author had had prior satisfactory experience with. The data-collection company was asked to collect data from the eastern part of China (mainly from the southeastern coastal provinces to provinces in the northeastern part of China). Prior to the questionnaire delivery, the list of firms in the sample frame was sent to the data collection company, together with introductory letter and the ethics approval letter from Curtin University, as well as the English and Chinese version of the questionnaires. It took the data-collection company three weeks to become familiar with the contents of the survey questionnaire, to understand the detailed survey process, and to check the contact details of firms listed in the sample frame. In terms of survey quality control and survey authenticity, the data-collection company was asked to use a survey team to conduct the survey, and the survey team member would record the respondents' contact details for follow-ups and authenticity verification by the author if needed. The data-collection company was also asked to send a fortnightly survey progress report to the author, which notifies the author the number of questionnaires delivered and collected, as well as any issues which occurred during the survey process. Hence the author was well informed with the survey progress by the data-collection company in a timely manner, and was able to take action should any issues be identified.

### **5.6.2 Telephone-Email/Facsimile Approach**

Cooper and Schindler (2003) indicate that the mail survey can be delivered via various forms, such as post, facsimile, courier service or email and internet websites. In this research, the author chose email and facsimile as the delivery method, due to their higher cost efficiency than the postal and courier service for such a large scale research. Email and facsimile are also more accepted methods of business correspondence in China. At the beginning of the questionnaire survey, the introductory letter was sent to the 1,381 Chinese OFDI firms identified in the sample frame (introductory letter from CMCEI was sent to firms located in Sichuan

Province) via email and facsimile, and the email address and facsimile number was obtained from the firms' website or the latest business directory.

A telephone pre-screen procedure was carried out following delivery of the introductory letters to confirm their reception, and it also aimed to identify the potential respondent, as well as to seek their initial consent to participate in the questionnaire survey. The telephone pre-screen procedure prior to the questionnaire delivery has been proven as an effective approach in achieving a better response rate in a previous study (Cui & Jiang, 2012). In the Chinese context, the telephone pre-screen procedure is particularly important to the questionnaire survey not only because it is a proof of authenticity of the research, it is also regarded as important business etiquette in the Chinese business environment. During the pre-screen process, a total of 381 firms were eliminated from the survey list. Among these 381 firms, 82 of them denied having OFDI activities, and 299 firms refused to participate in this questionnaire survey due to their time constraints or concerns for confidentiality of their firm information. As a result, the author confirmed a total of 1,000 firms for the questionnaire survey.

After the telephone pre-screen procedure the survey documents, including an introductory letter and an information sheet, were sent to each of the potential respondents via email or facsimile based on their preference. These documents specified the details of the study, as well as the issues related to confidentiality of the information provided and anonymity of the respondents (see Appendix 1: Survey Documents). The consent form was asked to be signed by the respondents and sent back to the author, and the questionnaire was sent to the respondents after the consent forms were received.

As discussed previously this research investigates the quality of the headquarters-subsubsidiary relationship which has a dyadic nature, and the questionnaires were sent to firms' headquarters in China and one of their overseas subsidiaries. In cases where the firm had more than one overseas subsidiary, the author asked the headquarters to answer the questions in regard to their most recent established overseas subsidiary, and the questionnaires for subsidiary were sent to that specific subsidiary to capture the information from a subsidiary manager's perspective.

Since the author employed a survey instrument for data collection, the common method variance was considered to be the major methodological issue (Chang et al., 2010). Several measures were carried out to minimize the impact of common method variance on this research. Firstly, as stated in Section 5.5, a pair of questionnaires was developed to collect information from senior executives in both headquarters and subsidiary. This enabled the author to use information from two different sources for the same construct (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), for example, the author was able to use independent variables from the subsidiary dataset and dependent variables from the headquarters dataset or vice versa. Secondly, in the information sheet, it clearly states that the confidentiality of the information provided and anonymity of the respondents was guaranteed, as well as there is no right or wrong answer, which aims to reduce the likelihood of receiving biased feedback. Thirdly, the author administered the delivery and collection of questionnaires to headquarters and subsidiary in two separate stages. Upon receiving signed consent forms from the headquarters and subsidiary, the author first delivered the questionnaire to the respondent at the headquarters, and withheld the delivery of the questionnaire to the corresponding subsidiary. The respondents at headquarters were given three weeks to complete the questionnaire. After the three-week period, a reminder was sent to the respondents, and the final reminder was sent three weeks later. Once the completed questionnaire was returned from the headquarters respondent, the author commenced the second stage of the questionnaire delivery, i.e., release questionnaire to the respondent at the corresponding subsidiary. The subsidiary respondents were also given three weeks to complete the questionnaires, and the first reminder was sent after three weeks, followed by a final reminder three weeks later. This two-stage data collection approach at different points in time reduced the likelihood that respondents at headquarters and subsidiary share their answers with each other, as well as the questionnaires being answered by the same respondent. As a result, less biased answers could be expected.

### **5.6.3 Survey Results**

Among the 2,000 questionnaires sent out to potential respondent firms, a total of 392 pairs of questionnaires were returned from both headquarters and subsidiary. Of the returned questionnaires, thirty-eight were deemed to be unusable, including thirty

that were incomplete, four that were from firms headquartered in Hong Kong, and four that had significant numbers of missing values. In total, 354 firms provided usable questionnaires, yielding a response rate of 35.4%, which is better than the average of 27.4% from those studies in the field of international business that use mail survey data collection methods (Yang et al., 2006).

## **5.7 Data Analysis**

Data collected via questionnaires were entered into Statistical Package for Social Science (SPSS) 21.0 for Windows, where data analysis tasks were performed. Before introducing the statistical techniques used in the analysis, the operational measures for the variables are stated in the following sections.

### **5.7.1 Variable Measurements**

#### ***5.7.1.1 Dependent Variable***

The dependent variable in this research according to the research questions (see Chapter 4 Section 4.2) is the quality of headquarters-subsidary relationship. Following prior studies (Johnston, 2005; Johnston & Menguc, 2007), the quality of the headquarters-subsidary relationship is measured by asking respondents to indicate their perceived levels of communication effectiveness (Anderson & Weitz, 1989; Menon, Bharadwaj, & Howell, 1996), mutual trust (Ganesan, 1994), commitment (Anderson & Weitz, 1992) and satisfaction (Smith & Barclay, 1997) between the headquarters and subsidiary. The author employed a 5-point scale ranging from '1' ('strongly disagree') to '5' ('strongly agree').

#### ***5.7.1.2 Independent Variables***

Most of the independent variables (i.e., determinants of quality of the headquarters-subsidary relationship) are latent constructs that can only be measured via indicators. In this research, the two types of indicators that have been used are psychometric scale indicators and proxy indicators. When measuring respondents' perception, psychometric measurement is more commonly used by prior studies compared to the single-item proxy as it is regarded as a more accurate measurement (e.g., Aulakh & Kotabe, 1997; Kim & Hwang, 1992). Operational measurements for independent

variables in this research were mainly adopted from established measurement indicators in the literature. In some cases where the established psychometric measurement indicators were not available, the author employed a single-item proxy that was regarded as a suitable operational measurement for the independent variable.

The construct of institutional distance includes two independent variables that are based on two dimensions (formal and informal institutions) of institutional theory, i.e., regulatory distance and cultural distance. Prior studies have employed both archival index measures (e.g., Yiu & Makino, 2002) and survey-based perceptual measures (e.g., Cui & Jiang, 2012) for the institutional distance. In this research, the author followed previous studies and adopted perceptual measures instead of archival index measures for three reasons. First, as the institutional categories are domain or issue specific, institutional variable measures should be anchored in organizational practices in the study of institutional-organizational dynamics (Kostova & Roth, 2002). The majority of archival indices measure countries' institutional environments at the national level and thus do not accurately reflect the particular institutional-organizational dynamics faced by each firm. Second, archival index measures are limited in terms of usability due to infrequent updating (Cui & Jiang, 2012), and it is also argued that missing data and inconsistent index definitions undermine the usability of archival indices (Meyer et al., 2009). Third, although survey-based perceptual measures are less objective than archival indices and can generate common method variance, they can also provide researchers with insight into decision makers' views on the environment in which they are embedded (Santangelo & Meyer, 2011).

*Regulative distance* is measured by asking the respondents to indicate the degree of difference that they perceived between their host country and China on a 5-point scale based on a prior study (Gaur & Lu, 2007), where '1' represents 'very low' and '5' represents 'very high', including (1) fiscal policy, (2) anti-trust regulation, (3) political transparency, (4) intellectual property protection, (5) judiciary system efficiency, (6) rarity of market dominance in key industries, and (7) inflation.

*Cultural distance* is measured using perceptual measurement items adopted from Hofstede's cultural dimensions instead of Hofstede's cultural distance scores because

of two limitations. First, Hofstede's cultural distance scores remain unchanged over time and thus do not reflect rapid cultural changes in the real world (Berry, Guillén, & Zhou, 2010). Second, Hofstede's cultural score was developed, based on samples from a single MNE, which cannot be representative of the overall population of each country under investigation (Lu, 2006). Therefore, the respondents were asked to indicate the degree of difference that they perceived between their host country and China in terms of (1) power distance, (2) uncertainty avoidance, (3) individualism, (4) masculinity, and (5) long-term orientation (Hofstede, 2005). To make Hofstede's cultural dimensions easier for respondents to understand, the author provided brief examples of each of the five dimensions to illustrate their meanings.

*Organizational exchange* is measured by a 12-item scale in two dimensions, namely organizational information exchange (Kozlowski & Doherty, 1989) and organizational negotiation latitude (Liden & Graen, 1980). The author employed 5-point scale measure for the managerial exchange from '1' being very low and '5' being very high. Respondents were asked to indicate their perceived level of organizational exchange between headquarters and subsidiary in these dimensions. Information exchange includes (1) You know what's going on in the subsidiary (headquarters), (2) Subsidiary (headquarters)'s willingness to listen to your firm, (3) Confide firm information to subsidiary (headquarters), (4) Your firm is a superior in the relationship, (5) Subsidiary (headquarters) seeks input or advice from your firm, (6) Your firm is a trusted assistant in the relationship, (7) You let subsidiary (headquarters) know what's going on in your firm, and (8) Subsidiary (headquarters) confide firm information to your firm. Negotiation latitude includes (1) The flexibility of subsidiary (headquarters) when dealing with your firm, (2) Subsidiary (headquarters)'s willingness to solve your firm's problem, (3) Subsidiary (headquarters) bails your firm out at subsidiary (headquarters)'s expense, (4) Frequency of your firm give suggestion to subsidiary (headquarters).

*Managerial exchange* is measured by using the 11-item perceptual measures in a leader-member exchange context (Liden & Maslyn, 1998). The author employed 5-point scale measure for the managerial exchanges from '1' being strongly disagree and '5' being strongly agree. Respondents were asked to indicate their perceived level managerial exchange between the headquarters managers and them, including

(1) I like the subsidiary (headquarters) manager very much as a person, (2) I would like to have subsidiary (headquarters) manager as a friend, (3) Subsidiary (headquarters) manager is a lot of fun to work with, (4) Subsidiary (headquarters) manager defends my work actions to a superior, even without complete knowledge of the issue, (5) Subsidiary (headquarters) manager come to my defence if I were 'attacked', (6) Subsidiary (headquarters) manager defends me if I made an honest mistake, (7) I am willing to apply extra efforts for subsidiary (headquarters) manager that beyond my job description, (8) I will apply extra efforts to further subsidiary (headquarters)'s interest, (9) I am impressed with subsidiary (headquarters) manager's knowledge, (10) I respect subsidiary (headquarters) manager's knowledge and competence, and (11) I admire subsidiary (headquarters) manager's professional skills.

*Global mindset* is measured by 39-item perceptual measurement items adopted from Arora et al. (2004). The respondents were asked to indicate the two manifest variables, i.e., degree of conceptualization and contextualization of global mindset at their work and life, where '1' represents 'strongly disagree' and '5' represents 'strongly agree' (see Appendix 1: Servey Documents).

*Perceived psychic distance* is captured by survey-based perceptual measures (e.g., Evans & Mavondo, 2002) instead of archival index measures (e.g., Ellis, 2008) for three reasons. First, because the psychic distance reflects the individual's perceived degree of uncertainty about the foreign market based on the business and cultural differences (O'Grady & Lane, 1996; Sousa & Bradley, 2006), therefore the psychic distance should be measured at individual or managerial level rather than national or country level. The majority of archival indices measure psychic distance at the national level, which assumes that the psychic distance is constant between the host country and home country, and thus do not accurately reflect the particular business and cultural differences perceived by managers at the sub-national level, i.e., regional and industrial differences between host and home country, as well as individual differences and experiences (O'Grady & Lane, 1996). Second, as archival index measures are limited in terms of usability due to infrequent updating (Cui & Jiang, 2012), it is also argued that missing data and inconsistent index definitions undermine the usability of archival indices (Meyer et al., 2009). Third, although

survey-based perceptual measures are less objective than archival indices and can generate common method variance, they can also provide researchers with insight into decision makers' views on the environment in which they are embedded (Santangelo & Meyer, 2011). The author employed a ten 5-point scale measure of psychic distance based on a prior study (Evans & Mavondo, 2002), where '1' represents 'very low' and '5' represents 'very high'. The respondents were asked to indicate the degree of difference that they perceived between their host country and China in terms of (1) legal/political system, (2) market structure, (3) economic environment, (4) business practices, (5) language, (6) power distance, (7) individualism, (8) masculinity, (9) uncertainty avoidance and (10) long-term orientation.

### ***5.7.1.3 Moderators***

Institutionalization of headquarters practices is measured in two dimensions: implementation and internalization. For these two dimensions, the author adapted measures from a prior study (Kostova & Roth, 2002), where '1' represents 'very low' and '5' represents 'very high'. The respondents at subsidiaries were asked to indicate their perceived levels of implementation of headquarters' practices with respect to (1) the headquarters practice as a whole, (2) leadership (e.g., work area objectives), (3) information and analysis, (4) planning (e.g., overall strategic business planning), (5) people (e.g., authority to make decisions, training), (6) process management (e.g., problem prevention), (7) business results (e.g., improvement), (8) customer focus and satisfaction. To measure internalization, the respondents were asked to indicate their perceived levels of (1) willingness to put in a great deal of effort beyond that normally expected in order to help implement practice, (2) headquarters practice is a great way to reorganize business, (3) headquarters practice and subsidiary practices value are similar, (4) headquarters practice inspires the best in subsidiary's involvement, (5) subsidiary is really happy to adopt the headquarters practice, (6) subsidiary really cares about headquarters practice and its future.

*Subsidiary manager's organizational identity with subsidiary* is measured by a 6-item organizational identity scale adapted from prior study (Mael & Ashforth, 1992). The respondents were asked to indicate their perceived levels of organizational



identity with respect to (1) when someone criticize the subsidiary, it feels like a personal insult, (2) he/she is very interested in what others think about the subsidiary, (3) when he/she talks about subsidiary, he/she usually say 'we' rather than 'they', (4) the subsidiary's success is his/her success, (5) when someone praises subsidiary, it feels like a personal compliment, (6) if a story in the media criticized the subsidiary, he/she would feel embarrassed, from '1' being totally disagree and '5' being totally agree.

*Headquarters ownership in the subsidiary* is measured on a dummy variable which has a value of 1 for wholly owned subsidiary and 0 for joint venture. In this research, the author used 95% as a cut-off for a wholly owned subsidiary and a joint venture (Makino & Neupert, 2000), so that if the headquarters owns 95% or above, it is a wholly owned subsidiary, otherwise it is a joint venture. To measure the headquarters' ownership in the subsidiary, the respondents were asked to indicate the ownership structure of the subsidiary, indicating the ownership percentage of Chinese headquarters, local partner firms, as well as the local government.

*The subsidiary's entry mode* is also measured on a dummy variable which has a value of 1 for greenfield entry mode and 0 for merger and acquisition entry mode (Hennart & Park, 1993). To ascertain the entry mode of subsidiary, the author asked the respondent to indicate if the subsidiary is established via merger/acquisition of existing local firm, or via greenfield that is brand new facilities established by the Chinese headquarters.

*Personality flexibility* is measured by items adapted from McGuiness (2004). Respondents were asked to indicate how much structure/non-flexibility (judgement) or flexibility (perception) they need in their outer world in ten dimensions. Structure and judgement reflect managers' preference to be planned and organized in the outer world, which indicates they seek closure; whereas the flexibility and perception reflect managers' preference to be spontaneous and flexible in the outer world, and they are ready to explore new alternatives (McGuiness, 2004). The responses were summed for non-flexible personality and flexible personality, when non-flexible personality response equals to or greater than 5, it indicates a non-flexible personality; otherwise a flexible personality is indicated. The author coded '1' for non-flexible

personality, and '0' for flexible personality. The specific items for non-flexible personality and flexible personality are presented in Appendix 1.

*Overseas study experience* is measured by the length of their exposure to foreign study environment, which is the number of years managers studied out of mainland China adapted from Black and Stephens (1989).

#### **5.7.1.4 Control Variables**

Five control variables related to firm capabilities and demographics were included to avoid alternative explanations of the findings. The percentage of MNE sales to overseas markets was used to capture the degree of multinationality of an MNE (Tallman & Li, 1996), indicating the firm's level of involvement in foreign markets as well as its dependence on overseas markets for sales revenues (Gomes & Ramaswamy, 1999). The level of an MNE's involvement in overseas operations and its level of dependence on such operations can be expected to affect the headquarters-subsidary relationship in the MNE. Subsidiary size indicates firms' assets, resources, and capabilities (Penrose, 1959), and a larger subsidiary size is associated with a higher value of a subsidiary to the headquarters (Johnston & Menguc, 2007), which is expected to affect the headquarters-subsidary relationship. Firm size was measured by using the number of employees in the subsidiary in the year 2012 (Johnston & Menguc, 2007). The author also included Chinese parent ownership of the subsidiary as a control variable, as ownership ties reflect the 'weight' of a subsidiary to the headquarters. The more 'weight' that the subsidiary has, the more attention it receives from the headquarters (Bouquet & Birkinshaw, 2008), which can affect the quality of the headquarters-subsidary relationship. State ownership of a Chinese MNE headquarters was measured by using a dummy variable that takes a value of 1 for state-owned Chinese MNEs and a value of 0 for non-state-owned Chinese MNEs (Cui & Jiang, 2009). Chinese state ownership indicates a high level of dependence on resources and political support from the home government (Cui & Jiang, 2012), which may affect the headquarters-subsidary relationship when a subsidiary faces a high level of isomorphic pressure overseas. Each subsidiary manager's nationality was measured by using a dummy variable that takes a value of 1 for a mainland Chinese manager and 0 for a non-mainland Chinese

manger (Yip, Johansson, & Roos, 1997). Prior studies suggest that the nationality of a subsidiary manager has significant managerial implications (Gupta & Govindarajan, 1991), as host country nationals have a greater level of familiarity with the local environment, identification with the subsidiary, and commitment to the subsidiary than home country nationals. The identification with and commitment to the subsidiary can affect the quality of headquarters-subsidiary relationships.

The measurements of the variables are summarized in Table 5.4. The variable constructs are subject to scale reliability tests that are reported Chapter 7.

**Table 5.4 Variable Measurement Scheme**

| Variable  | Measurement  | Reference   |
|---|--|---|
| <i>Dependent Variables</i>                      |  |   |
| Quality of headquarters-subsidiary relationship | 24 five-point scale indicators   | Anderson & Weitz, 1989; Menon, Bharadwaj, & Howell, 1996; Ganesan, 1994; Anderson & Weitz, 1992; Smith & Barclay, 1997. |
| <i>Independent Variables</i>                    |  |   |
| Regulative distance                             | 7 five-point scale indicators  | Gaur & Lu, 2007   |
| Cultural distance                               | 5 five-point scale indicators  | Hofstede, 2005  |
| Organizational exchange                         | 12 five-point scale indicators   | Kozlowski & Doherty, 1989; Liden & Graen, 1980  |
| Managerial exchange                             | 11 five-point scale indicators   | Liden & Maslyn, 1998  |
| Global mindset                                  | 39 five-point scale indicators   | Arora et al., 2004  |
| Perceived psychic distance                      | 10 five-point scale indicators   | Evans & Mavondo, 2002   |
| <i>Moderators</i>                               |  |   |
| Institutionalization                            | 14 five-point scale indicators   | Kostova & Roth, 2002  |
| Headquarters ownership in subsidiary            | Two categories: 0 = joint venture and 1 = wholly owned                                 | Makino & Neupert, 2000  |
| Subsidiary's entry mode                         | Two categories: 0 = M&A and 1 = greenfield   | Hennart & Park, 1993  |
| Subsidiary manager's organizational identity    | 6 five-point scale indicators  | Mael & Ashforth, 1992   |
| Manager's non-flexible personality              | 40 binary indicators then merge into two categories: 0 = flexible and 1 = non-flexible | McGuinness, 2004  |
| Manager's overseas study experience             | Number of years manager studied outside mainland China                                 | Black & Stephens, 1989  |
| <i>Control Variables</i>                        |  |   |
| Percentage of MNE sales to overseas market      | Percentage of MNE sales to overseas market   | Tallman & Li, 1996  |
| Subsidiary size                                 | Number of employees in subsidiary  | Johnston & Menguc, 2007   |
| Chinese parent's ownership in subsidiary        | Percentage of Chinese parent's ownership in subsidiary                                 | Cui & Jiang, 2009   |
| State ownership in Chinese MNE headquarters     | Dummy variable: 0 = non-state-owned and 1 = state-owned                                | Cui & Jiang, 2012   |
| Nationality of subsidiary manager               | Dummy variable: 0 = non-mainland Chinese national and 1 = mainland Chinese national    | Yip, Johansson, & Roos, 1997  |

### **5.7.2 Data Analysis Methods**

There are three major statistical analysis tasks performed sequentially in this study and various statistical techniques are involved. Prior to the three major data analysis process tasks, the author performed analysis on responding firms and respondents. Descriptive statistics of the major characteristics of the responding firms, their reported subsidiary, and respondents were examined to provide an overall understanding of the sample under study. The analysis results are presented in Chapter 6. The statistical techniques involved in the three major analysis tasks are described in this section, and their results are reported in Chapter 7.

#### ***5.7.2.1 Non-response Bias Test***

The non-response bias test is carried out on the sample firms first, because if there is existence of non-response bias, i.e., the responses from the participants are different from non-participants in a systematic way, then the analysis results from the participants' responses will not be able to generalize the entire survey sample frame, nor to the population of the study (Armstrong & Overton, 1977; Cooper & Schindler, 2003). In this research, the author followed the extrapolation method (Armstrong & Overton, 1977) to assess the non-response bias based on the assumption that participants who respond later are more similar to non-respondents (Ferber, 1948). Non-response bias exists if the group means of firm size and subsidiary performance between the first fifty percent and the remaining fifty percent of the responding firms are significantly different. Independent sample t-tests were performed on dependent variable and all the seven independent variables. The t-statistic is computed based on the mean ( $\bar{X}$ ), sum of squares (SS), and number of subjects (n) of each group. The null hypothesis of equality of group means between early respondents and late respondents is rejected when the t-statistic is significant (two-tailed), which statistically proves the existence of non-response bias. On the other hand, the insignificant t-statistics suggests that there is no non-response bias issue in the sample.

### 5.7.2.2 Scale Reliability Test

The second analysis task performed is the scale reliability test on the variable constructs build on multiple indicators. It measures the measurement scale's ability to produce similar results when the measurements are repeated under identical conditions (Bordens & Abbott, 2005). As discussed earlier in the chapter, the independent variables in this research are all latent constructs that consist of single or multiple measurement items. The reliability of the construct can be undermined by a single item if its survey question is confusing or misinterpreted by the respondents, and such item should be eliminated from the original variable construct. Therefore, the scale reliability test can assist the author to refine the variable constructs. When performing the analysis, the item-to-total correlation (the correlation between the score of each indicator item and the total score of the indicators used to capture each construct) was examined and a Cronbach's coefficient *alpha* was calculated. Based on the suggestion of a previous study (Nunnally, 1978), any item with an item-to-total correlation lower than 0.25 was removed from the construct. Cronbach's coefficient *alpha* is computed based on the number of items remaining in the construct ( $k$ ) and the ratio of the average inter-item covariance to the average item variance (Cronbach, 1951).

The author followed prior studies (Kaplan & Saccuzzoo, 1982; Murphy & Davidshofer, 1988) and used 0.70 as the cut-off criterion for Cronbach's coefficient *alpha* in this study. A variable construct is regarded as reliable if its Cronbach's coefficient *alpha* is greater than the cut-off value of 0.70, and all indicator items within that construct have an item-to-total correlation that exceed 0.25.

After the variable constructs were finalized through the reliability test procedure, variable score were calculated. For the variables measured on a single indicator, the score of the corresponding variable equals the score of the single indicator. For the variables measured on multiple indicators, the scores of the indicator items are summed up as the variable score.

Once the variable scores were calculated, a correlation test was carried out to assess the independence of variables. If the correlation test returns a result that is not strong and significant, it suggests that there is no multi-collinearity issue with the variable construct and the variable construct is regarded as satisfactory.

### ***5.7.2.3 Hypothesis Test – Moderated Hierarchical Multiple Regressions***

The purpose of analysis tasks in this research is to empirically test the conceptual framework and hypotheses derived from it, and hence answer the research questions. The main research question is related to the factors that influence the quality of the headquarters-subsidary relationship in Chinese OFDI firms, i.e., the determinants of the quality of the headquarters-subsidary relationship. The sub-research question asks the factors that influence the quality of the headquarters-subsidary relationship in Chinese OFDI firms from different theoretical perspectives. Moderated hierarchical multiple regressions are used in the analysis task to test the hypothesized relationships. To answer sub-research questions under each of the theoretical perspectives, the moderated hierarchical multiple regression analysis was carried out in two phases. The first phase test hypotheses separately based on their theoretical perspectives, so that the moderated hierarchical multiple regression analysis only includes factors under the same theoretical perspective. This helps the researcher to understand how the different factors under each theoretical perspective influence the quality of headquarters-subsidary relationship. The second phase test the hypotheses from all three theoretical perspectives, hence, all the factors are included in the moderated hierarchical multiple regression analysis. This reveals the impact of each factor on the quality of the headquarters-subsidary relationship when factors from other theoretical perspectives are included.

The multiple regressions method has been widely used as an empirical test method in headquarters-subsidary relationship studies (e.g., Hewett et al., 2003; Luo, 2003; O'Donnell, 2000; Roth & Nigh, 1992). It explains how the variation in one variable (dependent variable) is related to the variation in a set of other variables (independent variables) (Bordens & Abbott, 2005). As the research questions investigate how the determinants influence the quality of the headquarters-subsidary relationship, these issues can be addressed by using multiple regressions method. The influence of

determinants on the quality of the headquarters-subsiary relationship can be modeled as function of the independent variables and control variables as follows.

$$Y = b_0 + b_1X_1 + b_2X_2 + \dots + b_nX_n$$

For the main research question, Y is the respondents' perceived level of quality of headquarters-subsiary relationship, which is a linear combination of the determinants (independent variables, X). A positive regression coefficient (*b*) means that an increase in its associated impacting factor (X1) will increase the level of quality of the headquarters-subsiary relationship. The parameters are estimated using maximum likelihood, employing the multiple linear regression procedure of SPSS 21. A statistical significant parameter indicates the extent to which the corresponding variable contributes to the quality of the headquarters-subsiary relationship in a Chinese OFDI firm for the research question. To assess the overall efficacy of the estimated model, several measures can be used. The first measure is R-square, which indicates the goodness of fit of the model, in other words, it measures how well the regression model fits the data. The higher R-square value represents high percentage of variation in the data being explained by the regression model. As the R-square value can be increased by adding extra explanatory variables, hence the significant change in R-square value from the base model to the later estimated models with extra independent variables indicates that there is a significant improvement in model fit. The second measure is adjusted R-square, which increases only when the new added explanatory variable improves the R-square more than would be expected in the absence of any explanatory value being added by the new explanatory variable. The third measure is the F-statistics for overall model fit. By using extra-sum-of-squares method, it assesses 'whether the difference between the sums of squared residuals from the full and reduced model is greater than can be explained by chance variation' (Ramsey & Schafer, 2002, p. 280). A significant F-statistics indicate a good model fit, which means the full model is better and more flexible than the reduced model in explaining the variations in the data.

## **5.8 Summary**

This chapter introduces the methodology of this research, which adopts a quantitative empirical research method. The population is the Chinese OFDI firms that currently



have one or more affiliates outside mainland China, and the author used a self-constructed sample frame for data collection due to the absence of a complete list of the population at firm level. The author developed a pair of questionnaires for senior executives at both headquarters and the corresponding overseas subsidiary, and the data were collected from both headquarters and overseas subsidiaries of Chinese OFDI firms via the questionnaires. Given the difficulties of conducting questionnaires survey in mainland China, several measures were taken to enhance the response rate, including obtaining local government endorsement and hiring professional data-collection firms. In total, a sample of 354 firms was obtained, and descriptive analysis on responding firms and respondents were performed first, followed by analysis by multiple statistical methods, which empirically tested the conceptual framework and the hypotheses derived from it. The results of these analyses are reported in Chapter 6 and Chapter 7.



## **CHAPTER 6 ANALYSIS OF RESPONDING FIRMS AND RESPONDENTS**

### **6.1 Introduction**

By the completion of the mail survey in this research, the author received 708 usable questionnaires from 354 responding firms. The answers from the respondents were coded and entered into SPSS 21.0 for the purpose of data analysis. Prior to the data analysis for conceptual framework and hypotheses testing, this chapter presents the background information of the responding firm and the respondents at both headquarters and overseas subsidiary. Three sections are presented in this chapter to report the information on the responding firms, their corresponding overseas subsidiary, and the respondents from both headquarters and subsidiary, followed by a conclusion remark ending this chapter.

### **6.2 Background Information of Responding Firms - Headquarters**

As previously stated in Chapter 5 Section 5.2, the target firms in this research are the Chinese OFDI firms, which has one or more foreign affiliates outside mainland China. A total of 354 Chinese OFDI firms took part in the questionnaire survey and returned 708 usable questionnaires from both headquarters and subsidiary. This section introduces the background information of the 354 responding firms, including their size, location, ownership type, and industrial distribution.

#### **6.2.1 Firm Sizes**

In this research, the firm size is measured in terms of total number of employees and total assets. When measured in number of employees, the firms ranged from the minimum total of 13 employees to the maximum of 1,700,000 employees with 20,000 employees overseas, which is a state-owned bank. In terms of total assets in 2011, the smallest responding firm had a total asset of less than one million US dollars and the largest responding firm had a total of more than one hundred billion US dollars. The distribution of responding firms by size is shown in Table 6.1.

**Table 6.1 Size of Responding Firms**

| Total Number of Employee |              |             | Total Asset (USD Billion) |              |             |
|--------------------------|--------------|-------------|---------------------------|--------------|-------------|
| Range                    | No. of Firms | % in Sample | Range                     | No. of Firms | % in Sample |
| 0-49                     | 8            | 2.3         | 0-1                       | 125          | 35.3        |
| 50-99                    | 14           | 4.0         | 1-2                       | 27           | 7.6         |
| 100-249                  | 23           | 6.5         | 2-3                       | 28           | 7.9         |
| 250-499                  | 15           | 4.2         | 3-4                       | 16           | 4.5         |
| 500-999                  | 6            | 1.7         | 4-5                       | 12           | 3.4         |
| 1,000-4,999              | 76           | 21.5        | 5-6                       | 10           | 2.8         |
| 5,000-9,999              | 33           | 9.3         | 6-7                       | 12           | 3.4         |
| 10,000-24,999            | 56           | 15.8        | 7-8                       | 9            | 2.5         |
| 25,000-                  | 123          | 34.7        | 8-9                       | 5            | 1.4         |
|                          |              |             | 9-10                      | 3            | .8          |
|                          |              |             | 10-                       | 107          | 30.2        |
| Total                    | 354          | 100.0       | Total                     | 354          | 100.0       |

### 6.2.2 Headquarters Location

The headquarters locations of the responding firms are reported at the provincial level. The responding firms are located in twenty-one provinces, two autonomous regions and four municipalities (directly governed by the Chinese central government) in east, central and west China. Out of the thirty-one provinces, autonomous region and municipalities in mainland China, one province and three autonomous regions could not be covered by the questionnaire survey, including Qinghai, Inner Mongolia, Ningxia in the north west and Tibet in the south west of China. Sichuan, Beijing and Guangdong are the top three provinces where majority of the responding firms are located (221 firms represent 62.4% of the sample). In terms of regional distributions, firms from China's east region represent more than half of the sample at 55.4%, followed by 35.3% of the western region and 9.3% of the central region. The regional and provincial distribution of the responding firms is reported in Table 6.2. In general, the sample firms cover major Chinese provinces that are active and relatively advanced in economic development, which are the major contributors of the Chinese OFDI, and it is consistent with the *2009 Statistical Bulletin of China's OFDI* in relation to the OFDI stock at the provincial level (MOFCOM, 2010). As a result, the representativeness of the sample is satisfactory.

**Table 6.2 Location of Responding Firms**

| Region  | Region Total | Region % | Province     | No. of Firms | %     |
|---------|--------------|----------|--------------|--------------|-------|
| East    | 196          | 55.4     | Beijing      | 87           | 24.6  |
|         |              |          | Guangdong    | 33           | 9.3   |
|         |              |          | Shanghai     | 21           | 5.9   |
|         |              |          | Zhejiang     | 13           | 3.7   |
|         |              |          | Shandong     | 12           | 3.4   |
|         |              |          | Jiangsu      | 9            | 2.5   |
|         |              |          | Liaoning     | 8            | 2.3   |
|         |              |          | Fujian       | 3            | 0.8   |
|         |              |          | Heilongjiang | 3            | 0.8   |
|         |              |          | Tianjin      | 3            | 0.8   |
|         |              |          | Hainan       | 2            | 0.6   |
|         |              |          | Jilin        | 2            | 0.6   |
| Central | 33           | 9.3      | Hubei        | 7            | 2.0   |
|         |              |          | Hebei        | 6            | 1.7   |
|         |              |          | Henan        | 5            | 1.4   |
|         |              |          | Shanxi (山西)  | 5            | 1.4   |
|         |              |          | Anhui        | 4            | 1.1   |
|         |              |          | Hunan        | 4            | 1.1   |
|         |              |          | Jiangxi      | 2            | 0.6   |
| West    | 125          | 35.3     | Sichuan      | 101          | 28.5  |
|         |              |          | Guizhou      | 9            | 2.5   |
|         |              |          | Yunnan       | 4            | 1.1   |
|         |              |          | Gansu        | 3            | 0.8   |
|         |              |          | Xinjiang     | 3            | 0.8   |
|         |              |          | Guangxi      | 2            | 0.6   |
|         |              |          | Shanxi (陕西)  | 2            | 0.6   |
|         |              |          | Chongqing    | 1            | 0.3   |
| Total   | 354          | 100.0    | Total        | 354          | 100.0 |

### 6.2.3 Ownership Type

In recent years, the number of state-owned enterprises (SOEs) has been declining in the Chinese OFDI, whereas the non-state-owned enterprises (Non-SOEs) such as private firms are increasingly engaged in the OFDI activities, due to the privatization

of ownership in SOEs, as well as institutional incentives that encourages private firms' OFDI engagement. Nevertheless, the SOEs still weigh heavily in the Chinese OFDI, represent 59.8% of the OFDI stock by the end of 2012 (MOFCOM, 2013). Among the 354 responding firms in the sample, 242 of them are SOEs (including fully or partially owned by the Chinese government at both central and provincial levels), and the remaining 112 are private or jointly owned firms as illustrated in Table 6.3.

**Table 6.3 Ownership Type of Responding Firms**

|         | No. of Firms | %     |
|---------|--------------|-------|
| SOE     | 242          | 68.4  |
| Non-SOE | 112          | 31.6  |
| Total   | 354          | 100.0 |

#### 6.2.4 Industrial Sectors

The sample firms come from various industries and in the questionnaire, the respondents were asked to indicate their firms' industry category in an open-ended question. Amongst these industries, three industrial sectors are divided, namely primary, manufacturing, and service sectors. The primary sector includes agriculture related industries such as crop and animal production. The manufacturing sector includes all the manufacturing industries. The service sector includes industries that are not included in the primary and manufacturing sectors, such as construction, consulting and other services. The industry sector distribution of the responding firms is presented in Table 6.4. It shows that the majority of the responding firms fall into the manufacturing and service sectors, with 140 and 205 firms respectively, and together count for 97.5% of the sample.

**Table 6.4 Industrial Sector of Responding Firms**

| Industry Sector | No. of Firms | %     |
|-----------------|--------------|-------|
| Primary         | 9            | 2.5   |
| Manufacturing   | 140          | 39.6  |
| Service         | 205          | 57.9  |
| Total           | 354          | 100.0 |

### **6.3 Background Information of Corresponding Overseas Subsidiaries**

In the survey questionnaire, the headquarters respondents were asked to answer the questions in regards to the firm's most recently established overseas subsidiary, and the subsidiary version questionnaire was delivered to that corresponding subsidiary. As a result, the author obtained information from two different sources on one subsidiary, and the information from both headquarters and subsidiary were used to test the conceptual framework and hypotheses, and the results are presented in Chapter 7. This section reports the results of the descriptive analysis on the background information of those overseas subsidiaries, including subsidiary location, timing, ownership and internationalization strategy, OFDI motivation, and activities.

#### **6.3.1 Subsidiary Location**

Based on the returned questionnaires, the overseas subsidiaries are located in seventy countries around the world, and these countries range from developed countries to less developed countries over six continents, as shown in Table 6.5. Around half of the responding subsidiaries are located in Asia (50.8%), followed by Europe (15.3%) and North America (14.1%). The top three destination countries for the Chinese OFDI in this sample are United States of America (44 subsidiaries), Japan (27 subsidiaries), Australia and Singapore (with 23 subsidiaries in each country).

**Table 6.5 Subsidiary Location by Country and Continent**

| Country                 | Total | %   | Country                  | Total | %     |
|-------------------------|-------|-----|--------------------------|-------|-------|
| Kenya                   | 6     | 1.7 | Qatar                    | 1     | 0.3   |
| South Africa            | 6     | 1.7 | Taiwan                   | 1     | 0.3   |
| Zambia                  | 5     | 1.4 | <i>Asia</i>              | 180   | 50.8  |
| Nigeria                 | 3     | 0.8 | Germany                  | 13    | 3.7   |
| Angola                  | 2     | 0.6 | United Kingdom           | 8     | 2.3   |
| Congo                   | 2     | 0.6 | Italy                    | 6     | 1.7   |
| Algeria                 | 1     | 0.3 | France                   | 4     | 1.1   |
| Equator Guinea          | 1     | 0.3 | Russia                   | 4     | 1.1   |
| Egypt                   | 1     | 0.3 | Spain                    | 3     | 0.8   |
| Liberia                 | 1     | 0.3 | Sweden                   | 3     | 0.8   |
| Morocco                 | 1     | 0.3 | Turkey                   | 2     | 0.6   |
| Niger                   | 1     | 0.3 | Belgium                  | 1     | 0.3   |
| Tanzania                | 1     | 0.3 | Denmark                  | 1     | 0.3   |
| Uganda                  | 1     | 0.3 | Georgia                  | 1     | 0.3   |
| Zimbabwe                | 1     | 0.3 | Hungary                  | 1     | 0.3   |
| <i>Africa</i>           | 33    | 9.3 | Luxembourg               | 1     | 0.3   |
| Japan                   | 27    | 7.6 | Netherlands              | 1     | 0.3   |
| Singapore               | 23    | 6.5 | Portugal                 | 1     | 0.3   |
| Laos                    | 22    | 6.2 | Russia                   | 1     | 0.3   |
| Hong Kong               | 19    | 5.4 | Slovakia                 | 1     | 0.3   |
| Vietnam                 | 18    | 5.1 | Switzerland              | 1     | 0.3   |
| South Korea             | 11    | 3.1 | Ukraine                  | 1     | 0.3   |
| India                   | 9     | 2.5 | <i>Europe</i>            | 54    | 15.3  |
| Burma                   | 8     | 2.3 | United States of America | 44    | 12.4  |
| Malaysia                | 6     | 1.7 | Canada                   | 6     | 1.7   |
| Thailand                | 6     | 1.7 | <i>North America</i>     | 50    | 14.1  |
| United Arab of Emirates | 6     | 1.7 | Australia                | 23    | 6.5   |
| Indonesia               | 3     | 0.8 | New Zealand              | 3     | 0.8   |
| Iran                    | 3     | 0.8 | Papua New Guinea         | 1     | 0.3   |
| Pakistan                | 3     | 0.8 | North Mariana Islands    | 1     | 0.3   |
| Philippines             | 3     | 0.8 | <i>Oceania</i>           | 28    | 7.9   |
| Kazakhstan              | 2     | 0.6 | Brazil                   | 4     | 1.1   |
| Kyrgyzstan              | 2     | 0.6 | Chile                    | 2     | 0.6   |
| Saudi Arabia            | 2     | 0.6 | Antigua and Barbuda      | 1     | 0.3   |
| Bangladesh              | 1     | 0.3 | Cuba                     | 1     | 0.3   |
| Cambodia                | 1     | 0.3 | Paraguay                 | 1     | 0.3   |
| Jordan                  | 1     | 0.3 | <i>South America</i>     | 9     | 2.5   |
| North Korea             | 1     | 0.3 | Total                    | 354   | 100.0 |
| Pakistan                | 1     | 0.3 |                          |       |       |

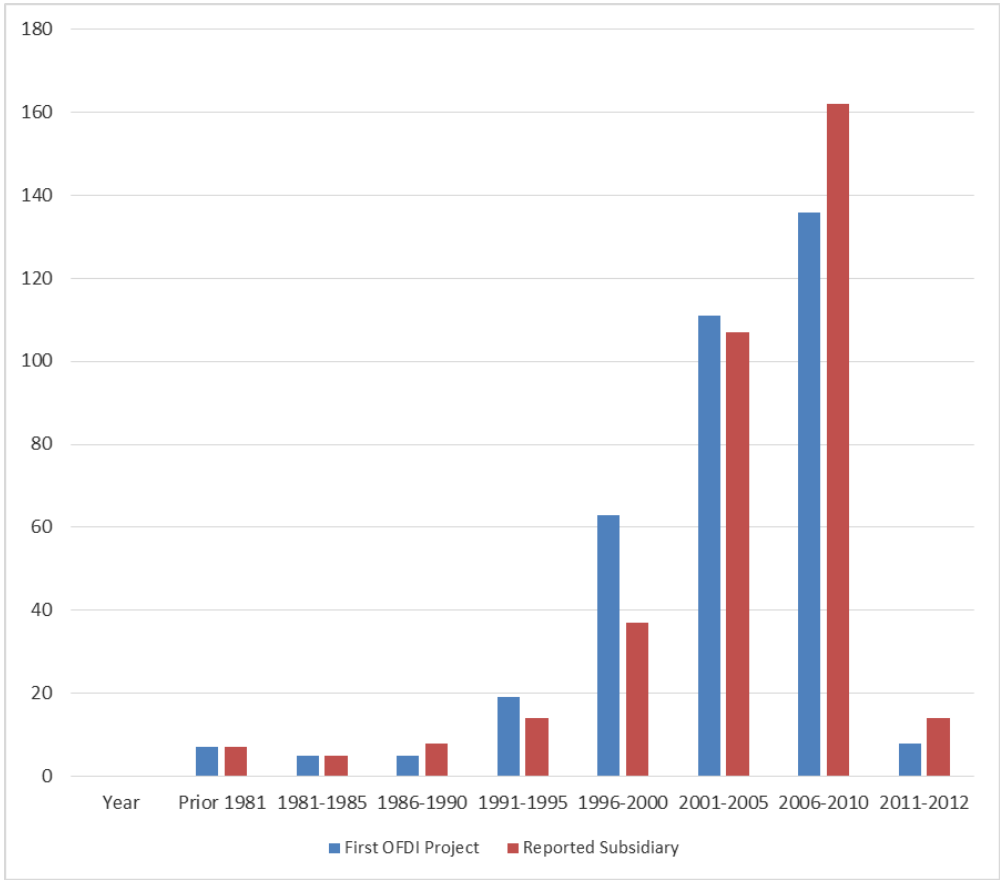


In general, the distribution of Chinese subsidiaries in the six continents is consistent with the literature (Kang & Jiang, 2012) and the official statistics (MOFCOM, 2010), where the majority of Chinese investments goes to adjacent Asian countries such as Singapore, Laos, Hong Kong, Vietnam, South Korea, India, Burma, Malaysia and Thailand. Given the Chinese firms' lack of firm-specific advantage (Rugman & Li, 2007), their internationalization is a gradual development process via regional expansion rather than global expansion (Johanson & Vahlne, 1977). To address the issue of lacking firm-specific advantage, an increasing number of Chinese firms also entered developed countries such as Germany, United Kingdom, Italy and France in Europe, United States of America and Canada in North America, and Japan in Asia to acquire strategic assets such as technology and management know-how (Buckley et al., 2007). In addition, the Chinese firms are encouraged by the government to invest in resource-rich countries such as Australia, Canada and Brazil to secure the supply of scarce resources for China's domestic economic development (Ye, 1992; Zhan, 1995).

### **6.3.2 Timing of OFDI**

The respondents were asked to indicate the year of establishment for their first OFDI project and the subsidiary in this sample, which is shown in Figure 6.1. The earliest OFDI project reported was established in 1959, and the most recent OFDI project was established in early 2012, just a couple of months prior to the mail survey. The results show that the pace of OFDI activities is slow prior to 1996, with less than 20 cases reported for each five-year period. Since 1996, there is a surge of OFDI activities of the sample firms. Between the period of 1996 and 2005, the number of first OFDI project is greater than the number of subsidiaries that reported in the sample, and since 2006, there are more subsidiaries than the number of first OFDI projects. This increase in the number of reported subsidiary in the sample indicates that the Chinese firms are continuing their expansion into the international market, hence there are more OFDI activities (reported subsidiaries in the sample) compared to the number of first OFDI establishment.

**Figure 6.1 Timing of OFDI Project (No. of subsidiaries)**



**6.3.3 OFDI Ownership and Internationalization Strategy**

The respondents were asked to indicate their ownership from Chinese parent firms, as well as their internationalization strategy. As shown in Table 6.6, more than half of the subsidiaries (54%) are jointly owned by the Chinese headquarters and the host country partner firms, and the rest of the subsidiaries (46%) in the sample are wholly owned by their parent firms from mainland China. Amongst the jointly owned subsidiaries, 113 of them have a majority of Chinese ownership, 26 of them have equal ownership, and 52 of them with a minority Chinese ownership.

**Table 6.6 Ownership of OFDI Project**

| Ownership     | No.                                | %     |
|---------------|------------------------------------|-------|
| Wholly Owned  | 163                                | 46.0  |
| Joint Venture | Majority Chinese Ownership (> 50%) | 113   |
|               | Equal Ownership (50%)              | 26    |
|               | Minority Chinese Ownership (< 50%) | 52    |
| Total         | 354                                | 100.0 |

In total, there are 276 subsidiaries (78%) owned by their Chinese parent firms with major or full ownership, and only 22% of the sample firm are owned by their Chinese parent firms with equal or minor equity. This high proportion of major and full equity ownership in subsidiaries suggests that there is a high level of resource commitment from the Chinese parent firms to their overseas operations, which can be explained by their strategic intent of seeking complementary assets and capabilities overseas (Luo & Tung, 2007), and high levels of implementation of global strategy (64.7% of sample subsidiaries) as shown in Table 6.7 with a tendency to use high control entry mode (Hammel & Prahalad, 1985) that is suggested in the literature.

**Table 6.7 Internationalization Strategy**

| Strategy      | No. | %     |
|---------------|-----|-------|
| Global        | 229 | 64.7  |
| Multidomestic | 125 | 35.3  |
| Total         | 354 | 100.0 |

#### 6.3.4 OFDI Motivation

In the questionnaire, the respondents were asked to choose from market-seeking, resource-seeking and asset-seeking to indicate their OFDI motivations. As shown in Table 6.8, market-seeking is the most prevalent OFDI motivation (67.5%) amongst the sample subsidiaries, followed by resource-seeking (33.3%) and asset-seeking (22.6%). This result also indicates that some of the subsidiaries in the sample have more than just one motivation during their OFDI activities, which suggests that some of these Chinese MNEs are setting multiple targets to address their firm-specific disadvantage when they are entering the international market.

**Table 6.8 OFDI Motivation**

| OFDI Motivation  | No. | %    |
|------------------|-----|------|
| Market-seeking   | 239 | 67.5 |
| Resource-seeking | 118 | 33.3 |
| Asset-seeking    | 80  | 22.6 |

### 6.3.5 OFDI Activities

The respondents were also asked to indicate the activities carried out by subsidiary during their OFDI operations. As shown in Table 6.9, the most common activities for subsidiaries are the marketing of their final product (57.1%), followed by sourcing of local production capabilities (50.3%), product design and innovation (48.6%), obtaining financial resources (47.2%) and sourcing of components and parts (46.6%). Three of the top five activities (except obtaining financial resources and product design and innovation) are directly related to production, which indicates that a majority of the Chinese MNEs' activities in this sample are more focused on the lower stream of their value chain, rather than the upper stream of the value chain (product design and innovation), and this is consistent with their market-seeking motivation in Table 6.8. Almost half of the sample subsidiaries (45.8%) are sourcing local natural resources, and it reflects the second most reported OFDI motivation of resource-seeking. Obtaining managerial skills are the least conducted OFDI activities, which is also consistent with the least prevalent OFDI motivation of asset seeking.

**Table 6.9 OFDI Activities**

| OFDI Activities                           | No. | %    |
|---|-----|------|
| Marketing of final products               | 202 | 57.1 |
| Sourcing of local production capabilities | 178 | 50.3 |
| Product design and innovation             | 172 | 48.6 |
| Obtain financial resources                | 167 | 47.2 |
| Sourcing of components and parts          | 165 | 46.6 |
| Sourcing local natural resources          | 162 | 45.8 |
| Hiring local labour                       | 122 | 34.5 |
| Obtain managerial skills                  | 78  | 22.0 |

## 6.4 Background Information of Respondents

As stated in Section 5.4 in Chapter 5, the targeted respondents are the senior executives of Chinese MNEs in both headquarters and the corresponding overseas subsidiaries who are directly involved in decision making of their firms' OFDI activities or knowledgeable about their firms' OFDI activities. The respondents' position, education background, overseas experience, age range and nationality are reported in this section.

### 6.4.1 Respondents' Position at Headquarters and Subsidiary

The survey questionnaire was delivered to the senior executives who are directly involved in the decision making of their firms' OFDI operations at both headquarters and overseas subsidiaries. The respondents were asked to indicate their title or position in their firm from one of the four categories at the time of the survey, and the results are presented in Table 6.10.

**Table 6.10 Position of Respondents**

| Position               | Headquarters |       | Subsidiary |       |
|------------------------|--------------|-------|------------|-------|
|                        | No.          | %     | No.        | %     |
| CEO/President/Chairman | 131          | 37.0  | 47         | 13.3  |
| General manager        | 65           | 18.4  | 111        | 31.4  |
| Department manager     | 92           | 26.0  | 139        | 39.3  |
| Other                  | 66           | 18.6  | 57         | 16.0  |
| Total                  | 354          | 100.0 | 354        | 100.0 |

From the headquarters respondents, the majority (55.4%) of them are top executives such as CEO, president, chairman and general manager, followed by 92 department managers and 66 respondents from other positions that are knowledgeable about the firms OFDI operations, such as personal assistant of the senior executives. For the subsidiary questionnaires, 47 of them were answered by CEO, president and chairman of the subsidiary, and 111 questionnaires were answered by general managers. Most of the questionnaires in subsidiary were answered by department managers, and 57 knowledgeable respondents from non-managerial positions in subsidiary answered the rest of the questionnaires. Overall, more than eighty percent

of the questionnaires were answered by respondents holding a managerial or senior managerial position in both headquarters and subsidiary, which indicates a satisfactory level of confidence in their answers.

### 6.4.2 Educational Background

The respondents were asked to indicate their highest level of education they had completed by the time of the survey. The majority of respondents have attended tertiary education, with less than seven percent of respondents at both headquarters and subsidiary holding qualifications that are below university level as shown in Table 6.11. At the headquarters, nearly half of the respondents (44.9%) hold bachelor degree, followed by master degree (37.3%) and doctorate degree (12.1%). At the subsidiaries, there are slightly more respondents holding a bachelor degree (50.6%), with less respondents completing master degree (35.3%) and doctorate degree (7.6%). This suggests that the respondents at both headquarters and subsidiaries are well educated in general.

**Table 6.11 Educational Level of Respondents**

| Highest Education Qualification    | Headquarters |       | Subsidiary |       |
|------------------------------------|--------------|-------|------------|-------|
|                                    | No.          | %     | No.        | %     |
| High school certificate/equivalent | 1            | 0.3   | 1          | 0.3   |
| Junior college diploma             | 2            | 0.6   | 2          | 0.6   |
| University diploma                 | 17           | 4.8   | 20         | 5.6   |
| Bachelor degree                    | 159          | 44.9  | 179        | 50.6  |
| Master degree                      | 132          | 37.3  | 125        | 35.3  |
| Doctorate degree                   | 43           | 12.1  | 27         | 7.6   |
| Total                              | 354          | 100.0 | 354        | 100.0 |

### 6.4.3 Overseas Experience

In the survey questionnaire, the respondents were asked to indicate their overseas experience in terms of working, living and studying. As shown in Table 6.12, the headquarters respondents have much less overseas experiences in all three categories, with less than sixteen percent of headquarters respondents having worked and lived outside mainland China, and only 5.1% of the headquarters respondents have

attended education overseas. In contrast, all of the subsidiary respondents have worked and lived overseas due to the nature of their work. There is considerably more subsidiary respondents having attended overseas education, which is more than three times higher than their counterparts at the headquarters. These numbers suggest that the subsidiary respondents are far more exposed to the overseas environment compared to the headquarters respondents, which enables them to better understand the market and the host country institutions.

**Table 6.12 Overseas Experience of Respondents**

| Experience | Headquarters |      | Subsidiary |      |
|------------|--------------|------|------------|------|
|            | Yes          | %    | Yes        | %    |
| Work       | 54           | 15.3 | 354        | 100  |
| Live       | 52           | 14.7 | 354        | 100  |
| Study      | 18           | 5.1  | 63         | 17.8 |

#### 6.4.4 Age Group

Respondents' age group was also collected during the survey. They were asked to indicate their age group at the time of the survey. As reported in Table 6.13, the majority of headquarters respondents (86.1%) are between 31 and 60 years old, and they can be further divided into two groups: 31-45 years old (34.8%) and 46-60 years old (51.3%). A majority of the subsidiary respondents (86.2%) are between 31-55 years old. There are more respondents that are over the age of fifty-six at the headquarters than that of subsidiaries. This indicates that the majority of the subsidiary respondents are younger than the respondents at the headquarters.

**Table 6.13 Age Group of Respondents**

| Age Group | Headquarters |       | Subsidiary |       |
|-----------|--------------|-------|------------|-------|
|           | No.          | %     | No.        | %     |
| 21-25     | 4            | 1.1   | 4          | 1.1   |
| 26-30     | 25           | 7.1   | 27         | 7.6   |
| 31-35     | 53           | 15.0  | 77         | 21.8  |
| 36-40     | 51           | 14.4  | 78         | 22.0  |
| 41-45     | 19           | 5.4   | 52         | 14.7  |
| 46-50     | 78           | 22.0  | 59         | 16.7  |
| 51-55     | 55           | 15.5  | 39         | 11.0  |
| 56-60     | 49           | 13.8  | 13         | 3.7   |
| >60       | 20           | 5.6   | 5          | 1.4   |
| Total     | 354          | 100.0 | 354        | 100.0 |

#### 6.4.5 Nationality of Respondents

The last collected demographic information of the respondents is their nationality. For the headquarters respondents, they are all Chinese citizens. As for the subsidiary respondents reported in Table 6.14, there are twenty-eight nationalities. Two hundred and seventy-seven of the respondents are Chinese nationals, followed by thirteen managers from Japan, ten from United States, eight from Singapore and six from South Korea. The hiring of foreign nationals from developed economies suggests that the Chinese MNEs are more willing to learn management know-how from the experiences of developed countries. Despite the managers from the United States, appointment of managers from Japan, Singapore and South Korea also indicates that the Chinese MNEs are looking for nationals from culturally adjacent countries, instead of culturally distant countries such as India and Italy.



**Table 6.14 Subsidiary Manager Nationality**

| Nationality        | No. | %     |
|--------------------|-----|-------|
| Chinese            | 277 | 78.2  |
| Japanese           | 13  | 3.7   |
| American           | 10  | 2.8   |
| Singaporean        | 8   | 2.3   |
| South Korean       | 6   | 1.7   |
| German             | 5   | 1.4   |
| Australian         | 4   | 1.1   |
| Hong Konger        | 3   | 0.8   |
| Russian            | 3   | 0.8   |
| Swedish            | 3   | 0.8   |
| British            | 2   | 0.6   |
| Canadian           | 2   | 0.6   |
| Indian             | 2   | 0.6   |
| Spanish            | 2   | 0.6   |
| Antiguan Barbadian | 1   | 0.3   |
| Chilean            | 1   | 0.3   |
| Danish             | 1   | 0.3   |
| Iranian            | 1   | 0.3   |
| Italian            | 1   | 0.3   |
| Kazakhstan         | 1   | 0.3   |
| Lao                | 1   | 0.3   |
| Liberian           | 1   | 0.3   |
| Malaysian          | 1   | 0.3   |
| Paraguayan         | 1   | 0.3   |
| South African      | 1   | 0.3   |
| Taiwanese          | 1   | 0.3   |
| Ugandan            | 1   | 0.3   |
| Ukrainian          | 1   | 0.3   |
| Total              | 354 | 100.0 |

### 6.5 Summary

This chapter presents the results of descriptive analysis on background information of the responding firms, the corresponding overseas subsidiaries, and the respondents from both headquarters and subsidiaries. For the responding firms, their firm size, headquarters location, ownership type, and industry sector distribution are reported.

The results indicate that the sample firm covered a wide range of Chinese OFDI firms in different size (SMEs and large firms) with different ownership (SOEs and Non-SOEs) that are located in twenty-one provinces, two autonomous regions and four municipalities across east, central and west regions of China. For the corresponding overseas subsidiaries, their location, timing of entry, ownership and internationalization strategy, motivation, and business activities are reported. Around half of the overseas subsidiaries are located in China's home region of Asia, with the rest of the subsidiaries scattered in five other continents, and most of them are established after 1995. There are more jointly owned subsidiaries than the wholly owned subsidiaries in this sample, with 32% of them under major Chinese ownership. The subsidiaries also have various motives, and the majority of them are driven by seeking new markets, with different activities in their operation. For the headquarters and subsidiary respondents, their positions in the firm, education background, overseas experience, age and nationalities are reported. These respondents are knowledgeable about their firms' OFDI operations, as they are senior executives in their firms and directly involved in the decision making process of their firms' OFDI. In general, all respondents are well educated with a high level of tertiary education, and the respondents at headquarters are all Chinese citizens with limited international exposures in terms of work, living and study. On the other hand, the subsidiary respondents have a more diverse background, and more than 21.8% of the subsidiary respondents are foreign nationals from twenty-seven countries, they also have more overseas experiences compared to the headquarters counterparts.

This chapter provides an overview for the background information on the responding firms and respondents from both headquarters and subsidiaries. The descriptive analysis sheds light on the overall representativeness of the sample and the reliability of the data. A more detailed analysis of the data is carried out in the next step of data analysis, and the results are presented in Chapter 7.

## **CHAPTER 7 DATA ANALYSIS RESULTS**

### **7.1 Introduction**

In this research, the data analysis process was divided into several steps. The first analysis carried out was the non-response bias test to examine the existence of systematic differences between responding firms and non-responding firms in their feedback and the results of this test are reported in Section 7.2. The next step was to test and refine the measurements of the variables and calculation of variable scores. As discussed in Chapter 5, most of the variables in this research are latent variables that are measured by multiple indicators, and the variable constructs that consist of multiple indicators are subject to the scale reliability test. Based on the test results, certain adjustments were made to the construct and then the variable scores were calculated. The correlation analysis and common method variance test were also performed. This analysis is carried out as the research employed a questionnaire survey that involves perceptual measures as its data collection method, the common method variance is the most important methodological concern and therefore, the data is subject to the common method variance test. Section 7.3 presents the results of scale reliability test, finalized variable constructs, correlation analysis and common method variance test. The third step was hypotheses testing, where the direct impact and the moderating effect were tested by moderated hierarchical multiple linear regression under each of the theoretical perspectives. Robustness checks were also carried out for each of the hypotheses testing, and the results of both tests were reported in Section 7.4 and Section 7.5. In Section 7.6, a summary of the data analysis of this research is presented.

### **7.2 Non-Response Bias Test**

To test whether there are possible systematic differences in the feedback between the responding firms and the non-responding firms, the non-response bias test was performed. The accuracy of data analysis results could suffer and the external validity could be undermined should non-response bias presents. As discussed in Chapter 5 (Methodology), the comparisons of group mean differences on the independent variables and dependent variable is the method to test the non-response bias in this research. The author split the response firms into two groups, i.e., early

response group and late response group, based on the date of receiving their survey responses. The early response group is the first fifty percent of the sample firms that returned their useable survey questionnaires, i.e., the first one hundred and seventy-seven firms, and the rest of the sample firms are regarded as the late response group. The assumption of this method is that the late respondents are similar to the non-respondents (Armstrong & Overton, 1977; Ferber, 1948), which is appropriate when the information of non-respondents is not accessible in this research.

The statistical technique applied in the non-response bias test was an independent sample t-test, in which the group means of the dependent variable and the seven independent variables were compared. The dependent variables and independent variables were measured in continuous scales, and their scores were calculated after the scale-reliability test was performed (refer to Section 7.3 Scale Reliability Test). Both headquarters' responses and subsidiary's responses were tested and compared, and the results of the t-test analysis are presented in Table 7.1.

**Table 7.1 Non-Response Bias Test Results**

| Variables                      | Headquarters Dataset         |     |                 | Subsidiary Dataset           |     |                 |
|--------------------------------|------------------------------|-----|-----------------|------------------------------|-----|-----------------|
|                                | t-test for Equality of Means |     |                 | t-test for Equality of Means |     |                 |
|                                | T                            | df  | Sig. (2-tailed) | T                            | df  | Sig. (2-tailed) |
| Quality of HQ-Sub Relationship | -.262                        | 352 | .793            | -.375                        | 352 | .708            |
| Regulative Distance            | .147                         | 352 | .883            | 1.411                        | 352 | .159            |
| Cultural Distance              | 1.444                        | 352 | .150            | .352                         | 352 | .725            |
| Organizational Exchange        | .360                         | 352 | .719            | -.452                        | 352 | .652            |
| Managerial Exchange            | -1.218                       | 352 | .224            | -.917                        | 352 | .360            |
| Global Mindset                 | .473                         | 352 | .637            | .238                         | 352 | .812            |
| Perceived Psychic Distance     | .772                         | 352 | .441            | 1.042                        | 352 | .298            |

The independent sample t-test results suggest that the null hypothesis, that the group means are equal, cannot be rejected. For both headquarters and subsidiary responses, the t-statistics for dependent variables and independent variables are all insignificant, and this indicates that there are no significant differences in the feedback between the early response group and the late response group. Based on the assumption that the

late response group is more similar to the non-respondents, the insignificant t-test results suggest that the non-response bias does not present in this research.

### 7.3 Scale Reliability Test

The variable measurements employed in this research are introduced in Section 5.7 in Chapter 5. The variable measurement scheme in Table 5.4 lays the foundation for questionnaire development and the variable indicators are converted into survey questions to collect relevant information from respondents. It is possible for the respondent to find some of the questions confusing, leading to biased or inaccurate responses, as most of the variable indicators are adopted from previous studies that are conducted in non-Chinese contexts that are different from this research. As a result, the scale reliability test is carried out to examine the soundness of the variable constructs, i.e., their ability to produce the same or highly similar results on repeated administrations (Rogers, 1995). The tests were performed on dependent variable, independent variables and moderators that are measured by continuous scales. The test results on these variable constructs are reported in this section. Some adjustments were made to the variable constructs based on the reliability test, and later the variable scores were calculated and correlations between variables were examined. It is then followed by the common method variance test, which examines the existence of false internal consistency in the feedback when perceptual measures are used for both dependent and independent variables (Chang et al., 2010), as the respondents were asked to indicate the level of variable constructs based on their perceptions in this research.

#### 7.3.1 Institutional Perspective Variables

*Regulative distance* is measured by seven indicators referring to the difference in formal institutions between China and the host country in terms of (1) fiscal policy, (2) anti-trust regulation, (3) political transparency, (4) intellectual property protection, (5) judiciary system efficiency, (6) rarity of market dominance in key industries, and (7) inflation. The scale reliability test results for these seven indicators are reported in Table 7.2. According to the table, all of the indicators have a corrected item-to-total correlation above the cut-off value for item rejection ( $r < 0.25$ ), and Cronbach's *alpha* on these seven indicators is 0.700 for headquarters dataset and 0.741 for

subsidiary dataset, which is acceptable for this study ( $\alpha \geq 0.70$ ). There is no adjustment needed for the variable construct of regulative distance, and the variable score was calculated by summing up the scores on the seven indicator scores.

**Table 7.2 Scale Reliability Test - Regulative Distance**

| Indicator                                    | Corrected<br>Item-<br>Total<br>Correlation | Cronbach's<br>Alpha | Number<br>of<br>Items | Data<br>Source |
|--|--|---------------------|-----------------------|----------------|
| Fiscal policy                                | .476                                       | .700                | 7                     | HQ             |
| Anti-trust regulation                        | .505                                       |                     |                       | HQ             |
| Political transparency                       | .400                                       |                     |                       | HQ             |
| Intellectual property protection             | .387                                       |                     |                       | HQ             |
| Judiciary system efficiency                  | .402                                       |                     |                       | HQ             |
| Rarity of market dominance in key industries | .374                                       |                     |                       | HQ             |
| Inflation                                    | .336                                       |                     |                       | HQ             |
| Fiscal policy                                | .504                                       | .741                | 7                     | Sub            |
| Anti-trust regulation                        | .505                                       |                     |                       | Sub            |
| Political transparency                       | .473                                       |                     |                       | Sub            |
| Intellectual property protection             | .454                                       |                     |                       | Sub            |
| Judiciary system efficiency                  | .492                                       |                     |                       | Sub            |
| Rarity of market dominance in key industries | .472                                       |                     |                       | Sub            |
| Inflation                                    | .293                                       |                     |                       | Sub            |

Note: HQ – survey based on headquarters managers

Sub – survey based on subsidiary managers

*Cultural distance* is measured by five indicators referring to the cultural dimensions that reflect difference in informal institution between China and the host country in terms of (1) power distance, (2) uncertainty, (3) individualism, (4) masculinity, and (5) long-term orientation. The scale reliability test results for these five indicators are reported in Table 7.3. According to the table, all of the indicators have a corrected item-to-total correlation above the cut-off value for item rejection ( $r < 0.25$ ), and Cronbach's *alpha* on these seven indicators is 0.756 for headquarters dataset and 0.772 for subsidiary dataset, which is acceptable for this study ( $\alpha \geq 0.70$ ). There is no adjustment needed for the variable construct of cultural distance, and the variable score was calculated by summing up the scores on the five indicator scores.

**Table 7.3 Scale Reliability Test - Cultural Distance**

| Indicator             | Corrected Item-<br>Total Correlation | Cronbach's<br>Alpha | Number of<br>Items | Data<br>Source |
|-----------------------|--------------------------------------|---------------------|--------------------|----------------|
| Power distance        | .644                                 | .756                | 5                  | HQ             |
| Uncertainty avoidance | .434                                 |                     |                    | HQ             |
| Individualism         | .529                                 |                     |                    | HQ             |
| Masculinity           | .516                                 |                     |                    | HQ             |
| Long-term orientation | .490                                 |                     |                    | HQ             |
| Power distance        | .577                                 | .772                | 5                  | Sub            |
| Uncertainty avoidance | .488                                 |                     |                    | Sub            |
| Individualism         | .561                                 |                     |                    | Sub            |
| Masculinity           | .565                                 |                     |                    | Sub            |
| Long-term orientation | .525                                 |                     |                    | Sub            |

Note: HQ – survey based on headquarters managers

Sub – survey based on subsidiary managers

*Level of institutionalization of headquarters' practices* is measured by fourteen indicators referring to two dimensions of institutionalization, namely implementation and internalization of headquarters' practices in subsidiaries. These two dimensions include the level of (1) implementation of headquarters' practices as a whole, (2) implementation of leadership, (3) information and analysis, (4) planning (overall strategic business planning), (5) authority to make decisions and training, (6) process management, (7) business results improvement, (8) customer focus and satisfaction, (9) willingness to put in a great deal of effort beyond that normally expected in order to help implement practices, (10) regarding headquarters' practice is a great way to reorganize business, (11) regarding headquarters' practices and subsidiary's practices values are similar, (12) regarding headquarters' practices inspire the best in subsidiary's involvement, (13) subsidiary is happy to adopt headquarters' practices, and (14) subsidiary really cares about headquarters' practices and its future. The scale reliability test results of these fourteen indicators are shown in Table 7.4. For both headquarters and subsidiary datasets, all the item-to-total correlations are above the cut-off value of 0.25, and the Cronbach's *alpha* on these fourteen indicators is 0.880 and 0.709 respectively. Therefore, both criteria are satisfied and there is no need to adjust the variable construct. The variable score for institutionalization of headquarters' practices was calculated by summing up the indicators' scores.

**Table 7.4 Scale Reliability Test - Institutionalization of Headquarters' Practices**

| Indicator  | Corrected<br>Item-<br>Total<br>Correlation | Cronbach's<br>Alpha | Number<br>of<br>Items | Data<br>Source |
|--|--|---------------------|-----------------------|----------------|
| Implementation of HQ's practice as a whole       | .576                                       | .880                | 14                    | HQ             |
| Leadership                                       | .580                                       |                     |                       | HQ             |
| Information and analysis                         | .573                                       |                     |                       | HQ             |
| Planning   | .572                                       |                     |                       | HQ             |
| People   | .559                                       |                     |                       | HQ             |
| Process management                               | .540                                       |                     |                       | HQ             |
| Business results improvement                     | .574                                       |                     |                       | HQ             |
| Customer focus and satisfaction                  | .523                                       |                     |                       | HQ             |
| Willingness to put effort                        | .573                                       |                     |                       | HQ             |
| HQ practice is great for reorganize business     | .561                                       |                     |                       | HQ             |
| HQ practice and Sub practice values are similar  | .459                                       |                     |                       | HQ             |
| HQ practice inspires the best in Sub involvement | .554                                       |                     |                       | HQ             |
| Sub is happy to adopt HQ's practices             | .514                                       |                     |                       | HQ             |
| Sub cares about HQ's practice and its future     | .520                                       |                     |                       | HQ             |
| Implementation of HQ's practice as a whole       | .458                                       | .709                | 14                    | Sub            |
| Leadership                                       | .516                                       |                     |                       | Sub            |
| Information and analysis                         | .524                                       |                     |                       | Sub            |
| Planning   | .419                                       |                     |                       | Sub            |
| People   | .457                                       |                     |                       | Sub            |
| Process management                               | .424                                       |                     |                       | Sub            |
| Business results improvement                     | .483                                       |                     |                       | Sub            |
| Customer focus and satisfaction                  | .331                                       |                     |                       | Sub            |
| Willingness to put effort                        | .495                                       |                     |                       | Sub            |
| HQ practice is great for reorganize business     | .251                                       |                     |                       | Sub            |
| HQ practice and Sub practice values are similar  | .448                                       |                     |                       | Sub            |
| HQ practice inspires the best in Sub involvement | .429                                       |                     |                       | Sub            |
| Sub is happy to adopt HQ's practices             | .414                                       |                     |                       | Sub            |
| Sub cares about HQ's practice and its future     | .374                                       |                     |                       | Sub            |

*Note: HQ – survey based on headquarters managers  
Sub – survey based on subsidiary managers*



### 7.3.2 Social Exchange Perspective Variables

*Organizational exchange* is measured by twelve indicators referring to two dimensions of organizational exchange between headquarters and subsidiary, including information exchange and negotiation latitude. These two dimensions include (1) headquarters (subsidiary) knows what's going on in the subsidiary (headquarters), (2) subsidiary's (headquarters') willingness to listen to the headquarters (subsidiary), (3) headquarters (subsidiary) confide firm information to subsidiary (headquarters), (4) headquarters (subsidiary) is a superior (subordinate) in the relationship, (5) subsidiary (headquarters) seeks input or advice from headquarters (subsidiary), (6) headquarters (subsidiary) is a trusted assistant in the relationship, (7) headquarters (subsidiary) let subsidiary (headquarters) know what's going on in the firm, (8) subsidiary (headquarters) confides firm information to headquarters (subsidiary), (9) the flexibility of subsidiary (headquarters) when dealing with headquarters (subsidiary), (10) subsidiary's (headquarters') willingness to solve headquarters' (subsidiary's) problem, (11) subsidiary (headquarters) bails headquarters (subsidiary) out at subsidiary's (headquarters') expense, and (12) frequency of headquarters (subsidiary) give suggestion to subsidiary (headquarters). The scale reliability test results of these twelve indicators are shown in Table 7.5. For both headquarters and subsidiary datasets, all the item-to-total correlations are above the cut-off value of 0.25, and the Cronbach's *alpha* on these fourteen indicators is 0.829 and 0.816 respectively. Therefore, both criteria are satisfied and there is no need to adjust the variable construct. The variable score for organizational exchange was calculated by summing up the indicators' scores.

**Table 7.5 Scale Reliability Test - Organizational Exchange**

| Indicator                                      | Corrected<br>Item-<br>Total<br>Correlation | Cronbach's<br>Alpha | Number of<br>Items | Data<br>Source |
|--|--|---------------------|--------------------|----------------|
| HQ knows what's going on in Sub                | .522                                       | .829                | 12                 | HQ             |
| Sub's willingness to listen                    | .653                                       |                     |                    | HQ             |
| HQ confides firm information to Sub            | .529                                       |                     |                    | HQ             |
| HQ is a superior in the relationship           | .351                                       |                     |                    | HQ             |
| Sub seeks input or advice from HQ              | .500                                       |                     |                    | HQ             |
| HQ is a trusted assistant in the relationship  | .529                                       |                     |                    | HQ             |
| HQ lets Sub know what's going on in HQ         | .420                                       |                     |                    | HQ             |
| Sub confides firm information to HQ            | .548                                       |                     |                    | HQ             |
| Flexibility of Sub when dealing with HQ        | .415                                       |                     |                    | HQ             |
| Sub's willingness to solve HQ's problem        | .481                                       |                     |                    | HQ             |
| Sub bails HQ at Sub's expense                  | .480                                       |                     |                    | HQ             |
| Frequency of HQ gives suggestions to Sub       | .412                                       |                     |                    | HQ             |
| Sub knows what's going on in HQ                | .532                                       | .816                | 12                 | Sub            |
| HQ's willingness to listen                     | .563                                       |                     |                    | Sub            |
| Sub confides firm information to HQ            | .568                                       |                     |                    | Sub            |
| Sub is a subordinate in the relationship       | .404                                       |                     |                    | Sub            |
| Sub seeks input or advice from HQ              | .454                                       |                     |                    | Sub            |
| Sub is a trusted assistant in the relationship | .487                                       |                     |                    | Sub            |
| Sub lets HQ know what's going on in HQ         | .444                                       |                     |                    | Sub            |
| HQ confides firm information to Sub            | .421                                       |                     |                    | Sub            |
| Flexibility of HQ when dealing with Sub        | .482                                       |                     |                    | Sub            |
| HQ's Willingness to solve Sub's problem        | .492                                       |                     |                    | Sub            |
| HQ bails Sub at HQ's expense                   | .418                                       |                     |                    | Sub            |
| Frequency of Sub gives suggestions to HQ       | .333                                       |                     |                    | Sub            |

*Note: HQ – survey based on headquarters managers*

*Sub – survey based on subsidiary managers*

*Managerial exchange* is measured by eleven indicators referring to (1) the respondent likes the headquarters (subsidiary) manager very much as a person, (2) the respondent would like to have subsidiary (headquarters) manager as a friend, (3) subsidiary (headquarters) manager is a lot of fun to work with, (4) subsidiary (headquarters) manager defends the respondent's work actions to a superior even without complete knowledge of the issue, (5) subsidiary (headquarters) manager

comes to the respondent's defence if the respondent was 'attacked', (6) subsidiary (headquarters) manager defends the respondent if the respondent made an honest mistake, (7) the respondent is willing to apply extra efforts for subsidiary (headquarters) manager that beyond the respondent's job description, (8) the respondent will apply extra efforts to further subsidiary's (headquarters') interest, (9) the respondent is impressed with subsidiary (headquarters) manager's knowledge, (10) the respondent respects subsidiary (headquarters) manager's knowledge and competence, and (11) the respondent admires subsidiary (headquarters) manager's professional skills. The scale reliability test results of these eleven indicators are shown in Table 7.6. For both headquarters and subsidiary datasets, all the item-to-total correlations are above the cut-off value of 0.25, and the Cronbach's *alpha* on these fourteen indicators is 0.850 and 0.830 respectively. Therefore, both criteria are satisfied and there is no need to adjust the variable construct. The variable score for managerial exchange was calculated by summing up the indicators' scores.

**Table 7.6 Scale Reliability Test - Managerial Exchange**

| Indicator   | Corrected<br>Item-<br>Total<br>Correlation | Cronbach's<br>Alpha | Number<br>of<br>Items | Data<br>Source |
|---|--|---------------------|-----------------------|----------------|
| Like the Sub manager as a person                  | .541                                       | .850                | 11                    | HQ             |
| Like to have Sub manager as a friend              | .603                                       |                     |                       | HQ             |
| Sub manager is a lot of fun to work with          | .545                                       |                     |                       | HQ             |
| Sub Manager defends my work                       | .546                                       |                     |                       | HQ             |
| Sub manager comes to my defence                   | .547                                       |                     |                       | HQ             |
| Sub manager defends me if I made honest mistake   | .473                                       |                     |                       | HQ             |
| Willing to apply extra effort                     | .469                                       |                     |                       | HQ             |
| Will apply extra effort to further Sub's interest | .574                                       |                     |                       | HQ             |
| Impressed with Sub manager's knowledge            | .522                                       |                     |                       | HQ             |
| Sub manager's knowledge & competence              | .496                                       |                     |                       | HQ             |
| Admire Sub manager's professional skills          | .575                                       |                     |                       | HQ             |
| Like the HQ manager as a person                   | .506                                       | .830                | 11                    | Sub            |
| Like to have HQ manager as a friend               | .512                                       |                     |                       | Sub            |
| HQ manager is a lot of fun to work with           | .561                                       |                     |                       | Sub            |
| HQ Manager defends my work                        | .603                                       |                     |                       | Sub            |
| HQ manager comes to my defence                    | .469                                       |                     |                       | Sub            |
| HQ manager defends me if I made honest mistake    | .396                                       |                     |                       | Sub            |
| Willing to apply extra effort                     | .434                                       |                     |                       | Sub            |
| Will apply extra effort to further HQ's interest  | .557                                       |                     |                       | Sub            |
| Impressed with HQ manager's knowledge             | .531                                       |                     |                       | Sub            |
| HQ manager's knowledge & competence               | .498                                       |                     |                       | Sub            |
| Admire HQ manager's professional skills           | .469                                       |                     |                       | Sub            |

Note: HQ – survey based on headquarters managers

Sub – survey based on subsidiary managers

*Subsidiary manager's organizational identity* is measured by six indicators referring to the respondent's perceived level of subsidiary manager's organizational identity with subsidiary in terms of (1) when someone criticizes subsidiary, it feels like a personal insult to the subsidiary manager, (2) subsidiary manager is very interested in what others think about subsidiary, (3) when the subsidiary manager talks about subsidiary, he/she usually says 'we' rather than 'they', (4) subsidiary's success is subsidiary manager's, (5) when someone praises subsidiary, it feels like a personal compliment to subsidiary manager, and (6) if a story in the media criticized

subsidiary, subsidiary manager would feel embarrassed. The scale reliability test results of these six indicators are shown in Table 7.7. For both headquarters and subsidiary datasets, all the item-to-total correlations are above the cut-off value of 0.25, and the Cronbach's *alpha* on these six indicators from headquarters and subsidiary datasets fall in the acceptance zone ( $\alpha \geq 0.70$ ). Therefore, the results suggest that both criteria are met and there is no further adjustment for the variable construct of subsidiary manager's organizational identity. The variable score for subsidiary manager's organizational identity was calculated by summing up the indicators' scores.

**Table 7.7 Scale Reliability Test - Subsidiary Manager's Organizational Identity**

| Indicator  | Corrected Item-Total Correlation | Cronbach's Alpha | Number of Items | Data Source |
|--|----------------------------------|------------------|-----------------|-------------|
| Feel like personal insult when Sub is criticized | .424                             | .720             | 6               | HQ          |
| Very interested in other's opinion on Sub        | .581                             |                  |                 | HQ          |
| When talk about Sub, use 'we'                    | .421                             |                  |                 | HQ          |
| Sub's success is the manager's success           | .469                             |                  |                 | HQ          |
| Praise Sub like a personal compliment            | .421                             |                  |                 | HQ          |
| Feel embarrassed when media criticizes Sub       | .422                             |                  |                 | HQ          |
| Feel like personal insult when Sub is criticized | .379                             | .701             | 6               | Sub         |
| Very interested in other's opinion on Sub        | .526                             |                  |                 | Sub         |
| When talk about Sub, use 'we'                    | .375                             |                  |                 | Sub         |
| Sub's success is the manager's success           | .469                             |                  |                 | Sub         |
| Praise Sub like a personal compliment            | .394                             |                  |                 | Sub         |
| Feel embarrassed when media criticizes Sub       | .477                             |                  |                 | Sub         |

Note: HQ – survey based on headquarters managers

Sub – survey based on subsidiary managers

### 7.3.3 Upper Echelons Perspective Variables

*Global mindset* is measured by thirty-nine indicators referring to two dimensions of manager's cognitive capabilities, including conceptualization and contextualization. These two dimensions are reflected by the level of manager's agreement on issues including (1) in the respondent's job, the best one can do is to plan ahead for at the most one year, (2) the respondent thinks it is necessary today to develop strategic

alliance with organizations around the globe, (3) projects that involve international dealings are long term, (4) the respondent takes pride in belonging to an international organization, (5) the respondent believes that in the next ten years the world will be the same as it is today, (6) in this interlinked world of ours, national boundaries are meaningless, (7) almost everybody agrees that international projects must have a shorter payback period than domestic ones, (8) believes that we really live in a global village, (9) in discussions, the respondent always drives for bigger, broader picture, (10) the respondent believes life is a balance of contradictory forces that are to be appreciated, pondered and managed, (11) the respondent considers it to be a disgrace when foreigners buys the home country land and buildings, (12) the respondent believes that 5-10 years is the best planning horizon in his/her line of business, (13) the respondent finds it is easy to rethink boundaries, and to change direction and behaviour, (14) the respondent feels comfortable with change, surprise and ambiguity, (15) the respondent gets frustrated when someone is constantly looking for context, (16) contradictors are time wasters that must be eliminated, (17) the respondent has no time for somebody trying to paint a broader or bigger picture, (18) the respondent believes he/she can live a fulfilling life in another culture, (19) five years is too long for a planning horizon, (20) the respondent enjoys trying foods from other countries, (21) the respondent finds people from other countries to be boring, (22) the respondent enjoys working on world community projects, (23) the respondent gets anxious around people from other cultures, (24) the respondent mostly watches and/or read the local news, (25) most of the respondent's social affiliations are local, (26) the respondent is at his/her best when he/she travels to worlds that he/she does not understand, (27) the respondent gets very curious when he/she meets somebody from another country, (28) the respondent enjoys reading foreign books or watching foreign movies, (29) the respondent finds the idea of working with a person from another culture unappealing, (30) when the respondent meets someone from another culture, he/she gets very nervous, (31) travelling in lands where the respondent can't read the street names gives him/her anxiety, (32) most of the respondent's professional affiliations are international, (33) the respondent gets irritated when he/she can't accomplish on time what he/she sets out to do, (34) the respondent becomes impatient when people from other cultures seem to take a long time to do something, (35) the respondent has a lot of empathy for people who struggle to speak his/her own language, (36) the respondent prefers to act

in his/her local environment (community or organization), (37) when something unexpected happens, it is easier to change the process than the structure, (38) in trying to accomplish his/her objectives, he/she finds diversity, multicultural teams play valuable role, and (39) the respondent has close friends from other cultural backgrounds. The scale reliability test results of these ten indicators are shown in Table 7.8. For both headquarters and subsidiary datasets, all the item-to-total correlations are above the cut-off value of 0.25, and the variable construct has a high scale reliability ( $\alpha = 0.950$  for headquarters dataset and  $\alpha = 0.939$  for subsidiary dataset). Therefore, both criteria are satisfied and there is no need to adjust the variable construct. The variable score for global mindset was calculated by summing up the indicators' scores.

**Table 7.8 Scale Reliability Test - Global Mindset**

| Indicator   | Corrected<br>Item-<br>Total<br>Correlation | Cronbach's<br>Alpha | Number<br>of<br>Items | Data<br>Source |
|---|--|---------------------|-----------------------|----------------|
| Plan ahead at the most one year                     | .637                                       | .950                | 39                    | HQ             |
| Necessary to develop strategic alliance             | .389                                       |                     |                       | HQ             |
| International projects are long term                | .453                                       |                     |                       | HQ             |
| Take pride in belonging to an international org     | .332                                       |                     |                       | HQ             |
| Believe the next ten years will be the same         | .640                                       |                     |                       | HQ             |
| National boundaries are meaningless                 | .499                                       |                     |                       | HQ             |
| International projects with a shorter payback time  | .574                                       |                     |                       | HQ             |
| We live in a global village                         | .319                                       |                     |                       | HQ             |
| I drive for bigger broader picture in discussion    | .460                                       |                     |                       | HQ             |
| Believe life is a balance of contradictory forces   | .268                                       |                     |                       | HQ             |
| Disgrace when foreigners buy our land               | .606                                       |                     |                       | HQ             |
| 5-10 years is the best planning horizon             | .471                                       |                     |                       | HQ             |
| Easy to rethink boundaries                          | .595                                       |                     |                       | HQ             |
| Comfortable with change                             | .613                                       |                     |                       | HQ             |
| Get frustrated when someone is seeking context      | .657                                       |                     |                       | HQ             |
| Contradictors are time wasters                      | .655                                       |                     |                       | HQ             |
| Have no time for somebody to paint big picture      | .631                                       |                     |                       | HQ             |
| Live a fulfilling life in any culture               | .522                                       |                     |                       | HQ             |
| Five years is too long for planning horizon         | .610                                       |                     |                       | HQ             |
| Enjoy trying food from other cultures               | .467                                       |                     |                       | HQ             |
| People from other countries are boring              | .697                                       |                     |                       | HQ             |
| Enjoy working with world community projects         | .548                                       |                     |                       | HQ             |
| Get anxious with people from other cultures         | .697                                       |                     |                       | HQ             |
| Mostly watch/read local news                        | .718                                       |                     |                       | HQ             |
| Most of my social affiliations are local            | .520                                       |                     |                       | HQ             |
| At my best when I travel to foreign country         | .613                                       |                     |                       | HQ             |
| Curious when I meet someone from other country      | .570                                       |                     |                       | HQ             |
| Enjoy foreign books and movies                      | .408                                       |                     |                       | HQ             |
| Working with foreigner is unappealing               | .726                                       |                     |                       | HQ             |
| People from other culture makes me nervous          | .716                                       |                     |                       | HQ             |
| Travel to foreign country gives me anxiety          | .588                                       |                     |                       | HQ             |
| Most of professional affiliations are international | .657                                       |                     |                       | HQ             |

Note: HQ – survey based on headquarters managers  
 Sub – survey based on subsidiary managers



**Table 7.8 Scale Reliability Test - Global Mindset Continued**

| Indicator   | Corrected<br>Item-<br>Total<br>Correlation | Cronbach's<br>Alpha | Number<br>of<br>Items | Data<br>Source |
|---|--|---------------------|-----------------------|----------------|
| Get irritated when don't accomplish on time       | .535                                       |                     |                       | HQ             |
| Become impatient when takes long time             | .676                                       |                     |                       | HQ             |
| Have a lot of empathy                             | .401                                       |                     |                       | HQ             |
| Prefer to act in my local environment             | .569                                       |                     |                       | HQ             |
| It is easier to change the process                | .511                                       |                     |                       | HQ             |
| Diversity multicultural teams play valuable role  | .408                                       |                     |                       | HQ             |
| Have close friends from other cultural background | .521                                       |                     |                       | HQ             |

*Note: HQ – survey based on headquarters managers*

*Sub – survey based on subsidiary managers*

**Table 7.8 Scale Reliability Test - Global Mindset Continued**

| Indicator   | Corrected<br>Item-<br>Total<br>Correlation | Cronbach's<br>Alpha | Number<br>of<br>Items | Data<br>Source |
|---|--|---------------------|-----------------------|----------------|
| Plan ahead at the most one year                     | .536                                       | .939                | 39                    | Sub            |
| Necessary to develop strategic alliance             | .501                                       |                     |                       | Sub            |
| International projects are long term                | .329                                       |                     |                       | Sub            |
| Take pride in belonging to an international org     | .359                                       |                     |                       | Sub            |
| Believe the next ten years will be the same         | .648                                       |                     |                       | Sub            |
| National boundaries are meaningless                 | .612                                       |                     |                       | Sub            |
| International projects with a shorter payback time  | .598                                       |                     |                       | Sub            |
| We live in a global village                         | .306                                       |                     |                       | Sub            |
| I drive for bigger broader picture in discussion    | .433                                       |                     |                       | Sub            |
| Believe life is a balance of contradictory forces   | .266                                       |                     |                       | Sub            |
| Disgrace when foreigners buy our land               | .577                                       |                     |                       | Sub            |
| 5-10 years is the best planning horizon             | .506                                       |                     |                       | Sub            |
| Easy to rethink boundaries                          | .559                                       |                     |                       | Sub            |
| Comfortable with change                             | .518                                       |                     |                       | Sub            |
| Get frustrated when someone is seeking context      | .605                                       |                     |                       | Sub            |
| Contradictors are time wasters                      | .578                                       |                     |                       | Sub            |
| Have no time for somebody to paint big picture      | .537                                       |                     |                       | Sub            |
| Live a fulfilling life in any culture               | .464                                       |                     |                       | Sub            |
| Five years is too long for planning horizon         | .642                                       |                     |                       | Sub            |
| Enjoy trying food from other cultures               | .324                                       |                     |                       | Sub            |
| People from other countries are boring              | .635                                       |                     |                       | Sub            |
| Enjoy working with world community projects         | .369                                       |                     |                       | Sub            |
| Get anxious with people from other cultures         | .638                                       |                     |                       | Sub            |
| Mostly watch/read local news                        | .625                                       |                     |                       | Sub            |
| Most of my social affiliations are local            | .491                                       |                     |                       | Sub            |
| At my best when I travel to foreign country         | .617                                       |                     |                       | Sub            |
| Curious when I meet someone from other country      | .491                                       |                     |                       | Sub            |
| Enjoy foreign books and movies                      | .358                                       |                     |                       | Sub            |
| Working with foreigner is unappealing               | .665                                       |                     |                       | Sub            |
| People from other culture makes me nervous          | .657                                       |                     |                       | Sub            |
| Travel to foreign country gives me anxiety          | .598                                       |                     |                       | Sub            |
| Most of professional affiliations are international | .599                                       |                     |                       | Sub            |

*Note: HQ – survey based on headquarters managers  
Sub – survey based on subsidiary managers*

**Table 7.8 Scale Reliability Test - Global Mindset Continued**

| Indicator   | Corrected<br>Item-<br>Total<br>Correlation | Cronbach's<br>Alpha | Number<br>of<br>Items | Data<br>Source |
|---|--|---------------------|-----------------------|----------------|
| Get irritated when don't accomplish on time       | .483                                       |                     |                       | Sub            |
| Become impatient when takes long time             | .652                                       |                     |                       | Sub            |
| Have a lot of empathy                             | .321                                       |                     |                       | Sub            |
| Prefer to act in my local environment             | .557                                       |                     |                       | Sub            |
| It is easier to change the process                | .554                                       |                     |                       | Sub            |
| Diversity multicultural teams play valuable role  | .338                                       |                     |                       | Sub            |
| Have close friends from other cultural background | .475                                       |                     |                       | Sub            |

*Note: HQ – survey based on headquarters managers*

*Sub – survey based on subsidiary managers*

*Perceived psychic distance* is measured by ten indicators referring to two dimensions of perceived differences between China and the host country by the manager, including business distance and cultural distance. These two dimensions include manager's perceived distance in (1) legal and political system, (2) market structure, (3) economic environment, (4) business practice, (5) language, (6) power distance, (7) uncertainty avoidance, (8) individualism, (9) masculinity, and (10) long-term orientation. The scale reliability test results of these ten indicators are shown in Table 7.9. For both headquarters and subsidiary datasets, all the item-to-total correlations are above the cut-off value of 0.25, and the variable construct has a high scale reliability ( $\alpha = 0.846$  for headquarters dataset and  $\alpha = 0.825$  for subsidiary dataset). Therefore, both criteria are satisfied and there is no need to adjust the variable construct. The variable score for organizational exchange was calculated by summing up the indicators' scores.

**Table 7.9 Scale Reliability Test – Perceived Psychic Distance**

| Indicator                  | Corrected Item-<br>Total Correlation | Cronbach's<br>Alpha | Number of<br>Items | Data<br>Source |
|----------------------------|--------------------------------------|---------------------|--------------------|----------------|
| Legal and political system | .637                                 | .846                | 10                 | HQ             |
| Market structure           | .591                                 |                     |                    | HQ             |
| Economic environment       | .563                                 |                     |                    | HQ             |
| Business practices         | .558                                 |                     |                    | HQ             |
| Language                   | .498                                 |                     |                    | HQ             |
| Power distance             | .594                                 |                     |                    | HQ             |
| Uncertainty avoidance      | .487                                 |                     |                    | HQ             |
| Individualism              | .497                                 |                     |                    | HQ             |
| Masculinity                | .524                                 |                     |                    | HQ             |
| Long-term orientation      | .504                                 |                     |                    | HQ             |
| Legal and political system | .537                                 | .825                | 10                 | Sub            |
| Market structure           | .498                                 |                     |                    | Sub            |
| Economic environment       | .482                                 |                     |                    | Sub            |
| Business practices         | .532                                 |                     |                    | Sub            |
| Language                   | .455                                 |                     |                    | Sub            |
| Power distance             | .558                                 |                     |                    | Sub            |
| Uncertainty avoidance      | .558                                 |                     |                    | Sub            |
| Individualism              | .508                                 |                     |                    | Sub            |
| Masculinity                | .503                                 |                     |                    | Sub            |
| Long-term orientation      | .481                                 |                     |                    | Sub            |

Note: HQ – survey based on headquarters managers

Sub – survey based on subsidiary managers

### 7.3.4 Quality of Headquarters-Subsidiary Relationship

*Quality of headquarters-subsidiary relationship* is measured by twenty-four indicators referring to four dimensions perceived by headquarters and subsidiary managers, including communication effectiveness, mutual trust, commitment and satisfaction. These four dimensions include managers' perceived level of quality of headquarters-subsidiary relationship in terms of (1) they communicate candidly with each other, (2) subsidiary (headquarters) always tells headquarters (subsidiary) everything it need to know, (3) headquarters (subsidiary) is responsive to subsidiary's (headquarters') need for information, (4) headquarters-subsidiary communication is open and effective, (5) headquarters and subsidiary have

continuous interaction with each other, (6) headquarters and subsidiary communicate clearly, (7) headquarters and subsidiary communicate openly, (8) headquarters and subsidiary have extensive formal and informal communication, (9) subsidiary (headquarters) has been frank in dealing with headquarters (subsidiary), (10) promises made by subsidiary (headquarters) are reliable, (11) subsidiary (headquarters) is knowledgeable regarding its operation, (12) subsidiary (headquarters) does not make false claims, (13) if problem arises, subsidiary (headquarters) is honest about it, (14) headquarters (subsidiary) defends subsidiary (headquarters) when others criticize subsidiary (headquarters), (15) headquarters and subsidiary have strong sense of loyalty to each other, (16) headquarters expect to be operating subsidiary for some time, (17) headquarters (subsidiary) is willing to make long-term investment in subsidiary (headquarters), (18) headquarters' (subsidiary's) relationship with subsidiary (headquarters) is a long-term one, (19) headquarters (subsidiary) is patient with subsidiary (headquarters) even when they cause trouble, (20) headquarters (subsidiary) is willing to dedicate whatever people and resources it takes to improve subsidiary's (headquarters') operation, (21) overall headquarters (subsidiary) is satisfied with the relationship, (22) this is the best relationship that headquarters (subsidiary) has experienced, (23) headquarters (subsidiary) thinks subsidiary (headquarters) is pleased with the relationship, and (24) headquarters (subsidiary) would say the relationship couldn't be much better. For subsidiary dataset, item (16) headquarters expect to be operating this subsidiary for some time was dropped as it can not be applied to subsidiary respondent. The scale reliability test results of these ten indicators are shown in Table 7.10.1 and Table 7.10.2. For both headquarters and subsidiary datasets, all the item-to-total correlations are above the cut-off value of 0.25, and the variable construct has a high scale reliability ( $\alpha = 0.850$  for headquarters dataset and  $\alpha = 0.904$  for subsidiary dataset). Therefore, both criteria are satisfied and there is no further adjustment is needed for the variable construct. The variable score for quality of headquarters-subsidiary relationship was calculated by summing up the indicators' scores.

**Table 7.10 Scale Reliability Test - Quality of  
Headquarters-Subsidiary Relationship**

| Indicator  | Corrected<br>Item-<br>Total<br>Correlation | Cronbach's<br>Alpha | Number<br>of<br>Items | Data<br>Source |
|--|--|---------------------|-----------------------|----------------|
| Communicate candidly with each other                 | .630                                       | .850                | 24                    | HQ             |
| Sub always tells us everything we need to know       | .508                                       |                     |                       | HQ             |
| HQ is responsive to Sub's need for information       | .502                                       |                     |                       | HQ             |
| Communication is open and effective                  | .570                                       |                     |                       | HQ             |
| Have continuous interaction with each other          | .448                                       |                     |                       | HQ             |
| We both communicate clearly                          | .548                                       |                     |                       | HQ             |
| Our staff communicate openly                         | .546                                       |                     |                       | HQ             |
| Have formal and informal communication               | .479                                       |                     |                       | HQ             |
| Sub has been frank in dealing with us                | .628                                       |                     |                       | HQ             |
| Promises made by Sub are reliable                    | .539                                       |                     |                       | HQ             |
| Sub is knowledgeable regarding to its operation      | .492                                       |                     |                       | HQ             |
| Sub does not make false claims                       | .498                                       |                     |                       | HQ             |
| If problem arises, Sub is honest about it            | .552                                       |                     |                       | HQ             |
| We defend Sub when others criticize Sub              | .546                                       |                     |                       | HQ             |
| We have strong sense of loyalty to each other        | .500                                       |                     |                       | HQ             |
| We expect to be operating this Sub for some<br>time  | .408                                       |                     |                       | HQ             |
| Willing to make long-term investment to this<br>Sub  | .503                                       |                     |                       | HQ             |
| Our relationship with this Sub is a long-term<br>one | .521                                       |                     |                       | HQ             |
| We are patient with this Sub                         | .255                                       |                     |                       | HQ             |
| We are willing to dedicate resources to this Sub     | .398                                       |                     |                       | HQ             |
| Overall we are satisfied with this relationship      | .549                                       |                     |                       | HQ             |
| This is the best relationship we've experienced      | .572                                       |                     |                       | HQ             |
| We think Sub is pleased with our relationship        | .513                                       |                     |                       | HQ             |
| Our relationship couldn't be better                  | .379                                       |                     |                       | HQ             |

*Note: HQ – survey based on headquarters managers  
Sub – survey based on subsidiary managers*

**Table 7.10 Scale Reliability Test - Quality of Headquarters-Subsidiary Relationship Continued**

| Indicator                                       | Corrected Item-Total Correlation | Cronbach's Alpha | Number of Items | Dataset |
|---|----------------------------------|------------------|-----------------|---------|
| Communicate candidly with each other            | .529                             | .904             | 23              | Sub     |
| HQ always tells us everything we need to know   | .475                             |                  |                 | Sub     |
| Sub is responsive to HQ's need for information  | .535                             |                  |                 | Sub     |
| Communication is open and effective             | .494                             |                  |                 | Sub     |
| Have continuous interaction with each other     | .520                             |                  |                 | Sub     |
| We both communicate clearly                     | .508                             |                  |                 | Sub     |
| Our staff communicate openly                    | .560                             |                  |                 | Sub     |
| Have formal and informal communication          | .558                             |                  |                 | Sub     |
| HQ has been frank in dealing with us            | .583                             |                  |                 | Sub     |
| Promises made by HQ are reliable                | .573                             |                  |                 | Sub     |
| HQ is knowledgeable regarding to its operation  | .570                             |                  |                 | Sub     |
| HQ does not make false claims                   | .530                             |                  |                 | Sub     |
| If problem arises, HQ is honest about it        | .591                             |                  |                 | Sub     |
| We defend HQ when others criticize HQ           | .611                             |                  |                 | Sub     |
| We have strong sense of loyalty to each other   | .601                             |                  |                 | Sub     |
| Willing to make long-term investment to HQ      | .486                             |                  |                 | Sub     |
| Our relationship with HQ is a long-term one     | .443                             |                  |                 | Sub     |
| We are patient with this HQ                     | .350                             |                  |                 | Sub     |
| We are willing to dedicate resources to this HQ | .572                             |                  |                 | Sub     |
| Overall we are satisfied with this relationship | .493                             |                  |                 | Sub     |
| This is the best relationship we've experienced | .455                             |                  |                 | Sub     |
| We think Sub is pleased with our relationship   | .516                             |                  |                 | Sub     |
| Our relationship couldn't be better             | .292                             |                  |                 | Sub     |

*Note: HQ – survey based on headquarters managers*

*Sub – survey based on subsidiary managers*

#### 7.4 Correlation Analysis for All Variables

Followed by the scale reliability test and calculation of variable scores, a correlation test was performed for all control variables, independent variables, moderator variables, and dependent variables. The results of the correlation test are reported in Table 7.11 and Table 7.12 for data from headquarters and subsidiaries of the sample Chinese MNEs, respectively. Some significant correlations are found in the test

results, and a small number of correlations return a high correlation coefficient ( $> 0.60$ ) (Bell, 1996; Churchill, 1991). For the rest of the highly correlated variables, it may suggest the existence of multicollinearity between these variables, and the potential issues of multicollinearity on these variables will be subject to further examinations during the hypotheses testing process. Overall, the results suggest that the constructs are fairly independent.



**Table 7.11 Correlation Matrix of All Variables - Headquarters Data**

|  | 1        | 2       | 3        | 4        | 5        | 6       | 7       | 8       | 9       | 10       |
|--|----------|---------|----------|----------|----------|---------|---------|---------|---------|----------|
| 1. Percentage of sales to overseas markets | 1        |         |          |          |          |         |         |         |         |          |
| 2. Subsidiary size                         | .077     | 1       |          |          |          |         |         |         |         |          |
| 3. Subsidiary owned by Chinese parent      | .003     | -.151** | 1        |          |          |         |         |         |         |          |
| 4. State ownership in headquarters         | .072     | .121*   | -.238*** | 1        |          |         |         |         |         |          |
| 5. Subsidiary manager's nationality        | .130*    | .056    | .052     | -.0190   | 1        |         |         |         |         |          |
| 6. Regulative distance                     | .111*    | .049    | -.020    | .179**   | .117*    | 1       |         |         |         |          |
| 7. Cultural distance                       | .125*    | .006    | .080     | .206***  | -.002    | .553*** | 1       |         |         |          |
| 8. Institutionalization of HQ's practices  | .206***  | -.028   | .097†    | .069     | .110*    | .464*** | .474*** | 1       |         |          |
| 9. Organizational exchange                 | .178**   | -.005   | .065     | .103†    | .140**   | .492*** | .506*** | .774*** | 1       |          |
| 10. Wholly owned subsidiary                | .033     | -.085   | .864***  | -.285*** | .184**   | -.0150  | .071    | .130*   | .080    | 1        |
| 11. Greenfield entry mode                  | .059     | -.124*  | .623***  | -.302*** | .086     | -.113*  | -.086   | .016    | -.054   | .701***  |
| 12. Managerial exchange                    | .143*    | .018    | .058     | .109*    | .117*    | .460*** | .419*** | .664*** | .712*** | .092†    |
| 13. Sub manager's identity                 | .155**   | .034    | .054     | .037     | .174**   | .389*** | .325*** | .583*** | .569*** | .085     |
| 14. Global mindset                         | .042     | .057    | -.135*   | .370***  | .050     | .567*** | .502*** | .392*** | .522*** | -.140**  |
| 15. Non-flexible personality               | .093†    | .069    | -.008    | -.092†   | .113*    | -.011   | -.050   | .062    | .009    | .047     |
| 16. Years studied overseas                 | -.221*** | -.044   | -.164**  | .168**   | -.488*** | -.090   | .018    | -.189** | -.124*  | -.235*** |
| 17. Perceived psychic distance             | .150**   | -.022   | .056     | .193***  | .045     | .628*** | .882*** | .568*** | .589*** | .047     |
| 18. Quality of HQ-Sub relationship         | .173**   | -.039   | .040     | .066     | .124*    | .455*** | .452*** | .739*** | .764*** | .063     |

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001. (2-tailed).

**Table 7.11 Continued**

|           |  | Pearson Correlation Coefficient (two-tailed) |         |         |         |        |        |         |    |  |  |  |  |  |  |  |  |  |  |  |
|-----------|--|--|---------|---------|---------|--------|--------|---------|----|--|--|--|--|--|--|--|--|--|--|--|
|           |  | 11   | 12      | 13      | 14      | 15     | 16     | 17      | 18 |  |  |  |  |  |  |  |  |  |  |  |
| <b>11</b> |  | 1  |         |         |         |        |        |         |    |  |  |  |  |  |  |  |  |  |  |  |
| <b>12</b> |  | -.013  | 1       |         |         |        |        |         |    |  |  |  |  |  |  |  |  |  |  |  |
| <b>13</b> |  | .022   | .548*** | 1       |         |        |        |         |    |  |  |  |  |  |  |  |  |  |  |  |
| <b>14</b> |  | -.263***                                     | .600*** | .423*** | 1       |        |        |         |    |  |  |  |  |  |  |  |  |  |  |  |
| <b>15</b> |  | .005   | .079    | .079    | -.068   | 1      |        |         |    |  |  |  |  |  |  |  |  |  |  |  |
| <b>16</b> |  | -.182**                                      | -.134*  | -.140*  | .029    | -.142* | 1      |         |    |  |  |  |  |  |  |  |  |  |  |  |
| <b>17</b> |  | -.080  | .487*** | .401*** | .518*** | -.006  | -.012  | 1       |    |  |  |  |  |  |  |  |  |  |  |  |
| <b>18</b> |  | .006   | .751*** | .662*** | .579*** | .071   | -.132* | .529*** | 1  |  |  |  |  |  |  |  |  |  |  |  |

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001. (2-tailed).

Table 7.12 Correlation Matrix of All Variables - Subsidiary Data

|  | 1        | 2       | 3        | 4        | 5        | 6       | 7       | 8       | 9       | 10       |
|--|----------|---------|----------|----------|----------|---------|---------|---------|---------|----------|
| 1. Percentage of sales to overseas markets | 1        |         |          |          |          |         |         |         |         |          |
| 2. Subsidiary size                         | .077     | 1       |          |          |          |         |         |         |         |          |
| 3. Subsidiary owned by Chinese parent      | .003     | -.151** | 1        |          |          |         |         |         |         |          |
| 4. State ownership in headquarters         | .072     | .121*   | -.238*** | 1        |          |         |         |         |         |          |
| 5. Subsidiary manager's nationality        | .130*    | .056    | .052     | -.019    | 1        |         |         |         |         |          |
| 6. Regulative distance                     | .133*    | .027    | -.074    | .214***  | .087     | 1       |         |         |         |          |
| 7. Cultural distance                       | .245***  | .093    | .003     | .218***  | .122*    | .530*** | 1       |         |         |          |
| 8. Institutionalization of HQ's practices  | .201***  | .001    | .085     | .112*    | .107*    | .360*** | .410*** | 1       |         |          |
| 9. Organizational exchange                 | .197***  | -.009   | .030     | .040     | .154**   | .361*** | .304*** | .703*** | 1       |          |
| 10. Wholly owned subsidiary                | .033     | -.085   | .864***  | -.285*** | .184**   | -.068   | -.022   | .111*   | .092†   | 1        |
| 11. Greenfield entry mode                  | .059     | -.124*  | .623***  | -.302*** | .086     | -.174** | -.121*  | -.017   | .018    | .701***  |
| 12. Managerial exchange                    | .226***  | -.007   | .040     | .028     | .088     | .276*** | .313*** | .587*** | .728*** | .0950†   |
| 13. Sub manager's identity                 | .194***  | .007    | .048     | .056     | .148**   | .336*** | .333*** | .528*** | .574*** | .107*    |
| 14. Global mindset                         | .074     | .108*   | -.116*   | .376***  | .122*    | .552*** | .632*** | .541*** | .497*** | -.118*   |
| 15. Non-flexible personality               | .093†    | .069    | -.008    | -.092†   | .113*    | .020    | -.041   | .066    | .086    | .047     |
| 16. Years studied overseas                 | -.221*** | -.044   | -.164**  | .168**   | -.488*** | -.078   | -.078   | -.133*  | -.167** | -.235*** |
| 17. Perceived psychic distance             | .304***  | .046    | -.007    | .174**   | .123*    | .643*** | .867*** | .470*** | .475*** | -.016    |
| 18. Quality of HQ-Sub relationship         | .217***  | -.001   | .049     | -.011    | .112*    | .349*** | .366*** | .696*** | .729*** | .091†    |

† p &lt; .10; \* p &lt; .05; \*\* p &lt; .01; \*\*\* p &lt; .001. (2-tailed).

**Table 7.12 Continued**

|           |  | Pearson Correlation Coefficient (two-tailed) |         |         |         |        |         |         |    |  |  |  |  |  |  |  |  |  |  |  |
|-----------|--|--|---------|---------|---------|--------|---------|---------|----|--|--|--|--|--|--|--|--|--|--|--|
|           |  | 11   | 12      | 13      | 14      | 15     | 16      | 17      | 18 |  |  |  |  |  |  |  |  |  |  |  |
| <b>11</b> |  | 1  |         |         |         |        |         |         |    |  |  |  |  |  |  |  |  |  |  |  |
| <b>12</b> |  | .010   | 1       |         |         |        |         |         |    |  |  |  |  |  |  |  |  |  |  |  |
| <b>13</b> |  | .002   | .510*** | 1       |         |        |         |         |    |  |  |  |  |  |  |  |  |  |  |  |
| <b>14</b> |  | -.255***                                     | .472*** | .502*** | 1       |        |         |         |    |  |  |  |  |  |  |  |  |  |  |  |
| <b>15</b> |  | .005   | .081    | .154**  | -.009   | 1      |         |         |    |  |  |  |  |  |  |  |  |  |  |  |
| <b>16</b> |  | -.182**                                      | -.134*  | -.165** | -.051   | -.142* | 1       |         |    |  |  |  |  |  |  |  |  |  |  |  |
| <b>17</b> |  | -.103  | .453*** | .369*** | .604*** | .023   | -.095†  | 1       |    |  |  |  |  |  |  |  |  |  |  |  |
| <b>18</b> |  | .012   | .752*** | .633*** | .539*** | .122*  | -.164** | .498*** | 1  |  |  |  |  |  |  |  |  |  |  |  |

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001. (2-tailed).

## **7.5 Hypotheses Testing**

The major focus of this research is the factors that impact on quality of headquarters-subsubsidiary relationship in Chinese MNEs. The analysis of the three sub-research questions involves statistical techniques that were outlined in Chapter 5 Section 5.7.2.3. For the direct relationship between independent variable and dependent variable, and the moderating effect on the direct relationship between independent variable and dependent variable is tested by moderated hierarchical multiple regression analysis. As discussed in Chapter 5 Section 5.7.2.3, the hypothesized relationships from different theoretical perspectives were tested separately in different groups, starting with the institutional perspective, followed by the social exchange perspective and the upper echelons perspective. After each of the hypothesized relationships were tested separately, they were tested in one full model by moderated hierarchical multiple regression analysis.

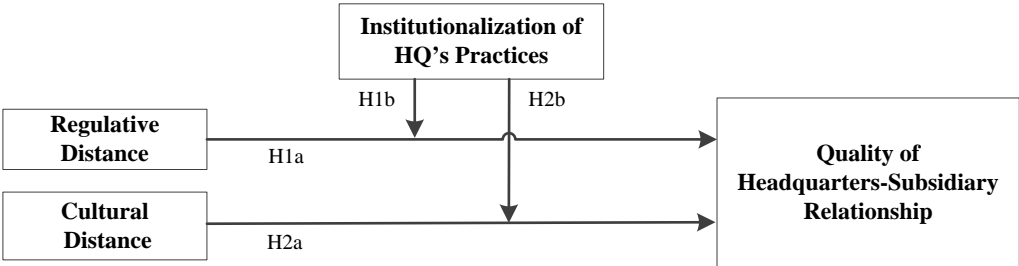
The analysis of each of the theoretical perspectives was divided into four steps. First, correlation analysis was performed to further examine whether the issue of multicollinearity exists. Second, the common method variance test was performed to address the methodological concern of common method variance in this research, as the data of this research was collected by using survey questionnaires that employed perceptual measures (Chang et al., 2010; Podsakoff et al., 2003). Although the author has adopted measures at the research design stage and data collection stage to minimize the impact of common method bias (refer to Chapter 5 Section 5.6.2 Telephone-Email/Facsimile Approach), such as develop a pair of questionnaires to collect information from different sources (i.e., from headquarters and subsidiary), reduce the potential for biased answers (i.e., state that there is no right or wrong answers and guarantee the confidentiality of the information provided), multiple stages of questionnaires delivery and collection (i.e., collect headquarters' questionnaire before the delivery of questionnaire to the corresponding subsidiary), statistical techniques are still required to further examine the presence of common method variance (Chang et al., 2010). Therefore, Harman's one-factor test (Podsakoff & Organ, 1986) and partial correlation analysis with a marker variable (Lindell & Whitney, 2001) were performed. After the common method variance test, the moderated hierarchical multiple regression analysis was performed to test the

hypothesized direct and moderating relationships. The final analysis tasked performed was robustness check of the results from moderated hierarchical multiple regression analysis, by changing the dependent variable from headquarters dataset to subsidiary dataset. The results of these tests are reported in this section.

**7.5.1 Institutional Perspective**

In this section, analyses were carried out to answer the sub-research questions that are related to the institutional perspective. As shown in Figure 7.1, it investigates the impacts of institutional differences between host and home countries on the quality of headquarters-subsidary relationship in Chinese MNEs. Further, it investigates how the impacts of institutional differences between host and home countries on the quality of headquarters-subsidary relationship in Chinese MNEs are contingent upon the levels of headquarters’ practices institutionalized in subsidiaries. Hypothesis 1a, 1b, 2a and 2b were tested in this section.

**Figure 7.1 Impacts of Factors Related to Institutional Perspective**



**7.5.1.1 Correlation Analysis**

To further examine the existence of multicollinearity issue, a correlation test was performed on the institutional perspective variables. As previously discussed, the author can use information from different sources to minimize the possibility of common method bias (Chang et al., 2010), therefore, the independent, moderator and dependent variables from different datasets are used in the hypotheses testing. As the institutional distance reflects the differences of institutional environments between China and the host country, it is argued that the independent and moderator variables from subsidiary dataset are more accurate indicators than the data from the

headquarters because the subsidiary is exposed to both home and host country institutions. By contrast, the dependent variable of quality of headquarters-subsidiary relationship from headquarters dataset has less variance, as they are collected from the same home country: China. Therefore, the author performed the following analysis using independent and moderator variables from the subsidiary dataset, and dependent variable from the headquarters dataset. The correlation results of institutional perspective variables are shown in Table 7.13. The results show significant correlations exist between the independent, moderator and dependent variables. However, the correlation coefficients are all below 0.60 except the correlation between institutionalization of headquarters' practices and the quality of the headquarters-subsidiary relationship, which will be subject to further examination in the moderated hierarchical multiple regression analysis.

Table 7.13 Correlation Matrix of Institutional Perspective Variables

|  | 1       | 2       | 3        | 4       | 5     | 6       | 7       | 8       | 9 |
|--|---------|---------|----------|---------|-------|---------|---------|---------|---|
| 1. Percentage of sales to overseas markets | 1       |         |          |         |       |         |         |         |   |
| 2. Subsidiary size                         | .077    | 1       |          |         |       |         |         |         |   |
| 3. Subsidiary owned by Chinese parent      | .003    | -.151** | 1        |         |       |         |         |         |   |
| 4. State ownership in headquarters         | .072    | .121*   | -.238*** | 1       |       |         |         |         |   |
| 5. Subsidiary manager nationality          | .130*   | .056    | .052     | -.019   | 1     |         |         |         |   |
| 6. Regulative distance                     | .133*   | .027    | -.074    | .214*** | .087  | 1       |         |         |   |
| 7. Cultural distance                       | .245*** | .093†   | .003     | .218*** | .122* | .530*** | 1       |         |   |
| 8. Institutionalization of HQ's practices  | .201*** | .001    | .085     | .112*   | .107* | .360*** | .410*** | 1       |   |
| 9. Quality of HQ-Sub relationship          | .173*** | -.039   | .040     | .066    | .124* | .400*** | .386*** | .677*** | 1 |

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001. (2-tailed).



The author examined the variance inflation factors (VIFs) in the regression analysis and found that all variables' VIFs in Models 3, 4 and 5 are below two, i.e., well below the cut-off value of ten (Hair, Anderson, Tatham, & Black, 1998). This finding indicates that there are no multicollinearity problems in the data.

#### ***7.5.1.2 Common Method Variance Test***

To detect common method variance, the author first performed Harman's one-factor test (Podsakoff & Organ, 1986). The test results show that the first extracted factor explains 26.40% of the total variance, indicating that there is no evidence of common method variance in the data. However, as Harman's one-factor test provides an incomplete picture (Podsakoff et al., 2003), the author also used Lindell and Whitney's (2001) approach by introducing a marker variable. This marker variable is measured using the same instrument as the scale used in our analysis, but it is theoretically unrelated to the variables in the institutional perspective (Noorderhaven & Harzing, 2009). The variable of 'credibility of subsidiary's top management' is selected as the marker variable for two reasons. First, this variable was not used in this study and is therefore unlikely to be theoretically related to the variables of interest. Second, the variable was measured in the same way as most of the variables in this study. When the credibility of the subsidiary's top management is controlled for, partial correlations of all of the variables show similar levels of significance as in Table 7.14. This finding provides further evidence that common method variance is not present in the data.

Table 7.14 Partial Correlation Matrix of Institutional Perspective Variables

|  | 1                   | 2                  | 3                   | 4                  | 5                 | 6                   | 7                   | 8                   | 9 |
|--|---------------------|--------------------|---------------------|--------------------|-------------------|---------------------|---------------------|---------------------|---|
| 1. Percentage of sales to overseas markets | 1                   |                    |                     |                    |                   |                     |                     |                     |   |
| 2. Subsidiary size                         | .082                | 1                  |                     |                    |                   |                     |                     |                     |   |
| 3. Subsidiary owned by Chinese parent      | .010                | -.111 <sup>†</sup> | 1                   |                    |                   |                     |                     |                     |   |
| 4. State ownership in headquarters         | .046                | .107 <sup>†</sup>  | -.195 <sup>**</sup> | 1                  |                   |                     |                     |                     |   |
| 5. Subsidiary manager nationality          | .150 <sup>**</sup>  | .047               | .078                | -.032              | 1                 |                     |                     |                     |   |
| 6. Regulative distance                     | .102 <sup>†</sup>   | .035               | -.064               | .178 <sup>**</sup> | .073              | 1                   |                     |                     |   |
| 7. Cultural distance                       | .226 <sup>***</sup> | .075               | .032                | .163 <sup>**</sup> | .128 <sup>*</sup> | .548 <sup>***</sup> | 1                   |                     |   |
| 8. Institutionalization of HQ's practices  | .142 <sup>*</sup>   | .001               | .101 <sup>†</sup>   | .050               | .112 <sup>†</sup> | .368 <sup>***</sup> | .373 <sup>***</sup> | 1                   |   |
| 9. Quality of HQ-Sub relationship          | .118 <sup>*</sup>   | -.028              | .081                | -.004              | .105 <sup>†</sup> | .400 <sup>***</sup> | .396 <sup>***</sup> | .648 <sup>***</sup> | 1 |

<sup>†</sup> p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001. (2-tailed).

***7.5.1.3 Moderated Hierarchical Multiple Regression Analysis***

Moderated hierarchical multiple regression analysis was performed to test the hypothesized direct and moderating effect of the independent and moderator variables under the institutional perspective. The test results are reported in Table 7.15.

Table 7.15 Moderated Hierarchical Multiple Regression Analysis

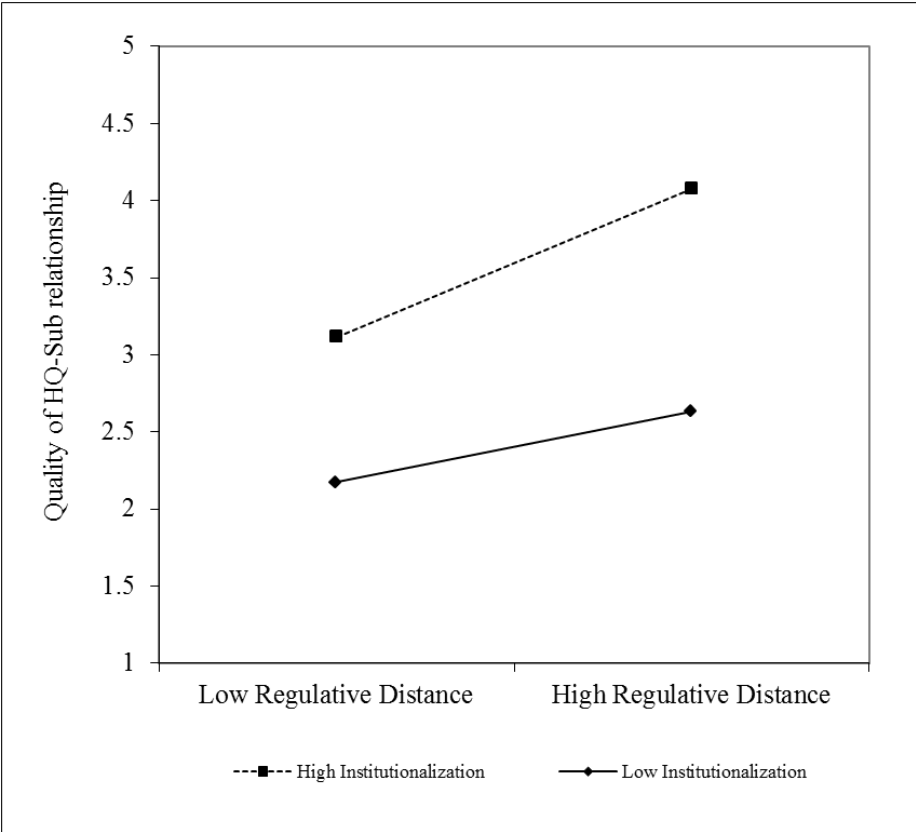
| DV: Quality of HQ-Sub Relationship         | Model 1 | Model 2   | Model 3   | Model 4   | Model 5   |
|--|---------|-----------|-----------|-----------|-----------|
| <i>Control variables</i>                   |         |           |           |           |           |
| Percentage of sales to overseas markets    | .137*   | .051      | .005      | .034      | .030      |
| Subsidiary size                            | -.048   | -.057     | -.037     | -.035     | -.037     |
| Subsidiary owned by Chinese parent         | .068    | .062      | .006      | .008      | .012      |
| State ownership in headquarters            | .034    | -.061     | -.062     | -.071†    | -.066     |
| Subsidiary manager's nationality           | .077    | .032      | .009      | .010      | .011      |
| <i>Independent variables</i>               |         |           |           |           |           |
| Regulative distance                        |         | .269***   | .126*     | .124*     | .115*     |
| Cultural distance                          |         | .281***   | .126*     | .115*     | .134**    |
| <i>Moderator</i>                           |         |           |           |           |           |
| Institutionalization                       |         |           | .601***   | .597***   | .584***   |
| <i>Interaction terms</i>                   |         |           |           |           |           |
| Regulative distance × Institutionalization |         |           |           | .125**    |           |
| Cultural distance × Institutionalization   |         |           |           |           | .138***   |
| <i>Model fit</i>                           |         |           |           |           |           |
| N  | 354     | 354       | 354       | 354       | 354       |
| R Square                                   | .035    | .251      | .531      | .545      | .549      |
| Adjusted R Square                          | .019    | .233      | .518      | .532      | .535      |
| F Value                                    | 2.193†  | 14.245*** | 41.968*** | 39.458*** | 40.006*** |

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001. (2-tailed).

As reported in Table 7.15, the first model is significant at the 0.10 level, and the other models are all significant at the 0.001 level, which indicates that the models fit the data well. In general, the signs of the beta coefficients are in the hypothesized directions for all independent and moderating variables. As for independent variables, both regulative distance and cultural distance are found to be statistically significant, and cultural distance has the largest beta coefficient, with the highest level of significance among the independent variables. The positive beta coefficients for regulative distance and cultural distance, with p-values of less than 0.001, indicate that larger regulative and cultural distances positively affect the quality of the headquarters-subsidary relationship. In summary, the results suggest that both regulative and cultural distances arising from differences between host and home countries have significant positive effects on the quality of the headquarters-subsidary relationship in Chinese MNEs. Therefore, Hypotheses 1a and 2a are supported.

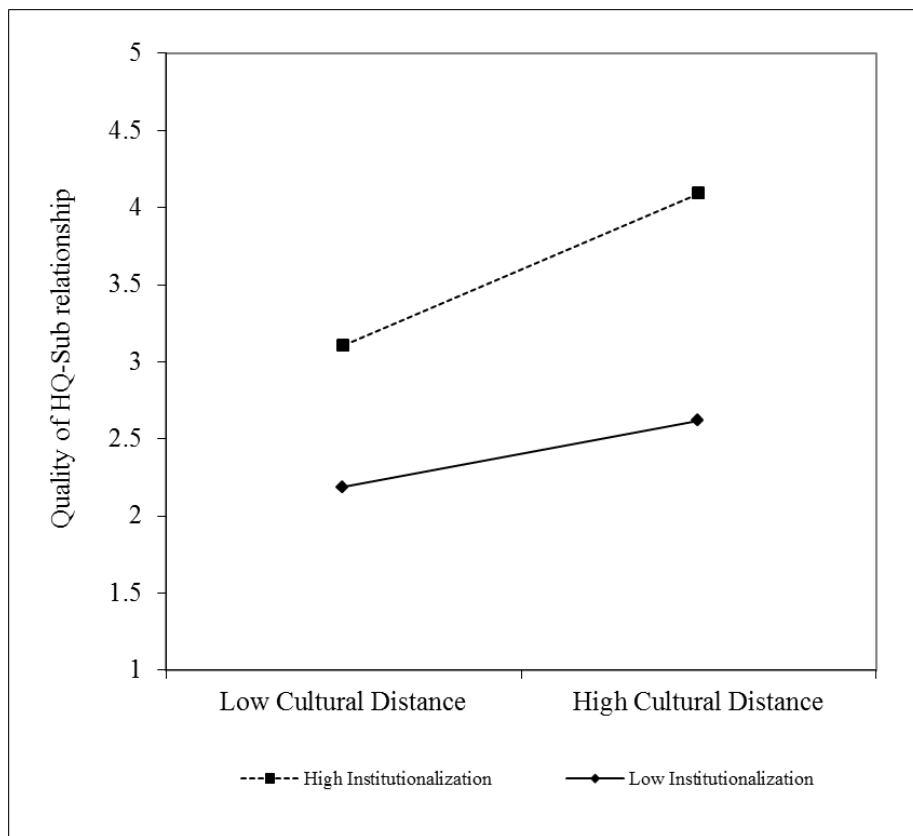
Hypothesis 1b proposes that the positive relationship between regulative distance and quality of headquarters-subsidary relationship is enhanced when the level of institutionalization of headquarters practices in the subsidiary is higher. As seen in the regression results for Model 4, the interaction term is positive and statistically significant ( $p < 0.01$ ). This positive moderating effect is also seen in Figure 7.2, which reveals that the positive relationship between regulative distance and quality of headquarters-subsidary relationship is stronger when the level of institutionalization of headquarters' practices is higher. Thus, Hypothesis 1b is supported.

**Figure 7.2 Moderating Effect of Institutionalization on Regulative Distance**



Hypothesis 2b proposes that the positive relationship between cultural distance and quality of headquarters-subsidary relationship is stronger when the degree of institutionalization of headquarters’ practices by the subsidiary is higher. As seen in the regression results for Model 5, the interaction term is positive and statistically significant ( $p < 0.001$ ). Moreover, the positive moderating effect of institutionalization is also shown in Figure 7.3. The plot demonstrates that the positive relationship between cultural distance and quality of headquarters-subsidary relationship is significantly enhanced when the level of institutionalization of headquarters practices increases. Thus, Hypothesis 2b is supported.

**Figure 7.3 Moderating Effect of Institutionalization on Cultural Distance**



#### 7.5.1.4 Robustness Check

To test the robustness of the model, the author altered the measurement of the dependent variable by using the quality of headquarters-subsidary relationship indicators from the subsidiary dataset. The results are presented in Table 7.16.

Table 7.16 Moderated Hierarchical Multiple Regression Analysis - Robustness Check

| DV: Quality of HQ-Sub Relationship         | Model 1.1 | Model 2.1 | Model 3.1 | Model 4.1 | Model 5.1 |
|--|-----------|-----------|-----------|-----------|-----------|
| <i>Control variables</i>                   |           |           |           |           |           |
| Percentage of sales to overseas markets    | .185**    | .105*     | .058      | .078†     | .081†     |
| Subsidiary size                            | -.032     | -.040     | -.019     | -.018     | -.019     |
| Subsidiary owned by Chinese parent         | .044      | .039      | -.018     | -.016     | -.013     |
| State ownership in headquarters            | .020      | -.070     | -.072†    | -.077†    | -.075†    |
| Subsidiary manager's nationality           | .097†     | .055      | -.032     | .032      | .033      |
| <i>Independent variables</i>               |           |           |           |           |           |
| Regulative distance                        |           | .265***   | .118*     | .017*     | .109*     |
| Cultural distance                          |           | .255***   | .097*     | .089*     | .103*     |
| <i>Moderator</i>                           |           |           |           |           |           |
| Institutionalization                       |           |           | .614***   | .611***   | .598***   |
| <i>Interaction terms</i>                   |           |           |           |           |           |
| Regulative distance × Institutionalization |           |           |           | .088*     |           |
| Cultural distance × Institutionalization   |           |           |           |           | .126**    |
| <i>Model fit</i>                           |           |           |           |           |           |
| N  | 354       | 354       | 354       | 354       | 354       |
| R Square                                   | .052      | .244      | .536      | .543      | .551      |
| Adjusted R Square                          | .036      | .227      | .524      | .530      | .537      |
| F Value                                    | 3.283**   | 13.765*** | 42.899*** | 39.145*** | 40.376*** |

† p &lt; .10; \* p &lt; .05; \*\* p &lt; .01; \*\*\* p &lt; .001. (2-tailed).



In general, all of the models are significant and fit the data well. The signs of the beta coefficients are in the hypothesized directions for all of the independent and moderating variables. Model 2.1 tests the direct relationship between the two institutional distances and the quality of the headquarters-subsidary relationship, returning results that are similar to those for Model 2 in Table 7.15. This model shows that both independent variables are positively related to the quality of the headquarters-subsidary relationship, with regulative and cultural distances having significant positive effects on the quality of the headquarters-subsidary relationship ( $p < 0.001$ ). This finding suggests that the higher the levels of regulative and cultural distances are, the better the relationship between the Chinese MNE headquarters and subsidiaries is. The results are thus consistent with those presented in Model 2, which support Hypotheses 1a and 2a.

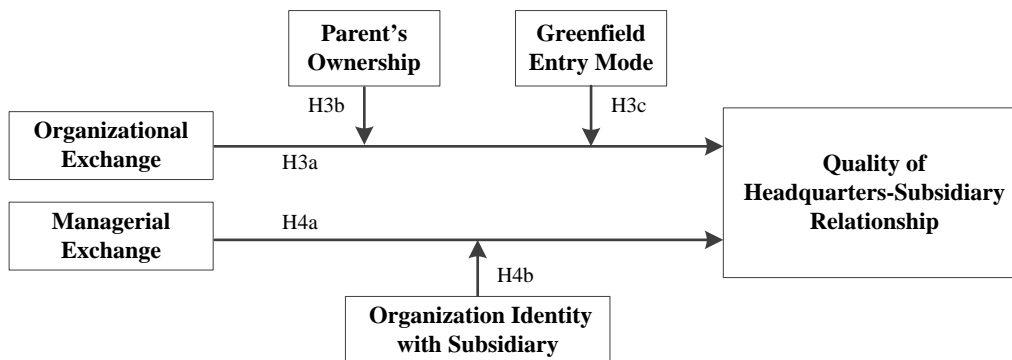
The moderating effects of the institutionalization of headquarters' practices are tested in Models 3.1 to 5.1. Institutionalization is found to have positive and significant effects on the quality of the headquarters-subsidary relationship ( $p < 0.001$ ) in all models. When the interaction terms are added in Models 4.1 and 5.1, the interaction term is positive and significant ( $p < 0.05$  and  $p < 0.01$ ), suggesting that a higher level of institutionalization of headquarters' practices in subsidiaries can significantly enhance the positive link between regulative and cultural distances and quality of the headquarters-subsidary relationship. This finding is again consistent with the estimation results for Models 4 and 5 in Table 7.15, which support Hypotheses 1b and 2b. In summary, the tests based on the subsidiary dataset show relatively high consistency with the results presented in Table 7.15, where the dependent variable was derived from the headquarters dataset.

### **7.5.2 Social Exchange Perspective**

In this section, analyses were carried out to answer the sub-research questions that are related to the social exchange perspective. As shown in Figure 7.4, it investigates the impacts of organizational and managerial exchanges between headquarters and subsidiary on the quality of the headquarters-subsidary relationship in Chinese MNEs. Further, it investigates how the impacts of organizational exchanges between headquarters and subsidiary on the quality of the headquarters-subsidary relationship

in Chinese MNEs are contingent upon the Chinese parent ownership in the subsidiary and entry mode of the subsidiary, and how the impacts of managerial exchanges between headquarters and subsidiary on the quality of the headquarters-subsidary relationship in Chinese MNEs are contingent upon the level of subsidiary manager's organizational identity with the subsidiary. Hypothesis 3a, 3b, 3c, 4a and 4b were tested in this section.

**Figure 7.4 Impacts of Factors Related to Social Exchange Perspective**



### 7.5.2.1 Correlation Analysis

To further examine the existence of multicollinearity issue, a correlation test was performed on the social exchange perspective variables. The correlation results of social exchange perspective variables are shown in Table 7.17. All of the correlation coefficients are below 0.6 except three pairs: between organizational exchange and managerial exchange, between organizational exchange and quality of headquarters-subsidiary relationship, as well as between greenfield entry mode and wholly owned subsidiary. Correlation coefficient above 0.6 is regarded as high (Churchill, 1991). The author then checked the variance inflation factor (VIF) during the regression analysis, and found that all the variables' VIF in all models are below four, which are well below the cut-off point of ten (Hair et al., 1998) and indicate that there are no multicollinearity problems with the data.

**Table 7.17 Correlation Matrix of Social Exchange Perspective Variables**

|  | 1       | 2      | 3        | 4      | 5       | 6       | 7     | 8       | 9       | 10 |
|--|---------|--------|----------|--------|---------|---------|-------|---------|---------|----|
| 1. Percentage of sales to overseas markets | 1       |        |          |        |         |         |       |         |         |    |
| 2. Subsidiary size                         | .077    | 1      |          |        |         |         |       |         |         |    |
| 3. State ownership in headquarters         | .072    | .121*  | 1        |        |         |         |       |         |         |    |
| 4. Subsidiary manager's nationality        | .130*   | .056   | -.019    | 1      |         |         |       |         |         |    |
| 5. Organizational exchange                 | .197*** | -.009  | .040     | .154** | 1       |         |       |         |         |    |
| 6. Managerial exchange                     | .226*** | -.007  | .028     | .088   | .728*** | 1       |       |         |         |    |
| 7. Subsidiary manager ID                   | .194*** | .007   | .056     | .148** | .574*** | .510**  | 1     |         |         |    |
| 8. Wholly owned subsidiary                 | .033    | -.085  | -.285*** | .184** | .092†   | .095†   | .107* | 1       |         |    |
| 9. Greenfield entry mode                   | .059    | -.124* | -.302*** | .086   | .018    | .010    | .002  | .701*** | 1       |    |
| 10. Quality of HQ-Sub relationship         | .125*   | -.031  | .022     | .131*  | .639*** | .559*** | .029  | .091†   | .486*** | 1  |

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001. (2-tailed).

***7.5.2.2 Common Method Variance Test***

Following the prior section (see Section 7.4.1.1), two statistical remedies were employed to further examine the impact of common method variance on the data's validity. The common method bias was first tested by performing Harman's one-factor test (Podsakoff & Organ, 1986). The test result shows that the extracted factor explains 23.48% of the total variance, which indicates that there is no evidence for the presence of common method variance in the data. Lindell and Whitney's (2001) approach - introducing a marker variable - was also adopted to examine the common method variance. According to Noorderhaven and Harzing (2009), the variable of 'lack of achievement will result in low ratings' is picked as the marker variable because this variable is not used in analysis of this research and it is unlikely to have theoretical relations to the variables under the social exchange perspective. Second, the variable was measured in the same way as most of the variables in this research. While controlling the 'lack of achievement will result in low ratings', the results of partial correlation between all social exchange perspective variables are reported in Table 7.18, which show similar significant correlations as in Table 7.17. This provides further evidence that common method variance is not impacting on the validity of the data.

Table 7.18 Partial Correlation Matrix of Social Exchange Perspective Variables

|  | 1       | 2      | 3        | 4       | 5       | 6       | 7       | 8       | 9    | 10 |
|--|---------|--------|----------|---------|---------|---------|---------|---------|------|----|
| 1. Percentage of sales to overseas markets | 1       |        |          |         |         |         |         |         |      |    |
| 2. Subsidiary size                         | .081    | 1      |          |         |         |         |         |         |      |    |
| 3. State ownership in headquarters         | .039    | .106†  | 1        |         |         |         |         |         |      |    |
| 4. Subsidiary manager's nationality        | .154**  | .042   | -.034    | 1       |         |         |         |         |      |    |
| 6. Organizational exchange                 | .213*** | .011   | .044     | .128*   | 1       |         |         |         |      |    |
| 5. Managerial exchange                     | .174**  | .002   | .056     | .168**  | .733*** | 1       |         |         |      |    |
| 7. Subsidiary manager ID                   | .168**  | .021   | .017     | .179**  | .557*** | .495*** | 1       |         |      |    |
| 8. Wholly owned subsidiary                 | .038    | -.067  | -.239*** | .203*** | .106†   | .142*   | .165**  | 1       |      |    |
| 9. Greenfield entry mode                   | .071    | -.125* | -.278*** | .107†   | .038    | .053    | .054    | .707*** | 1    |    |
| 10. Quality of HQ-Sub relationship         | .078    | .006   | -.036    | .143*   | .589*** | .585*** | .421*** | .135*   | .052 | 1  |

†  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ . (2-tailed).

***7.5.2.3 Moderated Hierarchical Multiple Regression Analysis***

To test the hypothesized direct and moderating effect of the independent and moderator variables under the social exchange perspective, moderated hierarchical multiple regression analysis was performed. The test results are reported in Table 7.19.

**Table 7.19 Moderated Hierarchical Multiple Regression Analysis**

| DV: Quality of HQ-Sub Relationship      | Model 1 | Model 2   | Model 3   | Model 4   | Model 5   | Model 6   | Model 7   | Model 8   |
|---|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <i>Control variables</i>                |         |           |           |           |           |           |           |           |
| Percentage of sales to overseas markets | .086    | -.046     | -.055     | -.059     | -.046     | -.048     | -.052     | -.026     |
| Subsidiary size                         | -.025   | .003      | .004      | .007      | .003      | .003      | .002      | -.004     |
| State ownership in headquarters         | -.009   | -.046     | -.056     | -.054     | -.047     | -.051     | -.046     | -.038     |
| Subsidiary manager's nationality        | .103    | .026      | .023      | .026      | .027      | .026      | .020      | .021      |
| <i>Independent variables</i>            |         |           |           |           |           |           |           |           |
| Organizational exchange                 |         | .386***   | .388***   | .469***   | .386***   | .466***   | .334***   | .322***   |
| Managerial exchange                     |         | .339***   | .341***   | .342***   | .339***   | .333***   | .317***   | .288***   |
| <i>Moderators</i>                       |         |           |           |           |           |           |           |           |
| Wholly owned subsidiary (WOS)           |         |           | .019      | .019      | -.003     | -.006     |           |           |
| Greenfield                              |         |           |           |           |           |           | .121*     | .138*     |
| Subsidiary manager identity (ID)        |         |           |           |           |           |           |           |           |
| <i>Interaction terms</i>                |         |           |           |           |           |           |           |           |
| Organizational exchange × WOS           |         |           |           | -.119*    |           |           |           |           |
| Organizational exchange × Greenfield    |         |           |           |           |           | -.136**   |           |           |
| Managerial exchange × Sub manager ID    |         |           |           |           |           |           |           | -.107*    |
| <i>Model fit</i>                        |         |           |           |           |           |           |           |           |
| N                                       | 354     | 354       | 354       | 354       | 354       | 354       | 354       | 354       |
| R Square                                | .021    | .456      | .461      | .469      | .456      | .469      | .465      | .475      |
| Adjusted R Square                       | .008    | .445      | .449      | .455      | .443      | .455      | .453      | .461      |
| F Value                                 | 1.592   | 41.773*** | 36.114*** | 32.481*** | 35.687*** | 32.779*** | 37.019*** | 33.615*** |

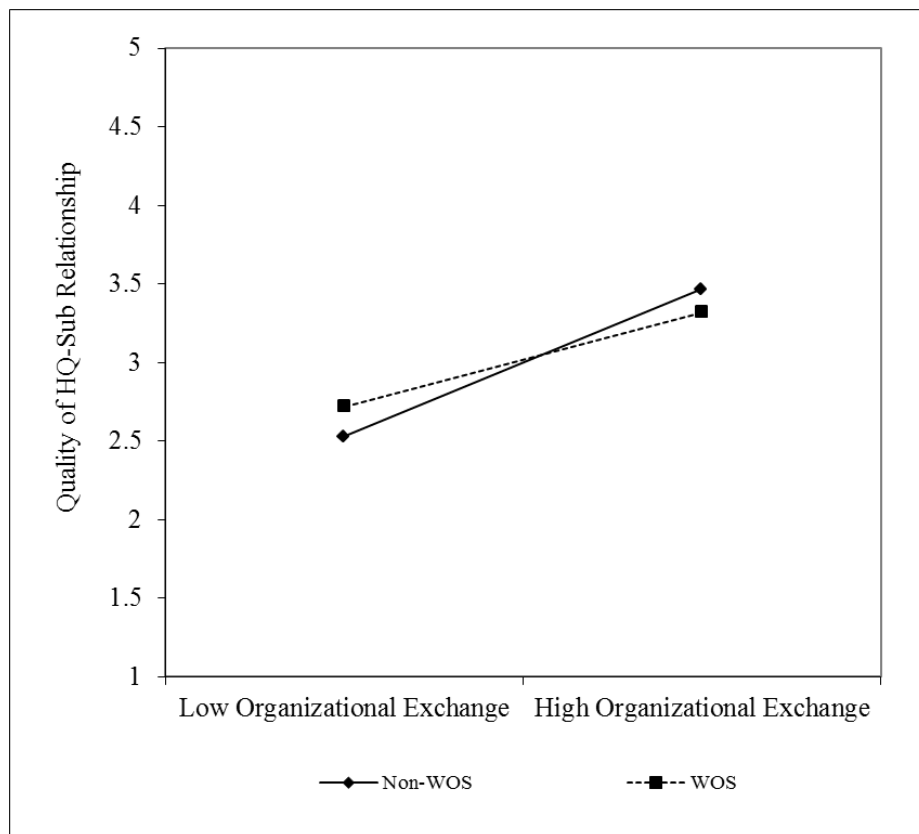
† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001. (2-tailed).

In general, the signs of beta coefficients in Table 7.19 are in the hypothesized direction for all independent variables and moderating variables. For the independent variables, both managerial exchange and organizational exchange were found statistically significant, and organizational exchange has the largest beta coefficient with the highest level of significance (0.469,  $p < 0.001$ ) in the independent variables. The positive beta coefficients of managerial exchange and organizational change between headquarters and subsidiary, with p-values less than 0.001, indicate that higher organizational and managerial exchanges between headquarters and subsidiary lead to higher levels of quality of the headquarters-subsidiary relationship. To summarize, these results suggested that both organizational exchange and managerial exchange between headquarters and subsidiary have significant positive impacts on the quality of the headquarters-subsidiary relationship in the Chinese MNEs, and therefore, Hypothesis 3a and 4a are supported.

Hypothesis 3b argues that the positive relationship between organizational exchange and quality of the headquarters-subsidiary relationship is weaker when the subsidiary is wholly owned by the headquarters compared to joint ownership with a local partner. According to Model 4 in Table 7.19, the interaction term is negative and statistically significant ( $p < 0.05$ ). Moreover, this negative moderating effect of wholly owned subsidiary is also shown in Figure 7.5. The plot demonstrates that positive relationship between organizational exchange and quality of headquarters-subsidiary relationship is significantly weakened when the subsidiary is wholly owned by the Chinese MNE headquarters. Thus, Hypothesis 3b is supported.

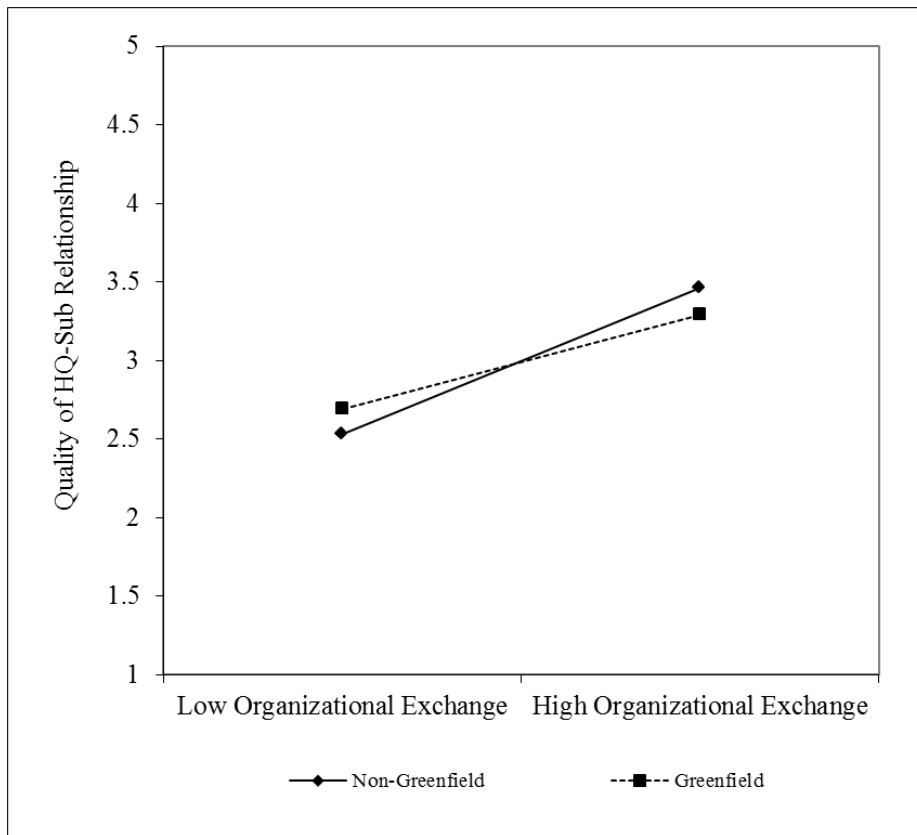


**Figure 7.5 Moderating Effect of WOS on Organizational Exchange**



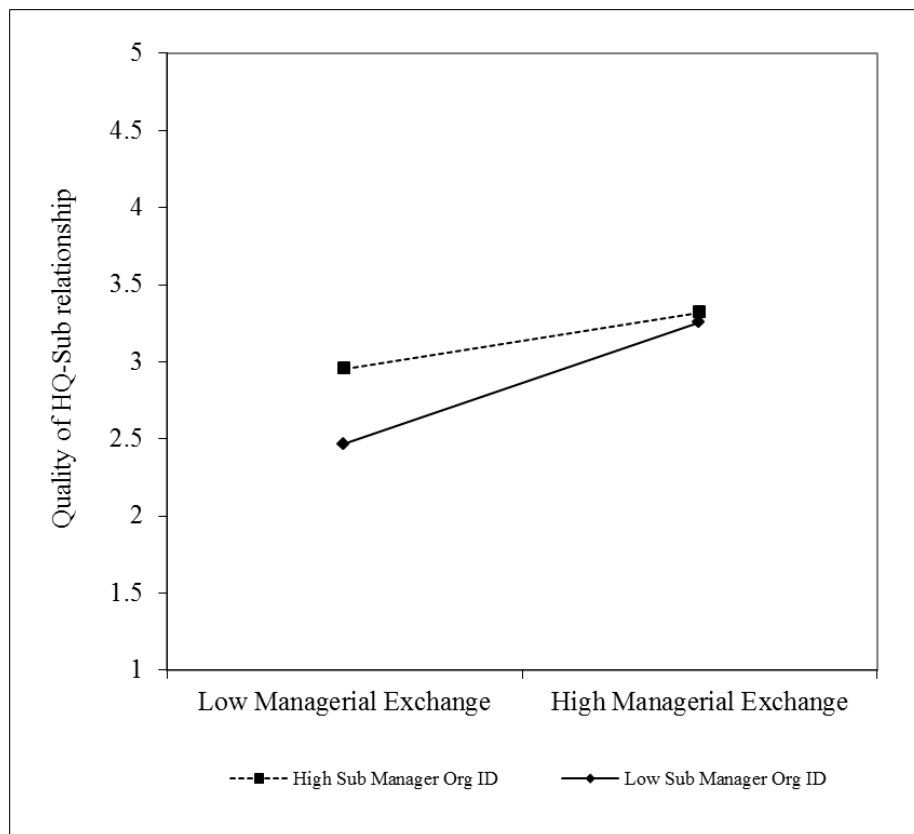
Hypothesis 3c argues that the positive relationship between organizational exchange and quality of headquarters-subsidary relationship is weaker when the subsidiary is established via greenfield entry mode. According to Model 6 in Table 7.19, the interaction term is negative and statistically significant ( $p < 0.01$ ). The author also graphed the interaction of greenfield entry mode and organizational exchange on the quality of the headquarters-subsidary relationship in Figure 7.6. The figure reveals that positive relationship between organizational exchange and quality of the headquarters-subsidary relationship is significantly weakened when the subsidiary is established via a greenfield entry mode. Thus, Hypothesis 3c is supported.

**Figure 7.6 Moderating Effect of Greenfield Entry Mode on Organizational Exchange**



Hypothesis 4b argues that the positive relationship between managerial exchange and quality of the headquarters-subsidary relationship is weaker when the level of subsidiary manager’s organizational identity with subsidiary is higher. As shown in Model 8 in Table 7.19, the interaction term is negative and statistically significant ( $p < 0.05$ ). This negative moderating effect is also shown in Figure 7.7, which reveals that positive relationship between managerial exchange and quality of the headquarters-subsidary relationship is weaker when the level of subsidiary manager’s organizational identity with subsidiary is higher, thus, Hypothesis 4b is supported.

**Figure 7.7 Moderating Effect of Sub Manager Org ID on Managerial Exchange**



#### 7.5.2.4 Robustness Check

To test the robustness of the model, the measurement of the dependent variable is changed using the quality of headquarters-subsidary relationship indicators from the subsidiary dataset. The results are presented in Table 7.20.

**Table 7.20 Moderated Hierarchical Multiple Regression Analysis - Robustness Check**

| DV: Quality of HQ-Sub Relationship      | Model 1.1 | Model 2.1 | Model 3.1 | Model 4.1 | Model 5.1 | Model 6.1 | Model 7.1 | Model 8.1 |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <i>Control variables</i>                |           |           |           |           |           |           |           |           |
| Percentage of sales to overseas markets | .185      | .031      | .021      | .019      | .034      | .033      | .017      | .033      |
| Subsidiary size                         | -.036     | -.007     | -.007     | -.005     | -.011     | -.010     | -.008     | -.012     |
| State ownership in headquarters         | .012      | -.027     | -.046     | -.045     | -.037     | -.039     | -.025     | -.020     |
| Subsidiary manager's nationality        | .100      | .020      | .024      | .025      | .024      | .024      | .005      | .006      |
| <i>Independent variables</i>            |           |           |           |           |           |           |           |           |
| Organizational exchange                 |           | .292***   | .297***   | .337***   | .291***   | .333***   | .173**    | .165**    |
| Managerial exchange                     |           | .524***   | .532***   | .532***   | .525***   | .522***   | .473***   | .455***   |
| <i>Moderators</i>                       |           |           |           |           |           |           |           |           |
| Wholly owned subsidiary (WOS)           |           |           | -.006     | -.006     | -.038     | -.039     |           |           |
| Greenfield                              |           |           |           |           |           |           | .275***   | .286***   |
| Subsidiary manager identity (ID)        |           |           |           |           |           |           |           |           |
| <i>Interaction terms</i>                |           |           |           |           |           |           |           |           |
| Organizational exchange × WOS           |           |           |           | -.059*    |           |           |           |           |
| Organizational exchange × Greenfield    |           |           |           |           |           | -.072*    |           |           |
| Managerial exchange × Sub manager ID    |           |           |           |           |           |           |           | -.068*    |
| <i>Model fit</i>                        |           |           |           |           |           |           |           |           |
| N                                       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       |
| R Square                                | .050      | .607      | .620      | .622      | .609      | .612      | .655      | .659      |
| Adjusted R Square                       | .037      | .600      | .611      | .612      | .600      | .602      | .647      | .650      |
| F Value                                 | 3.965**   | 77.128*** | 68.876*** | 60.542*** | 66.246*** | 58.644*** | 80.768*** | 71.722*** |

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001. (2-tailed).

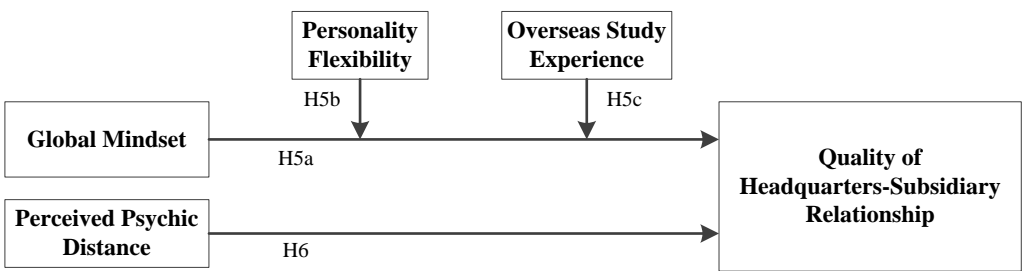
In general, all the models are significant and fit the data well. The signs of beta coefficients are in the hypothesized directions for all independent variables and moderating variables. Model 2.1 tests the direct relationship between two levels of exchange and quality of headquarters-subsidary relationship, which returns the similar results as Model 2 in Table 7.19. It shows that both organizational and managerial exchanges are positively related to the quality of headquarters-subsidary relationship, and both levels of exchange have significant positive impact on quality of the headquarters-subsidary relationship ( $p < 0.001$ ). This suggests that the higher the levels of organizational exchange and managerial exchange, the higher the relationship quality between Chinese MNE headquarters and subsidiaries. Therefore, the results are consistent with the ones in Model 2 in Table 7.19, which support Hypothesis 3a and 4a.

Moderating effects of headquarters' ownership in subsidiary, subsidiary's greenfield entry mode, and subsidiary manager's organizational identity are tested across Model 3.1 to Model 8.1. In Model 4.1, the interaction term of organizational exchange and wholly owned subsidiary is negative and significant, indicating that a subsidiary which is wholly owned by the headquarters has weaker positive association between organizational exchange and the quality of the headquarters-subsidary relationship than the subsidiary that is jointly owned. Therefore, Hypothesis 3b is supported when using subsidiary responses for the quality of the headquarters-subsidary relationship. In Model 6.1, the interaction term of organizational exchange and greenfield entry mode is negative and significant, indicating that the greenfield entry mode has significant negative influence on the positive association between organizational exchange and the quality of the headquarters-subsidary relationship, which is consistent with Model 6 in Table 7.19, and Hypothesis 3c is supported. The moderating effect of subsidiary manager's organizational identity is negative and significant ( $p < 0.05$ ) in Model 8.1, which is consistent with Model 8 in Table 7.19 and therefore Hypothesis 4b is confirmed. In summary, the tests using quality of headquarters-subsidary relationship from subsidiary dataset shows relatively high consistency with Table 7.19 results, which used dependent variable from the headquarters dataset.

### 7.5.3 Upper Echelons Perspective

In this section, analyses were carried out to answer the sub-research questions that are related to the upper echelons perspective. As shown in Figure 7.8, it investigates the impacts of subsidiary managers’ global mindset and perceived differences between host and home countries on the quality of the headquarters-subsidary relationship in Chinese MNEs. Further, it investigates how the impacts of subsidiary managers’ global mindset on the quality of the headquarters-subsidary relationship in Chinese MNEs are contingent upon subsidiary managers’ personality flexibility and overseas study experience. Hypothesis 5a, 5b, 5c and 6 were tested in this section.

**Figure 7.8 Impacts of Factors Related to Upper Echelons Perspective**



#### 7.5.3.1 Correlation Analysis

To further examine the existence of the multicollinearity issue, a correlation test was performed on the social cognitive perspective variables. The correlation results of information processing perspective variables are shown in Table 7.21.

Table 7.21 Correlation Matrix of Upper Echelons Perspective Variables

|  | 1        | 2      | 3       | 4       | 5        | 6       | 7       | 8      | 9      | 10 |
|--|----------|--------|---------|---------|----------|---------|---------|--------|--------|----|
| 1. Percentage of sales to overseas markets | 1        |        |         |         |          |         |         |        |        |    |
| 2. Subsidiary size                         | .077     | 1      |         |         |          |         |         |        |        |    |
| 3. Subsidiary owned by Chinese parent      | -.005    | -.153* | 1       |         |          |         |         |        |        |    |
| 4. State ownership in headquarters         | .072     | .121*  | -.254** | 1       |          |         |         |        |        |    |
| 5. Subsidiary manager's nationality        | .130*    | .056   | .051    | -.019   | 1        |         |         |        |        |    |
| 6. Global mindset                          | .074     | .108*  | -.128*  | .376*** | .122*    | 1       |         |        |        |    |
| 7. Perceived psychic distance              | .304***  | .046   | -.013   | .174**  | .123*    | .604*** | 1       |        |        |    |
| 8. Non-flexible personality                | .093     | .069   | -.004   | -.092   | .113*    | -.009   | .023    | 1      |        |    |
| 9. Years studied overseas                  | -.221*** | -.044  | -.170** | .168**  | -.488*** | -.051   | .095†   | -.142* | 1      |    |
| 10. Quality of HQ-Sub relationship         | .125*    | -.031  | .066    | .022    | .131*    | .483*** | .421*** | .082   | -.142* | 1  |

p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001. (2-tailed).

All of the correlation coefficients are below 0.6 except the correlation between subsidiary managers' perceived psychic distance and subsidiary managers' global mindset. As correlation coefficient above 0.6 is regarded as high (Churchill, 1991), the variance inflation factor (VIF) during the regression analysis was checked, and it found all the variables' VIF in all models are below four, which are well below the cut-off point of ten (Hair et al., 1998) and indicate that there are no multicollinearity problems with the data.

### ***7.5.3.2 Common Method Variance Test***

Two statistical remedies were employed to further examine the impact of common method variance on the data's validity. The common method bias was first tested by performing Harman's one-factor test (Podsakoff & Organ, 1986). The test result shows that the extracted factor explains 22.99% of the total variance, which indicates that there is no evidence for the presence of common method variance in the data. To further test the common method variance, Lindell and Whitney's (2001) approach by introducing a marker variable was also adopted to examine the common method variance. According to Noorderhaven and Harzing (2009), the variable of 'lack of achievement will result in low ratings' is picked as the marker variable because this variable is not used in analysis of this research and it is unlikely to have theoretical relations to the variables under the social exchange perspective. Second, the variable was measured in the same way as most of the variables in this research. While controlling the 'lack of achievement will result in low ratings', the results of partial correlation between all information processing perspective variables are reported in Table 7.22, which show similar significant correlations as in Table 7.21. This provides further evidence that common method variance is not having an impact on the validity of the data.



Table 7.22 Partial Correlation Matrix of Upper Echelons Perspective Variables

|  | 1        | 2                  | 3                  | 4       | 5        | 6       | 7       | 8      | 9       | 10 |
|--|----------|--------------------|--------------------|---------|----------|---------|---------|--------|---------|----|
| 1. Percentage of sales to overseas markets | 1        |                    |                    |         |          |         |         |        |         |    |
| 2. Subsidiary size                         | .083     | 1                  |                    |         |          |         |         |        |         |    |
| 3. Subsidiary owned by Chinese parent      | .028     | -.101 <sup>†</sup> | 1                  |         |          |         |         |        |         |    |
| 4. State ownership in headquarters         | .013     | .087               | -.111 <sup>†</sup> | 1       |          |         |         |        |         |    |
| 5. Subsidiary manager's nationality        | .147**   | .055               | .048               | -.019   | 1        |         |         |        |         |    |
| 6. Global mindset                          | .028     | .077               | .002               | .274*** | .206**   | 1       |         |        |         |    |
| 7. Perceived psychic distance              | .284***  | .033               | .025               | .072    | .169**   | .604*** | 1       |        |         |    |
| 8. Non-flexible personality                | .123*    | .071               | -.035              | -.080   | .126*    | -.025   | .018    | 1      |         |    |
| 9. Years studied overseas                  | -.211*** | -.040              | -.205**            | .148*   | -.535*** | -.081   | -.148*  | -.141* | 1       |    |
| 10. Quality of HQ-Sub relationship         | .129*    | -.045              | .079               | .006    | .174**   | .534*** | .526*** | .032   | -.165** | 1  |

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001. (2-tailed).

***7.5.3.3 Moderated Hierarchical Multiple Regression Analysis***

To test the hypothesized direct and moderating effect of the independent and moderator variables under the upper echelons perspective, moderated hierarchical multiple regression analysis was performed. The test results are reported in Table 7.23.

Table 7.23 Moderated Hierarchical Multiple Regression Analysis

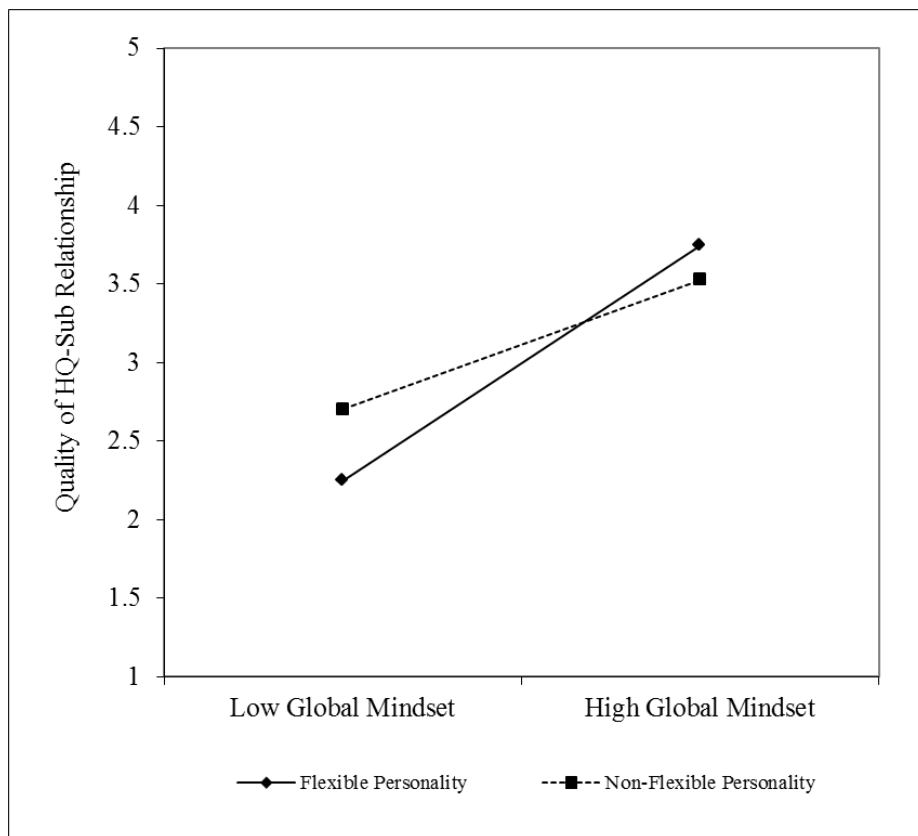
| DV: Quality of HQ-Sub Relationship        | Model 1 | Model 2   | Model 3   | Model 4   | Model 5   | Model 6   |
|---|---------|-----------|-----------|-----------|-----------|-----------|
| <i>Control variables</i>                  |         |           |           |           |           |           |
| Percentage of sales to overseas markets   | .082    | .012      | .005      | .022      | .008      | .011      |
| Subsidiary size                           | -.018   | -.032     | -.038     | -.041     | -.043     | -.037     |
| Subsidiary owned by Chinese parent        | .070    | .067      | .069      | .055      | .045      | .056      |
| State ownership in headquarters           | -.004   | -.165**   | -.154**   | -.141**   | -.126*    | -.104*    |
| Subsidiary manager's nationality          | .090    | .018      | .007      | .012      | -.016     | .002      |
| <i>Independent variables</i>              |         |           |           |           |           |           |
| Global mindset                            |         | .443***   | .443***   | .749***   | .411***   | .305***   |
| Perceived psychic distance                |         | .220**    | .223**    | .217**    | .288***   | .303***   |
| <i>Moderators</i>                         |         |           |           |           |           |           |
| Non-flexible personality                  |         |           | .088†     | .114*     |           |           |
| Years studied overseas                    |         |           |           |           | -.067     | -.078     |
| <i>Interaction terms</i>                  |         |           |           |           |           |           |
| Global mindset × Non-flexible personality |         |           |           | -.337**   |           |           |
| Global mindset × Years studied overseas   |         |           |           |           |           | .192***   |
| <i>Model fit</i>                          |         |           |           |           |           |           |
| N   | 354     | 354       | 354       | 354       | 354       | 354       |
| R Square                                  | .023    | .352      | .360      | .377      | .415      | .443      |
| Adjusted R Square                         | .007    | .337      | .342      | .358      | .397      | .424      |
| F Value                                   | 1.407   | 22.909*** | 20.638*** | 19.729*** | 23.482*** | 23.325*** |

† p &lt; .10; \* p &lt; .05; \*\* p &lt; .01; \*\*\* p &lt; .001. (2-tailed).

According to Table 7.23, the signs of the beta coefficients are in the hypothesized directions for all independent and moderating variables. As independent variables, both subsidiary managers' global mindset and perceived psychic distance are found to be statistically significant, and subsidiary managers' global mindset has the largest beta coefficient, with the highest level of significance among the independent variables. The positive beta coefficients for subsidiary managers' global mindset and perceived psychic distance, with p-values of less than 0.001 and 0.01, respectively, indicate that more global subsidiary managerial mindset and larger subsidiary managers' perceived psychic distance positively affect the quality of the headquarters-subsidiary relationship. In summary, the results suggest that both subsidiary managers' global mindset and perceived psychic distance have significant positive effects on the quality of the headquarters-subsidiary relationship in Chinese MNEs. Therefore, Hypotheses 5a and 6 are supported.

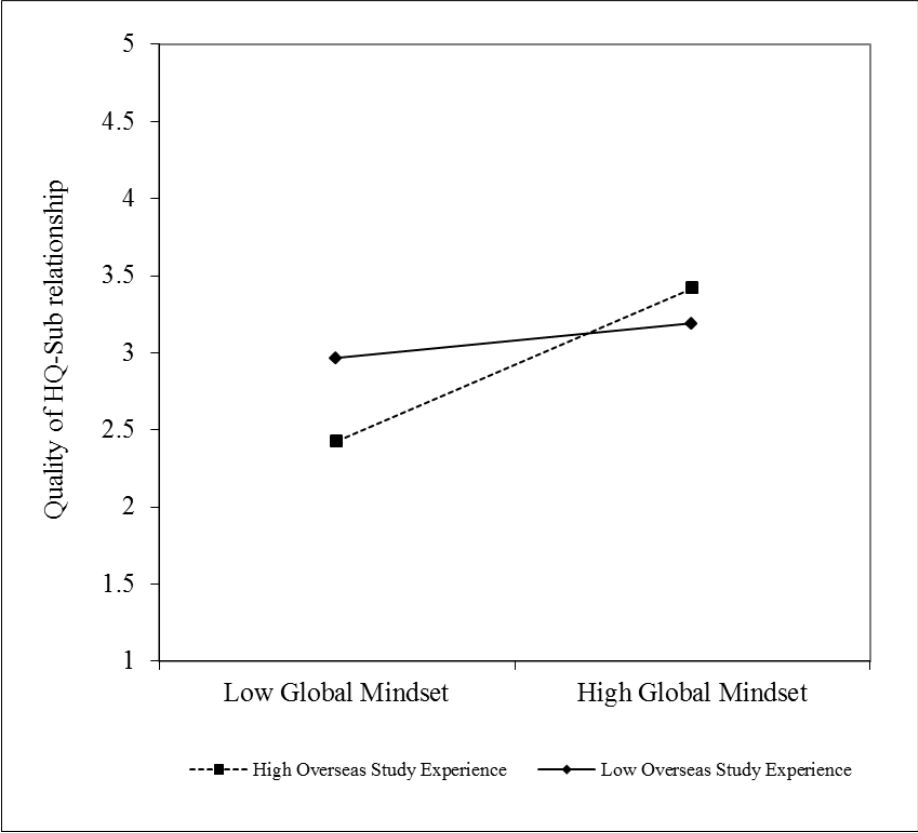
Hypothesis 5b proposes that the positive relationship between subsidiary managers' global mindset and the quality of the headquarters-subsidiary relationship is weaker when the subsidiary manager has a non-flexible personality. As seen in the regression results for Model 4, the interaction term is negative and statistically significant ( $p < 0.01$ ). Moreover, the negative moderating effect of subsidiary managers' non-flexible personality is also shown in Figure 7.9. The plot demonstrates that the positive relationship between subsidiary managers' global mindset and the quality of the headquarters-subsidiary relationship is significantly weakened when the subsidiary managers have a non-flexible personality compared to those with a flexible personality. Thus, Hypothesis 5b is supported.

**Figure 7.9 Moderating Effect of Non-flexible Personality on Global Mindset**



Hypothesis 5c proposes that the positive relationship between subsidiary managers’ global mindset and the quality of the headquarters-subsidary relationship is enhanced when the subsidiary managers have more overseas study experience. As seen in the regression results for Model 6, the interaction term is positive and statistically significant ( $p < 0.001$ ). This positive moderating effect is also seen in Figure 7.10, which reveals that the positive relationship between subsidiary managers’ global mindset and the quality of the headquarters-subsidary relationship is stronger when the subsidiary managers’ overseas study experience increases. Thus, Hypothesis 5c is supported.

**Figure 7.10 Moderating Effect of Overseas Study Experience on Global Mindset**



**7.5.3.4 Robustness Check**

To test the robustness of the model, the author altered the measurement of the dependent variable using the quality of the headquarters-subsidary relationship indicators from the subsidiary dataset. The results are presented in Table 7.24.

Table 7.24 Moderated Hierarchical Multiple Regression Analysis - Robustness Test

| DV: Quality of HQ-Sub Relationship        | Model 1.1 | Model 2.1 | Model 3.1 | Model 4.1 | Model 5.1 | Model 6.1 |
|---|-----------|-----------|-----------|-----------|-----------|-----------|
| <i>Control variables</i>                  |           |           |           |           |           |           |
| Percentage of sales to overseas markets   | .182**    | .116*     | .108*     | .124**    | .143**    | .145**    |
| Subsidiary size                           | -.033     | -.050     | -.056     | -.059     | -.062     | -.058     |
| Subsidiary owned by Chinese parent        | .036      | .033      | .036      | .023      | .012      | .019      |
| State ownership in headquarters           | .009      | -.170***  | -.157**   | -.145**   | -.114*    | -.098*    |
| Subsidiary manager's nationality          | .092      | .014      | .002      | .006      | -.049     | -.036     |
| <i>Independent variables</i>              |           |           |           |           |           |           |
| Global mindset                            |           | .506***   | .506***   | .792***   | .506***   | .432***   |
| Perceived psychic distance                |           | .202**    | .206**    | .201**    | .229***   | .240***   |
| <i>Moderators</i>                         |           |           |           |           |           |           |
| Non-flexible personality                  |           |           | .101*     | .124**    |           |           |
| Years studied overseas                    |           |           |           |           | -.106*    | -.114*    |
| <i>Interaction terms</i>                  |           |           |           |           |           |           |
| Global mindset × Non-flexible personality |           |           |           | -.314**   |           |           |
| Global mindset × Years studied overseas   |           |           |           |           |           | .134**    |
| <i>Model fit</i>                          |           |           |           |           |           |           |
| N   | 354       | 354       | 354       | 354       | 354       | 354       |
| R Square                                  | .048      | .430      | .440      | .455      | .508      | .522      |
| Adjusted R Square                         | .032      | .417      | .425      | .439      | .493      | .505      |
| F Value                                   | 3.024*    | 31.841*** | 28.879*** | 27.228*** | 34.203*** | 31.988*** |

† p &lt; .10; \* p &lt; .05; \*\* p &lt; .01; \*\*\* p &lt; .001. (2-tailed).

As shown in Table 7.24, all the models are significant and fit the data well. The signs of the beta coefficients are in the hypothesized directions for all of the independent and moderating variables. Model 2.1 tests the direct relationship between the subsidiary managers' global mindset, perceived psychic distance and the quality of the headquarters-subsidiary relationship, returning results that are similar to those for Model 2 in Table 7.23. This model shows that both subsidiary managers' global mindset and perceived psychic distance are positively related to the quality of the headquarters-subsidiary relationship, and both subsidiary managers' global mindset and perceived psychic distance have significant positive effects on the quality of the headquarters-subsidiary relationship ( $p < 0.001$  and  $p < 0.01$ , respectively). This finding suggests that the more global the subsidiary managers' mindset are, and the larger subsidiary managers' perceived psychic distance are, the better the relationship is between the Chinese MNE headquarters and subsidiaries. The results are thus consistent with those presented in Table 7.23 and support Hypotheses 5a and 6.

The moderating effects of the subsidiary managers' non-flexible personality and overseas study experience are tested in Models 3.1 to 6.1. Subsidiary managers' non-flexible personality is found to have positive and significant effects on the quality of the headquarters-subsidiary relationship ( $p < 0.05$  and  $p < 0.01$ , respectively) in Models 3.1 and 4.1. When the interaction terms are added in Models 4.1, the interaction between subsidiary managers' global mindset and non-flexible personality is negative and significant ( $p < 0.01$ ), indicating that a higher level of subsidiary managers' non-flexible personality weakens the positive association between subsidiary managers' global mindset and the quality of the headquarters-subsidiary relationship, and this influence is significant. Therefore, Hypothesis 5b is also supported when subsidiary responses regarding the quality of the headquarters-subsidiary relationship are used, which is consistent with the result from Model 4 in Table 7.23. Subsidiary managers' overseas study experience is found to have negative and significant effects on the quality of the headquarters-subsidiary relationship ( $p < 0.05$ ) in Models 5.1 and 6.1. When the interaction terms are added in Models 6.1, the interaction term is positive and significant ( $p < 0.01$ ), suggesting that subsidiary managers with more overseas study experience can significantly enhance the positive link between subsidiary managers' global mindset and the quality of the headquarters-subsidiary relationship. This finding is again consistent



with the estimation results from Models 6 in Table 7.23, which supports Hypotheses 5c. In summary, the tests based on the subsidiary dataset show a high level of consistency with the results presented in Table 7.23, where the dependent variable was derived from the headquarters dataset.

#### **7.5.4 All Determinants of Quality of Headquarters-Subsidiary Relationship**

##### ***7.5.4.1 Regression Analysis***

As discussed in Chapter 5 Section 5.7.2.3, the author also tested the hypothesized association between all determinants and the quality of the headquarters-subsidiary relationship together in moderated hierarchical multiple regression analysis, which includes determinants from all three theoretical perspectives, including the institutional, social exchange and upper echelons perspectives. The test results are reported in Table 7.25.

Table 7.25 Moderated Hierarchical Multiple Regression Analysis

| DV: Quality of HQ-Sub relationship                  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 | Model 9 | Model 10 | Model 11 | Model 12 | Model 13 | Model 14 | Model 15 | Model 16 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|
| <i>Control Variables</i>                            |         |         |         |         |         |         |         |         |         |          |          |          |          |          |          |          |
| 1. Percentage of sales to overseas markets          | .084    | -.037   | -.050   | -.028   | -.038   | -.045   | -.047   | -.039   | -.040   | -.042    | -.009    | -.040    | -.033    | -.005    | .004     | -.014    |
| 2. Subsidiary size                                  | -.018   | -.008   | -.004   | -.001   | -.003   | -.007   | -.004   | -.008   | -.007   | -.008    | -.017    | -.011    | -.013    | -.020    | -.017    | -.012    |
| 3. Subsidiary owned by Chinese parent               | .076    | .033    | .008    | .008    | .010    | .042    | .059    | .019    | .020    | .030     | .039     | .034     | .031     | .008     | .017     | .045     |
| 4. State ownership in headquarters                  | .004    | -.123** | -.114** | -.115** | -.112** | -.132** | -.130** | -.121** | -.121** | -.118**  | -.109*   | -.118**  | -.114*   | -.104*   | -.088*   | -.086    |
| 5. Subsidiary manager's nationality                 | .097    | .018    | .026    | .028    | .028    | .024    | .028    | .017    | .017    | .017     | .017     | .013     | .014     | -.009    | .006     | .022     |
| <i>Independent variables</i>                        |         |         |         |         |         |         |         |         |         |          |          |          |          |          |          |          |
| 6. Regulative distance                              | .161**  | .144**  | .148**  | .148**  | .146**  | .161**  | .151**  | .161**  | .152**  | .166**   | .177**   | .156**   | .158**   | .225***  | .224***  | .225***  |
| 7. Cultural distance                                | .092†   | .110*   | .113*   | .129†   | .106*   | .096†   | .099†   | .093†   | .093†   | .089     | .086     | .094†    | .087     | .156**   | .168**   | .168**   |
| 8. Organizational exchange                          | .240*** | .112    | .129†   | .129†   | .107    | .247*** | .319*** | .238*** | .291*** | .221**   | .190**   | .236***  | .234***  | .314***  | .307***  | .146†    |
| 9. Managerial exchange                              | .299*** | .247*** | .223*** | .223*** | .229*** | .309*** | .309*** | .299*** | .297*** | .294***  | .246***  | .297***  | .285***  | .116†    | .084     | .063     |
| 10. Global mindset                                  | .157*   | .080    | .048    | .048    | .063    | .139*   | .143*   | .161*   | .155*   | .137*    | .138*    | .160*    | .273*    | .152*    | .084     | .021     |
| 11. Perceived psychic distance                      | -.016   | -.026   | -.017   | -.017   | -.014   | -.018   | -.022   | -.015   | -.020   | -.014    | .019     | -.012    | -.009    | -.023    | -.006    | -.022    |
| <i>Moderating variables</i>                         |         |         |         |         |         |         |         |         |         |          |          |          |          |          |          |          |
| 12. Institutionalization of headquarters' practices |         | .305*** | .312*** | .312*** | .315*** |         |         |         |         |          |          |          |          |          |          | .276***  |
| 13. Wholly owned subsidiary (WOS)                   |         |         |         |         |         | -.023   |         |         | .019    |          |          |          |          |          |          | -.102    |
| 14. Greenfield entry mode                           |         |         |         |         |         |         |         | .023    |         | .054     | .075     | .044     | .054     |          |          | .053     |
| 15. Sub manager's ID                                |         |         |         |         |         |         |         |         |         |          |          |          |          |          |          | .042     |
| 16. Non-flexible personality                        |         |         |         |         |         |         |         |         |         |          |          |          |          |          |          | .041     |
| 17. Years studied overseas                          |         |         |         |         |         |         |         |         |         |          |          |          |          |          |          | -.055    |
| <i>Interaction terms</i>                            |         |         |         |         |         |         |         |         |         |          |          |          |          |          |          |          |
| 18. Regulative distance × Institutionalization      |         |         |         | .111**  |         |         |         |         |         |          |          |          |          |          |          | .030     |
| 19. Cultural distance × Institutionalization        |         |         |         |         | .068    |         |         |         |         |          |          |          |          |          |          | -.016    |
| 20. Organizational exchange × WOS                   |         |         |         |         |         |         |         |         |         |          |          |          |          |          |          | .051     |
| 21. Organizational exchange × Greenfield entry mode |         |         |         |         |         |         |         |         | -.079   |          |          |          |          |          |          | -.027    |
| 22. Managerial exchange × Sub manager's ID          |         |         |         |         |         |         |         |         |         |          |          |          |          |          |          | -.071    |
| 23. Global mindset × Non-flexible personality       |         |         |         |         |         |         |         |         |         |          |          |          |          |          |          | -.037    |
| 24. Global mindset × Years studied overseas         |         |         |         |         |         |         |         |         |         |          |          |          |          |          | .146     | .148     |

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| <i>Model fit</i>  | 354      | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       |           |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| N                 | 354      | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       |
| R Square          | .026     | .529      | .569      | .580      | .573      | .530      | .535      | .530      | .534      | .531      | .531      | .533      | .531      | .531      | .533      | .531      | .533      | .563      | .579      | .579      | .618      |
| Adjusted R Square | .010     | .512      | .551      | .561      | .554      | .510      | .514      | .510      | .513      | .512      | .533      | .513      | .512      | .512      | .513      | .512      | .513      | .543      | .558      | .558      | .581      |
| F Value           | 1.611*** | 30.078*** | 32.233*** | 31.019*** | 30.134*** | 27.223*** | 25.606*** | 27.223*** | 25.734*** | 27.660*** | 27.726*** | 25.667*** | 27.684*** | 27.684*** | 25.667*** | 27.684*** | 28.370*** | 27.789*** | 27.789*** | 27.789*** | 16.794*** |

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001. (2-tailed).

As shown in Table 7.25, all the models are significant and fit the data well. The signs of the beta coefficients are in the hypothesized directions for all the independent variables in Model 2, except subsidiary managers' perceived psychic distance (Hypothesis 6), which has a negative influence on the quality of the headquarters-subsidary relationship, and the influence is statistically insignificant. The moderating effects of moderator variables were tested in Model 3 to Model 16. The signs of the beta coefficients are in the hypothesized directions for the moderator variables in Model 4, 5, 6, 7, 9, 11, 13, and 15. The interaction variables all have moderating effects that are statistically significant, except the moderator variables of institutionalization of headquarters' practices in Model 5 (Hypothesis 2b), greenfield entry mode in Model 9 (Hypothesis 3c), non-flexible personality in Model 13 (Hypothesis 5b), and overseas study experience in Model 15 (Hypothesis 5c). In Model 16, all independent and moderator variables are entered into the multiple regression analysis, and only the regulative distance (Hypothesis 1a), cultural distance (Hypothesis 2a), and organizational exchange (Hypothesis 3a) have statistically significant influences on the quality of the headquarters-subsidary relationship that have signs of beta coefficients in the hypothesized direction. These findings suggest that for a complex and multi-dimensional construct such as the quality of the headquarters-subsidary relationship, the influences of its determinants are better examined separately in models under different theoretical perspectives, instead of being examined in an aggregate model.

#### ***7.5.4.2 Robustness Check***

To test the robustness of the model, the author also altered the measurement of dependent variables using the quality of the headquarters-subsidary relationship indicators from the subsidiary dataset, and the results are presented in Table 7.26.

**Table 7.26 Moderated Hierarchical Multiple Regression Analysis-Robustness Test**

| DV: Quality of HQ-Sub relationship                  | Model 1.1 | Model 2.1 | Model 3.1 | Model 4.1 | Model 5.1 | Model 6.1 | Model 7.1 | Model 8.1 | Model 9.1 | Model 10.1 | Model 11.1 | Model 12.1 | Model 13.1 | Model 14.1 | Model 15.1 | Model 16.1 |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|
| <i>Control Variables</i>                            |           |           |           |           |           |           |           |           |           |            |            |            |            |            |            |            |
| 1. Percentage of sales to overseas markets          | .185**    | .049      | .037      | .045      | .042      | .038      | .037      | .050      | .050      | .037       | .056       | .046       | .044       | .081*      | .086*      | .056       |
| 2. Subsidiary size                                  | -.032     | -.009     | -.008     | -.007     | -.008     | -.009     | -.008     | -.009     | -.009     | -.013      | -.017      | -.012      | -.015      | -.017      | -.017      | -.030      |
| 3. Subsidiary owned by Chinese parent               | .044      | .016      | -.007     | -.007     | -.006     | -.021     | -.015     | .030      | .030      | .005       | .008       | .018       | .024       | .001       | .003       | -.037      |
| 4. State ownership in headquarters                  | .020      | -.095*    | -.088     | -.088*    | -.087*    | -.105**   | -.104**   | -.097*    | -.097*    | -.091*     | -.085**    | -.089      | -.108**    | -.066†     | -.063      | -.061†     |
| 5. Subsidiary manager's nationality                 | .097†     | .014      | .018      | .017      | .018      | .013      | .014      | .015      | .015      | .001       | .001       | .007       | -.002      | -.048      | -.044      | -.046      |
| <i>Independent variables</i>                        |           |           |           |           |           |           |           |           |           |            |            |            |            |            |            |            |
| 6. Regulative distance                              | -.016     | -.017     | -.017     | -.017     | -.017     | -.019     | -.022     | -.017     | -.021     | .002       | .010       | -.022      | -.039      | -.014      | -.011      | .051       |
| 7. Cultural distance                                | -.138     | -.094     | -.104     | -.104     | -.103     | -.134     | -.130     | -.143     | -.143     | -.121      | -.132      | -.133      | -.147      | -.067      | -.054      | .017       |
| 8. Organizational exchange                          | .196**    | .083      | .089      | .089      | .082      | .200***   | .226**    | .197**    | .221***   | .094†      | .081       | .191**     | .177**     | .238***    | .235***    | .015       |
| 9. Managerial exchange                              | .476***   | .428***   | .418***   | .418***   | .421***   | .483***   | .484***   | .475***   | .474***   | .438***    | .414***    | .474***    | .465***    | .371***    | .358***    | .311***    |
| 10. Global mindset                                  | .245***   | .173***   | .164**    | .170**    | .170**    | .219***   | .219***   | .242***   | .240***   | .238***    | .231***    | .254***    | .202***    | .284***    | .267***    | .103       |
| 11. Perceived psychic distance                      | .179*     | .141      | .156†     | .152†     | .152†     | .194*     | .191*     | .183*     | .182*     | .119       | .142†      | .177†      | .185*      | .120       | .111       | .034       |
| <i>Moderating variables</i>                         |           |           |           |           |           |           |           |           |           |            |            |            |            |            |            |            |
| 12. Institutionalization of headquarters' practices |           | .260***   | .262***   | .263***   | .263***   | .026      | .020      |           |           |            |            |            |            |            |            | .201***    |
| 13. Wholly owned subsidiary (WOS)                   |           |           |           |           |           |           |           | -.023     | -.024     |            |            |            |            |            |            | .010       |
| 14. Greenfield entry mode                           |           |           |           |           |           |           |           |           |           |            |            |            |            |            |            | -.008      |
| 15. Sub manager's ID                                |           |           |           |           |           |           |           |           |           | .254***    | .265***    |            |            |            |            | .227***    |
| 16. Non-flexible personality                        |           |           |           |           |           |           |           |           |           |            |            | .060†      | .052       |            |            | .022       |
| 17. Years studied overseas                          |           |           |           |           |           |           |           |           |           |            |            |            |            | -.116*     | -.118*     | -.094*     |
| <i>Interaction terms</i>                            |           |           |           |           |           |           |           |           |           |            |            |            |            |            |            |            |
| 18. Regulative distance × Institutionalization      |           |           | .038      |           |           |           |           |           |           |            |            |            |            |            |            | .025       |
| 19. Cultural distance × Institutionalization        |           |           |           | .024      |           |           |           |           |           |            |            |            |            |            |            | .006       |
| 20. Organizational exchange × WOS                   |           |           |           |           | -.036     |           |           |           |           |            |            |            |            |            |            | .044       |
| 21. Organizational exchange × Greenfield entry mode |           |           |           |           |           |           |           |           | -.036     |            |            |            |            |            |            | -.025      |
| 22. Managerial exchange × Sub manager's ID          |           |           |           |           |           |           |           |           |           | -.084*     |            |            |            |            |            | -.116**    |
| 23. Global mindset × Non-flexible personality       |           |           |           |           |           |           |           |           |           |            |            | .125*      |            |            |            | -.008      |
| 24. Global mindset × Years studied overseas         |           |           |           |           |           |           |           |           |           |            |            |            |            | .051       |            | .064       |

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| <i>Model fit</i>  | 354     | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       |           |           |
|-------------------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| N                 | 354     | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       | 354       |           |
| R Square          | .052    | .657      | .685      | .664      | .665      | .557      | .658      | .696      | .702      | .660      | .668      | .656      | .658      | .658      | .658      | .658      | .658      | .658      | .658      | .658      | .658      | .713      |
| Adjusted R Square | .036    | .644      | .672      | .650      | .650      | .643      | .643      | .683      | .688      | .646      | .653      | .640      | .641      | .641      | .641      | .641      | .641      | .641      | .641      | .641      | .641      | .685      |
| F Value           | 3.283** | 51.110*** | 53.015*** | 49.061*** | 44.075*** | 46.750*** | 43.175*** | 55.803*** | 52.789*** | 47.408*** | 45.009*** | 41.976*** | 38.931*** | 38.931*** | 38.931*** | 38.931*** | 38.931*** | 38.931*** | 38.931*** | 38.931*** | 38.931*** | 25.733*** |

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001. (2-tailed).

As shown in Table 7.26, all the models are significant and fit the data well. However, according to Model 2.1, only organizational exchange (Hypothesis 3a), managerial exchange (Hypothesis 4a), subsidiary managers' global mindset (Hypothesis 5a), and subsidiary managers' perceived psychic distance (Hypothesis 6) have beta coefficient signs in the hypothesized directions, and are statistically significant. The only significant moderator variable in the hypothesized direction is subsidiary managers' organizational identification with subsidiary, which weakens the positive association between managerial exchange and the quality of the headquarters-subsidary relationship in Model 11.1. In Model 16.1, all independent and moderator variables are entered into the multiple regression analysis. The results show that only managerial exchange (Hypothesis 4a) and subsidiary managers' organizational identity with subsidiary (Hypothesis 4b) have beta coefficient signs in the hypothesized direction that are statistically significant. These results again suggest that the quality of the headquarters-subsidary relationship is a complex and multi-dimensional construct, and it is better to examine the influences of its determinants separately under different theoretical perspectives, rather than to examine them in an aggregate model.

## **7.6 Summary**

In this chapter, the data analysis results are presented and interpreted. A non-response bias test was first performed to check whether there are possible systematic differences in the feedback between responding firms and the non-responding firms. Results from the independent t-test suggest that there are no significant differences in the returned questionnaires between the early response group and the late response group, and the non-response bias does not present in this research.

Following the non-response bias test, a scale reliability test is carried out to examine the soundness of the variable constructs, as most of the variable indicators are adopted from previous studies that are conducted in a non-Chinese context. The analysis results suggest that no significant modifications are required for the variable indicators, which confirmed the reliability of the variable constructs.

Hypotheses testing are performed by moderated hierarchical regression analysis. The analysis was divided into four parts according to different theoretical perspectives. The analysis includes correlation analysis, one factor analysis, partial correlation analysis for common method variance, hypotheses testing and robustness check. The analysis results suggest that the models fit the data well when the determinants are tested under each of the theoretical perspectives, and all hypothesized relationship are supported with a significant influence. However, when all the factors from three different theoretical perspectives are analysed in an aggregate model, the results are less significant. This again suggests that for a complex and multi-dimensional construct like the quality of the headquarters-subsidary relationship, it is better to examine the influences of its determinants separately under different theoretical perspectives, rather than to examine them altogether. A summary of the results is presented in Table 7.27.

**Table 7.27 Summary of Hypotheses Testing Results**

| Hypothesis | Impact | Dependent Variable             | Estimated $\beta$ (sig.) | Supported |
|------------|--------|--------------------------------|--------------------------|-----------|
| H1a        | +      | Quality of HQ-Sub relationship | .269 (p=.000)            | Yes       |
| H1b        | +      | Quality of HQ-Sub relationship | .125 (p=.002)            | Yes       |
| H2a        | +      | Quality of HQ-Sub relationship | .281 (p=.000)            | Yes       |
| H2b        | +      | Quality of HQ-Sub relationship | .138 (p=.000)            | Yes       |
| H3a        | +      | Quality of HQ-Sub relationship | .386 (p=.000)            | Yes       |
| H3b        | -      | Quality of HQ-Sub relationship | -.119 (p=.040)           | Yes       |
| H3c        | -      | Quality of HQ-Sub relationship | -.136 (p=.008)           | Yes       |
| H4a        | +      | Quality of HQ-Sub relationship | .339 (p=.000)            | Yes       |
| H4b        | -      | Quality of HQ-Sub relationship | -.107 (p=.018)           | Yes       |
| H5a        | +      | Quality of HQ-Sub relationship | .443 (p=.000)            | Yes       |
| H5b        | -      | Quality of HQ-Sub relationship | -.337 (p=.004)           | Yes       |
| H5c        | +      | Quality of HQ-Sub relationship | .192 (p=.000)            | Yes       |
| H6         | +      | Quality of HQ-Sub relationship | .220 (p=.001)            | Yes       |



## **CHAPTER 8 DISCUSSIONS AND CONCLUSIONS**

### **8.1 Introduction**

The major findings of this research, concluded from the statistical analysis results, are summarized in this chapter. Based on the findings of this study, the research questions are answered and the implications of the findings are discussed. In Section 8.2, major findings in relation to the research questions are summarized. The factors with significant impact and their impacts on the quality of the headquarters-subsidary relationship in Chinese MNEs are discussed. Section 8.3 discusses the contributions of this study to the literature in general and to China's foreign direct investment in particular. Section 8.4 discusses the managerial implications from this research. The limitations of this research are addressed and future research directions are discussed in Section 8.5.

### **8.2 Major Findings**

This study aims to investigate the impacting factors of the quality of the headquarters-subsidary relationship in Chinese MNEs, and their impacts on the quality of that relationship. The main research question raised in this study is: what are the determinants of the quality of the headquarters-subsidary relationship in Chinese MNEs? The main research question is followed by three sub-research questions from different theoretical perspectives, i.e., what are the determinants of the quality of headquarters-subsidary relationship in Chinese MNEs from an institutional perspective? What are the determinants of the quality of the headquarters-subsidary relationship in Chinese MNEs from the social exchange perspective? What are the determinants of the quality of the headquarters-subsidary relationship in Chinese MNEs from an upper echelons perspective? To answer these research questions, moderated hierarchical multiple regression analysis based on the conceptual framework was carried out using a sample of 354 Chinese MNEs. The answers to these research questions are concluded from the statistical analysis results and discussed in the following section.

The determinants of the quality of the headquarters-subsidary relationship in Chinese MNEs are revealed in the moderated hierarchical multiple regression

analysis (refer to Chapter 7 Section 7.5 Hypotheses Testing). Regulative distance, cultural distance, organizational exchange, managerial exchange, subsidiary managers' global mindset and subsidiary managers' perceived psychic distance are the factors with significant positive impacts on the quality of the headquarters-subsidary relationship. The impacts of these factors, based on their theoretical perspectives, are discussed below.

From the institutional perspective, the Chinese MNEs are subject to institutional pressures when operating overseas, and they have to obtain their legitimacy through isomorphism in order to survive. At this early stage of China's outward foreign direct investment with limited international experience, Chinese MNEs' headquarters will cooperate with their subsidiaries in an institutional distant host country, where the Chinese MNEs are under the coercive, normative and mimetic pressures from the formal and informal institutions. In the regulatory and culturally distant host countries, it is more difficult for Chinese MNEs to survive as there are larger differences between China and the host country in terms of regulations, rules, norms, beliefs and values. Therefore, the Chinese MNEs need to devote more resources and energy to their subsidiaries to work closely together in order to attain their legitimacy. As a result, this will lead to a higher quality headquarters-subsidary relationship during their cooperation. Whereas in the regulatory and culturally adjacent host countries, the formal and informal institutions are more similar to the ones in China, it is hence easier for Chinese MNEs to establish their legitimacy. The level of cooperation required between headquarters and subsidiaries in Chinese MNEs will be lower, and therefore, the quality of the headquarters-subsidary relationship in Chinese MNEs will be lower compared to the ones operating in the institutional distant host country. In addition, the research results reveal that these impacts of regulative and cultural distances on the quality of the headquarters-subsidary relationship will be moderated by the level of institutionalization of the headquarters' practices in the subsidiary, so that the higher the level of institutionalization, the stronger the influence of regulative and cultural distances on the quality of headquarters-subsidary relationship in the Chinese MNEs. The institutionalization of headquarters' practice enhances the internal legitimacy of subsidiary within the MNE, which means increased support from the headquarters to subsidiary. This increased support includes access to organizational resources that allows the Chinese

subsidiaries to implement different strategies in response to the external institutional pressures rather than merely compliance. The lower level of compliance to the external institutional pressures means lower level of conflict between headquarters and subsidiary for internal consistency, which will further enhance the quality of headquarters-subsidiary relationship in the Chinese MNEs.

From the social exchange perspective, the quality of the headquarters-subsidiary relationship within Chinese MNEs can also be influenced by the different levels of exchange between the headquarters and subsidiary. The quality of the headquarters-subsidiary relationship in Chinese MNEs will be higher when the levels of organizational change and managerial exchange between headquarters and subsidiary are higher. The organizational and managerial exchanges between headquarters and subsidiary could enhance the ideological agreement and goal compatibility, and they also mitigate inter-firm conflict by bridging the perception gaps between headquarters and subsidiary which stem from the information asymmetry. Therefore, higher levels of exchanges enhance the synergies and reduce conflict between the headquarters and subsidiary, which can positively influence the quality of their relationship. However, the impact of organizational exchange on the quality of the headquarters-subsidiary relationship can be altered by headquarters' ownership in subsidiary and subsidiary's mode of entry, and the impact of managerial exchange on the quality of the headquarters-subsidiary relationship can be altered by subsidiary managers' organizational identity with subsidiary. The analysis results show that when the subsidiary is wholly owned by headquarters or established by greenfield entry modes, the influence of organizational exchange on the quality of the headquarters-subsidiary relationship in Chinese MNEs will be weaker. When subsidiary managers have a higher level of organizational identity with the subsidiary, the influence of managerial exchange on the quality of the headquarters-subsidiary relationship in Chinese MNEs will be weakened.

From the upper echelons perspective, subsidiary managers' global mindset and perceived psychic distance will have positive impacts on the quality of the headquarters-subsidiary relationship in the Chinese MNEs. Subsidiary managers in Chinese MNEs with a more global mindset are regarded as individuals with high levels of information-processing capabilities, which can also enhance the

information-processing capabilities of the whole organization, given the information-processing capabilities of the organization is represented by the information-processing capabilities of its organizational members (Wood & Bandura, 1989). Subsidiary managers with a more global mindset are more capable of handling complex situations and even conflicting demands, which enables them to solve difficult issues, as well as reconciling conflicts and paradoxes. As a result, this will also enhance the quality of the headquarters-subsidary relationship in Chinese MNEs. However, the impact of subsidiary managers' global mindset on the quality of the headquarters-subsidary will be moderated by their cognitive personality trait such as personality flexibility and their overseas study experience. Subsidiary managers with a non-flexible personality are less willing to learn new knowledge and new skills. They are also less willing to adapt to changes. This will weaken their global mindset development and consequently undermine the positive impact of subsidiary managers' global mindset and quality of the headquarters-subsidary relationship in Chinese MNEs. On the other hand, subsidiary managers with more overseas study experience will increase their skills such as interpersonal skills, as well as knowledge that will improve their understanding about global business practices, which will enhance their global mindset development, and subsequently positively impact on the quality of the headquarters-subsidary relationship in Chinese MNEs. Subsidiary managers in Chinese MNEs with a higher level of perceived psychic distance between China and host country means a higher level of perceived uncertainty in the host country. In order to mitigate the high level of uncertainties, subsidiary managers will need to work with headquarters and implement measures such as extensive research and planning, to make a better strategic decision, which will enhance the quality of the headquarters-subsidary relationship.

In summary, the quality of the headquarters-subsidary relationship in Chinese MNEs will be higher when the regulative and cultural distances between China and the host country are larger, levels of organizational and managerial exchange are higher, subsidiary managers have a more global mindset, and subsidiary managers perceive larger psychic distance between China and the host country. Furthermore, the impacts from regulative and cultural distances will be stronger where there is a higher level of institutionalization of headquarters' practices in the subsidiary;

influence from organizational exchange will be weaker when the subsidiary is wholly owned by headquarters and established via greenfield entry mode; influence from managerial exchange will be weaker when subsidiary managers' organizational identities with subsidiary are higher; influence of subsidiary managers' global mindset will be weaker when they have a non-flexible personality, but stronger when they have longer overseas study experience.

### **8.3 Contribution**

This research is an exploratory study on the issue of determinants of the quality of the headquarters-subsidiary relationship in Chinese MNEs. It builds on existing research and contributes to the literature of the headquarters-subsidiary relationship by examining the determinants of the quality of the headquarters-subsidiary relationship from three different theoretical perspectives, including institutional theory, social exchange theory and upper echelons theory.

From the institutional theory, scholars have suggested that institutional factors, along with industry and resource related factors form the strategic tripod, and they are identified as the key factors in studying the strategic decision making of firms (Peng et al., 2009). The difference between institutional environments in different countries, i.e., the institutional distance, is found to be an important factor for firms' operation in foreign countries (e.g., Chao & Kumar, 2010; Eden & Miller, 2004; Gaur & Lu, 2007; Salomon & Wu, 2012; Xu & Shenkar, 2002). In particular, it suggests that the larger institutional distance between host country and home country can increase the liability of foreignness, including inter-organizational relational hazards (Eden & Miller, 2004). This implies that the increased institutional distance could negatively influence the relationship between headquarters and subsidiary, as larger institutional distance makes the conflicting pressures for local responsiveness and global integration to become higher (Doz, 1980; Prahalad & Doz, 1987; Xu & Shenkar, 2002). The results from this research based on the Chinese MNEs indicate that the increased institutional distance (i.e., regulative distance and cultural distance) can positively influence the quality of the headquarters-subsidiary relationship. This result is in line with a previous study on inter-organizational relationships (Oliver, 1990), which suggests that legitimacy is one of the critical contingencies of

relationship formation, as enhancement of organizational legitimacy is a significant motive for organizations to interconnect. For MNEs originating from emerging economies such as China, they face unfamiliar formal and informal institutions when entering the institutional distant host country, and they are subject to heavy institutional pressures. In order to enhance their legitimacy, EE MNEs need to follow the written rules, laws and regulations (formal institution), as well as to appear in agreement with the prevailing norms, values and beliefs (informal institution). Therefore, the motivation for achieving external legitimacy makes the EE MNEs commit extra resources, enhance their communication effectiveness, as well as their trust between the headquarters and subsidiary, which eventually enhances the quality of the headquarters-subsidary relationship. In addition, the result of this study reveals that achieving internal legitimacy via institutionalization of headquarters' practices in subsidiary can enhance the quality of the headquarters-subsidary relationship. The internal legitimacy enables the subsidiary to access organizational resources (Pfeffer & Salancik, 1978), which enables the subsidiary to utilise different strategies during its external legitimating process (Pache & Santos, 2010). This further extends the application of institutional theory in that internal legitimacy could enhance a subsidiary's efforts to achieve external legitimacy rather than constraining a subsidiary's external legitimating efforts, as suggested by Kostova and Zaheer (1999).

From the social exchange perspective, prior study suggests that inter-personal relationship between leader and subordinate can be affected by the levels of exchange between them, and inter-organizational relationships can be formed on the basis of reciprocity (Oliver, 1990), so that relationship between firms can be influenced by their pursuit of common goals and interests at the organizational level. The literature also suggests that the managers' social ties, contacts and networks can affect firms' strategic choice (Peng & Luo, 2000), and personal exchange can influence organizations' relational behaviours (Barden & Mitchell, 2007). Given that headquarters-subsidary interdependency can be enhanced by their organizational members' socialization activities (Nohria & Ghoshal, 1994), it implies that the managerial level exchange might also have an impact on the quality of the headquarters-subsidary relationship. The results from this study found that the quality of the headquarters-subsidary relationship can be enhanced by both

organizational and managerial levels of exchange. This indicates that the managerial exchange is an equally important factor in influencing the quality of the headquarters-subsidary relationship at managerial level in the context of MNEs, as the managerial ties and networks facilitate coordination and exchange of resources, information and knowledge (Luo, 2003). This extends the application of social exchange theory, so that the managerial exchanges do not only influence the quality of relationship between managers similar to the ones in leader-member exchange (e.g., Goodwin et al., 2009; Rosen, Harris, & Kacmar, 2011), it can also affect inter-organizational relationships, such as the quality of the headquarters-subsidary relationship. Furthermore, this research reveals that the influence of organizational exchange on the quality of the headquarters-subsidary relationship is subject to the headquarters' ownership in subsidiary and subsidiary's entry mode, and the influence of managerial exchange on the quality of the headquarters-subsidary relationship will be weaker when the subsidiary manager has a stronger organizational identity with the subsidiary. These findings indicate that headquarters' ownership, subsidiary entry mode, and subsidiary manager's organizational identity all play key roles in undermining the link between organizational and managerial exchanges and the quality of headquarters-subsidary relationship.

The upper echelons theory suggests that the organizational outcomes, including strategies and their effectiveness, are reflected by the cognitive base and values of powerful actors such as senior managers in an organization (Hambrick & Mason, 1984). This study found that the managerial cognition factors, i.e., managers' global mindset and their perceived psychic distance, can also influence the quality of the headquarters-subsidary relationship. This provides insights into the importance of managerial cognition, which plays a significant role in shaping not only the organizational strategic behaviour and decision making, but also the relational outcome such as the quality of the headquarters-subsidary relationship. Furthermore, this research also indicates that managers' personality flexibility and overseas study experience can alter the impact of global mindset on the quality of the headquarters-subsidary relationship. This suggests that the quality of the headquarters-subsidary relationship based on managers' global mindset can be significantly influenced by managers who have a flexible cognitive personality, and the influence of manager's global mindset on the quality of the headquarters-subsidary relationship needs to be

validated and assured by managers' international study experience. The finding shows that the inter-organizational relationship can also result from managerial cognition rather than from the country- and firm-level factors, and the moderating roles of managers' personality flexibility and overseas study experience may explain why managers with the same cognition leads to different inter-organizational relationships.

#### **8.4 Managerial Implications**

The findings of this study have several important practical implications for managers in Chinese MNEs. First, institutional distance may not simply be perceived as a factor that negatively contributes to the headquarters-subsidary relationship; instead, it may encourage better and closer headquarters-subsidary coordination to achieve a higher level of synergy, leading to a higher quality headquarters-subsidary relationship. Therefore, institutional distance itself may not be a negative factor, instead, the key is how to address institutional distance with a more positive attitude and thereby promote higher levels of coordination, communication, commitment, and trust between headquarters and subsidiaries. When institutional distance is high, it is essential for headquarters to provide high levels of resource support to subsidiaries to overcome the possible negative effect on the headquarters-subsidary relationship arising from institutional distance. It is also important for headquarters and subsidiaries to have high levels of commitment and communication effectiveness, which could promote their mutual trust and satisfaction with each other, therefore leading to a high quality headquarters-subsidary relationship. Moreover, subsidiary managers must focus on how to implement and internalize headquarters' practices. This is particularly important when subsidiaries are located in institutionally distant host countries where strong institutional pressures are perceived. Subsidiaries can achieve internal legitimacy by institutionalizing the practices of their headquarters (Kostova & Zaheer, 1999), because this strategy can provide subsidiaries with greater 'weight' in the headquarters-subsidary relationship along with greater tolerance and support from its headquarters and access to organizational resources. This, in turn, allows subsidiaries to achieve external legitimacy by developing alternative strategies rather than merely conforming to their host countries' institutional pressures.



Second, the findings suggest that the quality of the headquarters-subsidary relationship in Chinese MNEs can be affected by a joint influence of both managerial and organizational exchanges. Managers in Chinese MNEs should take both levels of exchange into consideration when managing the headquarters-subsidary relationship. The higher level of managerial and organizational exchanges between the subsidiary and the headquarters can steer the headquarters-subsidary relationship towards an 'in-group' exchange rather than 'out-group' exchange, which is beneficial to the quality of the headquarters-subsidary relationship. Moreover, as the subsidiary managers' organizational identity with subsidiary weakens the influence of managerial exchange on the quality of the headquarters-subsidary relationship, it suggests that subsidiary manager with a less salient subsidiary organizational identity is preferred when it comes to the managerial exchange with the headquarters managers. A strong organizational identity of a subsidiary's manager with the subsidiary may create an image of 'out-group' in the eyes of headquarters managers. This 'out-group' image could negatively affect the headquarters managers' perception on their exchange with subsidiary managers. It therefore suggests that subsidiary managers need to show a less salient organizational identity with the subsidiary, or they can even possess a dual-organizational identity with both subsidiary and headquarters. The dual-organizational identity makes subsidiary managers less biased towards one party, hence, reduces the likelihood of being associated with an 'out-group' image. As a result, this dual-organizational identity can reduce the subsidiary manager's role conflict, as well as enhance the cooperation and knowledge transfer between the headquarters and subsidiary (Vora & Kostova, 2007), which also has implications for firm efficiency, profitability, as well as innovation (Smith, Carroll, & Ashford, 1995). In addition, this research reveals that having a joint ownership with a local partner, and using merger and acquisition entry mode can enhance the link between organizational exchange and quality of headquarters-subsidary relationship, especially in asset-seeking Chinese MNEs. The joint ownership with a local partner can facilitate the information exchange between the local partner firm and Chinese MNEs, as the subsidiary is set up as a springboard to access the strategic asset (Luo & Tung, 2007). Therefore, it suggests that Chinese MNEs could consider a jointly owned rather than a wholly owned subsidiary when making the ownership decisions. The higher level of organizational exchange leads to a better headquarters-subsidary relationship, which makes it easier for Chinese

MNE headquarters to access the strategic knowledge and the knowledge transfer easier. Following the same vein, the results also suggest that Chinese MNEs could consider a merger and acquisition entry mode rather than the greenfield entry mode. As the merger and acquisition entry mode entails integrating existing local firms into Chinese MNEs, the integration process could encourage the Chinese MNE headquarters and subsidiary to maintain a high level of organizational exchange, which will not just strengthen the quality of the headquarters-subsidary relationship, but also assist the headquarters to acquire the strategic asset to address their competitive disadvantage.

Third, the findings suggest that Chinese MNEs must account for the managerial cognition of their subsidiary managers, especially subsidiary managers' global mindset and perceived psychic distance, when managing headquarters-subsidary relationships. By knowing the influence of managerial cognition on their firms' information-processing capabilities and the quality of their headquarters-subsidary relationship, Chinese MNEs will be able to better manage their headquarters-subsidary relationship. In this respect, Chinese MNEs could appoint managers with a more global mindset and a greater perceived psychic distance to overseas subsidiaries. Such managers are more likely to form organizational structures that enhance the information-processing capabilities of their organization, which can facilitate coordination and communication between the headquarters and the subsidiary, align their goals, foster the development of mutual trust, and consequently lead to a higher quality headquarters-subsidary relationship. Furthermore, this study suggests that managers' personal traits and experience also play different roles in developing managers' global mindset, which subsequently influences the quality of headquarters-subsidary relationships. When appointing subsidiary managers, MNEs should consider managers with a flexible personality and more overseas study experience as ideal candidates, as such managers are more inclined to learn and to master new knowledge and skills, which can foster a global mindset and consequently lead to a high quality headquarters-subsidary relationship.

### **8.5 Limitations and Future Research Directions**

This study extends the research on the quality of headquarters-subsidary relationships and investigates the determinants of the quality of headquarters-subsidary relationships in the context of emerging economies multinational enterprises, i.e., Chinese MNEs. Since this research is at its early stage, it is not without limitations. The author identified several limitations of this study, which lead to future research directions.

First, the use of cultural distance to measure normative institutions is a shortcoming. Although cultural distance has been identified as the main barrier for MNEs to obtain normative legitimacy (Yiu & Makino, 2002) and has been used in international business studies as a robust measurement for normative institutions (Jensen & Szulanski, 2004), it still may not be able to capture the full picture of normative distance. For example, apart from the local culture, the normative institution also includes local social norms and values (Scott, 1995), and these are not reflected in the Hofstede's cultural distance indicators. In this case, the cultural distance indicators are not able to capture the differences in norms and values between China and the host country, as it may overlook the influences of such differences in norms and values. Thus, a more comprehensive set of measures for normative distance including the norms and values could be helpful in overcoming this shortcoming in future research.

Second, although the sample size in this research is relatively large for quantitative study in the topic of headquarters-subsidary relationships, this one country cross-industrial sample is not adequate for product, industry or country specific analysis. There are two major reasons for this small sample size. The first reason is that the size of Chinese firms engaged in outward foreign direct investment (around 16,000 firms) only accounts for a rather small percentage of the total number of Chinese firms. The second reason is that the complete list of Chinese firms engaged in outward foreign direct investment is not released to the public due to the tight information control by the Chinese government. In the *2012 Statistical Bulletin of China's Outward Foreign Direct Investment*, only the top one hundred non-financial Chinese MNEs are disclosed in three different categories, namely their foreign direct

investment stock volume, foreign asset, and foreign revenue (MOFCOM, 2013). This limited information availability further reduces the number of Chinese MNEs that researchers can have access to. Since the population of Chinese MNEs are growing rapidly and the government is gradually releasing its control over information, future researchers would be able to have access to more Chinese MNEs and collect larger size samples for product, industry or country specific analysis. Future research could develop larger samples for a product, industry or country specific analysis that provides more insights to researchers and business practitioners.

Third, the results of this research indicate that the determinants from institutional, social exchange and upper echelon perspectives all have significant direct impact on the quality of headquarters-subsidary relationship in Chinese MNEs. However, the results provide limited insight into the interrelationship among the three different theoretical perspectives that all had powerful predictions on Chinese MNE's quality of headquarters-subsidary relationship. Future research could examine to what extent are the three theoretical perspectives' effects independent from each other, and to what extent are their effects entangled together for a better understanding of the phenomenon. Furthermore, the relative explanatory power of each of the theoretical perspectives remain less well understood, i.e., which theoretical perspective is the most powerful in explaining the phenomenon? Research suggest that the quality of headquarters-subsidary relationship is a source of MNE's competitive advantage (Kostova, 1998), and the internationalization of emerging economies MNEs often start from a resource-meager position due to the relatively low level of economic and technological development of their home countries (Wang, Hong, Kafourous, & Boateng, 2012). It is crucial for emerging economy MNEs to distinguish between the different theoretical perspectives and identify the theoretical perspective that has the highest relative explanatory power. In so doing, emerging economy MNEs can devote their limited resources to the right direction to improve the quality of headquarters-subsidary relationship. Thus, future research can employ statistical techniques in parsimonious model testing such as structural equation modelling in expanding the explanatory ability of the theoretical model used here. Given that there were more private firms than the state owned enterprises conducting OFDI since 2009, it would also be interesting to see how the determining pattern of the quality of headquarters-subsidary relationship vary across state-owned enterprises and non-

state-owned enterprises and across different time periods (i.e., before and after 2009). In addition, future research can examine the issues related to Chinese MNEs' quality of headquarters-subsiary relationship from the population ecology perspective as Chinese MNEs move to a more mature stage. For instance, how would then the different practices get mature or be adopted? How organizational field parameters determine the quality of headquarters-subsiary relationship? How would the institutional perspective, social exchange perspective or upper echelon perspective variables play a role along this consideration? Questions such as these can form the basis of future research underpinning by this study.

Lastly, it is noted that the empirical context of this study is Chinese MNEs. Although China is the largest investor amongst emerging economies (UNCTAD, 2013), the institutional environment in China varies from other emerging economies. For example, the networking and relationship building can be found in China, as well as other emerging economies such as Argentina, India, Poland and Russia (Peng et al., 2008), but the practice of building *guanxi* (interpersonal relationship) in China may not work in other emerging economies as interpersonal relationships are handled differently elsewhere (Meyer & Thaijongrak, 2013). Thus, the application of this study's findings to explain the quality of the headquarters-subsiary relationship in the context of MNEs from other emerging economies such as Russia, India, Brazil and South Africa, may require empirical extensions together with some necessary theoretical modifications.



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## **LIST OF RELATED PUBLICATIONS**

### **Referred Conference Papers**

- Li, J.,** Jiang, F., & Travaglione, T. 2015. Headquarters-subsiary exchanges and the quality of headquarters-subsiary relationship: The moderating roles of organizational identity, parent's ownership, and entry mode. *Strategic Management Society* Annual Meeting. October 3-6, 2015 – Denver, United States.
- Li, J.** & Jiang, F. 2014. Headquarters-subsiary exchange and the quality of headquarters-subsiary relationship in EE MNEs: The moderating roles of subsidiary manager's organizational identity and subsidiary's entry mode. *Australian and New Zealand Academy of Management* Annual Meeting. December 3-5, 2014 – Sydney, Australia.
- Li, J.,** Jiang, F., & Travaglione, T. 2014. A cognitive perspective on managers' information processing and headquarters-subsiary relationship in EE MNEs: The moderating roles of managers' overseas study experience and non-flexible personality. *Academy of Management* Annual Meeting. August 1-5, 2014 – Philadelphia, United States.
- Li, J.,** Jiang, F., & Travaglione, T. 2014. A cognitive perspective on managers' information processing and headquarters-subsiary relationship in EE MNEs: The moderating roles of managers' overseas study experience and non-flexible personality. *Academy of International Business* Annual Meeting. June 23-26, 2014 – Vancouver, Canada.
- Li, J.** & Jiang, F. 2013. Institutional distance and headquarters-subsiary relationship quality: The moderating role of institutionalization of headquarters' practices in subsidiaries. *Academy of International Business* Annual Meeting. July 3-6, 2013 – Istanbul, Turkey.

**Papers in Scholarly Review Process**

**Li, J.,** Jiang, F., & Travaglione, T. Global mindset, psychic distance, and quality of headquarters-subsiidiary relationship: The moderating roles of subsidiary managers' personality flexibility and overseas study experience. *Journal of International Business Studies* (2013 ABDC journal ranking: A\*). (**1st round review**)

**Li, J.,** Jiang, F., & Shen, J. Institutional distance and headquarters-subsiidiary relationship quality: The moderating role of institutionalization of headquarters' practice in subsidiaries. *International Business Review* (2013 ABDC journal ranking: A). (**2nd round review**)

**APPENDIX 1 SURVEY DOCUMENTS**

1. Information Sheet (English)
2. Consent Form (English)
3. Headquarters Questionnaire (English)
4. Subsidiary Questionnaire (English)
5. Information Sheet (Chinese)
6. Consent Form (Chinese)
7. Headquarters Questionnaire (Chinese)
8. Subsidiary Questionnaire (Chinese)

## **Information Sheet**

### **Research Topic:**

Determinants of Quality of Headquarters-Subsidiary Relationship: A Study of Chinese Multinational Enterprises

### **Research Aims:**

Following China's accession to the World Trade Organization (WTO) in 2001, Chinese enterprises have increased their pace of internationalization. Investing in countries that are culturally, economically and politically different from the home market poses challenges to the senior managers of Chinese multinational enterprises (MNEs), one of which is the management of headquarters-subsidiary (HQ-Sub) relationship. This research aims to investigate the determinants of quality of HQ-Sub relationship. The finding of this research should contribute a better understanding of the impacting factors of quality of HQ-Sub relationship in contemporary Chinese context, as well as the foreign direct investment related international business theories. It also reveals some useful implication for practitioners.

### **Questionnaire Instrument:**

A questionnaire has been developed and has been enclosed for collecting the data and information required for the research. In this questionnaire we would like to ask you a series of questions about your organization, including your perceived institutional distance, intra-firm institution, HQ-Sub exchange, psychic distance, global mindset, quality of HQ-Sub relationship and subsidiary performance. We also would like to get some brief background information about you and your company. Instructions on how to answer the questions are specified in the questionnaire. The questionnaire should take you about 35 minutes to complete. Your participation in this research project is completely voluntary. You are free to withdraw from participation at any time during the process of the survey with no penalty whatsoever.

### **Confidentiality:**

All responses that you provide and your identity will remain **STRICTLY CONFIDENTIAL** to the extent permissible by Australian law. The consent forms and completed questionnaires will be stored separately in a locked locker at the Curtin

University. Data will be coded when entered onto a computer, and kept on a computer accessible only by password by a member of the research team. The results of this research will be reported in an aggregate form so that no individual respondent can be identified from the data and published materials. The Curtin University Human Research Ethics Committee has approved this research.

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## Consent Form for Research Subjects

### Research Title:

Determinants of Quality of Headquarters-Subsidiary Relationship: A Study of Chinese Multinational Enterprises

### Researcher:

Mr Jizhong Li, School of Management, Curtin Business School, Curtin University

1. I,.....hereby give my consent to participate in the project entitled “Determinants of quality of headquarters-subsubsidiary relationship: A study of Chinese multinational enterprises”. I recognise that participation is completely voluntary. I have understood that I am free to withdraw from participation at any time during the duration of the project with no penalty whatsoever. I can choose not to answer those questions that I feel are sensitive to me or my company.
2. I understand that if I agree to participate in the research project I will be asked to complete a questionnaire survey. This will take approximately 35 minutes and include questions about my company and my background.
3. I understand that my identity and all responses provided by me will remain STRICTLY CONFIDENTIAL to the extent permissible by Australian law. This form and the completed questionnaires will be stored separately in a locked locker at the Curtin University. Data will be coded when entered onto a computer, and kept on a computer accessible only by password by a member of the research team. The results of this research will be reported in an aggregate form so that no individual respondent can be identified from the data and published materials.
4. I understand that the Curtin Human Research Ethics Committee has approved this research (Protocol SOM-33-11).

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

**Researcher to Complete:**

I, Jizhong Li, certify that I have, in my information sheet, explained the nature and procedures of the research project to all participants and consider that he/she understands what is involved before he/she starts filling out the survey questionnaire.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

## Survey Questionnaire (Headquarters)

### 1. Please indicate your perceived levels of Regulative Distance between China and Host Country:

|  | Very Low |   |   |   | Very High |
|--|----------|---|---|---|-----------|
| Fiscal policy                                | 1        | 2 | 3 | 4 | 5         |
| Anti-trust regulation                        | 1        | 2 | 3 | 4 | 5         |
| Political transparency                       | 1        | 2 | 3 | 4 | 5         |
| Intellectual property protection             | 1        | 2 | 3 | 4 | 5         |
| Judiciary system efficiency                  | 1        | 2 | 3 | 4 | 5         |
| Rarity of market dominance in key industries | 1        | 2 | 3 | 4 | 5         |
| Inflation                                    | 1        | 2 | 3 | 4 | 5         |

### 2. Please indicate your perceived levels of Normative Distance between China and Host Country:

|  | Very Low |   |   |   | Very High |
|--|----------|---|---|---|-----------|
| Political system's adaptation to economic challenges   | 1        | 2 | 3 | 4 | 5         |
| Government policies' adaptation to economic realities  | 1        | 2 | 3 | 4 | 5         |
| Transparency of government toward its citizens         | 1        | 2 | 3 | 4 | 5         |
| Political risk   | 1        | 2 | 3 | 4 | 5         |
| Degree of bureaucracy hinders economic development     | 1        | 2 | 3 | 4 | 5         |
| Bureaucratic corruption                                | 1        | 2 | 3 | 4 | 5         |
| Local authority's independence from central government | 1        | 2 | 3 | 4 | 5         |

### 3. Please indicate your perceived levels of Implementation of Headquarters (HQ) Practices at the subsidiary firm:

|  | Very Low |   |   |   | Very High |
|--|----------|---|---|---|-----------|
| The HQ practices as a whole                          | 1        | 2 | 3 | 4 | 5         |
| Leadership (e.g., work area objectives)              | 1        | 2 | 3 | 4 | 5         |
| Information and analysis                             | 1        | 2 | 3 | 4 | 5         |
| Planning (e.g., overall strategic business planning) | 1        | 2 | 3 | 4 | 5         |
| People (e.g., authority to make decisions, training) | 1        | 2 | 3 | 4 | 5         |
| Process management (e.g., problem prevention)        | 1        | 2 | 3 | 4 | 5         |
| Business results (e.g., improvement)                 | 1        | 2 | 3 | 4 | 5         |
| Customer focus and satisfaction                      | 1        | 2 | 3 | 4 | 5         |



**4. Please indicate your perceived levels of Internalization of Headquarters Practices at the subsidiary (Sub) firm:**

|   | Very<br>Low |   |   |   | Very<br>High |
|---|-------------|---|---|---|--------------|
| Willingness to put in a great deal of effort beyond that normally expected in order to help implement practices | 1           | 2 | 3 | 4 | 5            |
| HQ practices are a great way to reorganize business   | 1           | 2 | 3 | 4 | 5            |
| HQ practices and Sub practices values are similar   | 1           | 2 | 3 | 4 | 5            |
| HQ practices inspire the best in Sub's involvement  | 1           | 2 | 3 | 4 | 5            |
| Sub is really happy to adopt the HQ practices   | 1           | 2 | 3 | 4 | 5            |
| Sub really cares about HQ practices and its future  | 1           | 2 | 3 | 4 | 5            |
| Sub often finds it difficult to agree with HQ practices (R)   | 1           | 2 | 3 | 4 | 5            |

**5. Please indicate your perceived levels of Centralization at the subsidiary firm:**

|   | Very<br>Low |   |   |   | Very<br>High |
|---|-------------|---|---|---|--------------|
| Degree of local autonomy (R)                | 1           | 2 | 3 | 4 | 5            |
| Degree of direct supervision                | 1           | 2 | 3 | 4 | 5            |
| The existence of integrated planning system | 1           | 2 | 3 | 4 | 5            |
| The utilization of reporting system         | 1           | 2 | 3 | 4 | 5            |

**6. Please indicate your perceived levels of Formalization at the subsidiary firm:**

|   | Very<br>Low |   |   |   | Very<br>High |
|---|-------------|---|---|---|--------------|
| Emphasis placed on standardized process and procedure | 1           | 2 | 3 | 4 | 5            |
| Degree of formalized rules and policies are enforced  | 1           | 2 | 3 | 4 | 5            |
| Degree of use of technical standards                  | 1           | 2 | 3 | 4 | 5            |
| Existence of standardized reports to other units      | 1           | 2 | 3 | 4 | 5            |

**7. Please indicate your perceived levels of Socialization at the subsidiary firm:**

|  | Very<br>Low |   |   |   | Very<br>High |
|--|-------------|---|---|---|--------------|
| Degree of shared values  | 1           | 2 | 3 | 4 | 5            |
| Use of expatriates   | 1           | 2 | 3 | 4 | 5            |
| Frequency of R&D personnel exchange between units                    | 1           | 2 | 3 | 4 | 5            |
| Degree to which Sub managers participated in international trainings | 1           | 2 | 3 | 4 | 5            |
| Sub management's involvement in joint team and task forces           | 1           | 2 | 3 | 4 | 5            |

**8. Please indicate your perceived levels of Input Control at the subsidiary firm:**

|  | Very<br>Low |   |   |   | Very<br>High |
|--|-------------|---|---|---|--------------|
| Provides substantial training before assuming responsibility   | 1           | 2 | 3 | 4 | 5            |
| Establish the best staffing procedures available   | 1           | 2 | 3 | 4 | 5            |
| Involved in the skills development of employees  | 1           | 2 | 3 | 4 | 5            |
| Performs multiple evaluations before hiring staff  | 1           | 2 | 3 | 4 | 5            |
| Provides chances for broadening a skill set of staff<br>takes pride in hiring the best employee possible | 1           | 2 | 3 | 4 | 5            |
| Overall commitment to training and development   | 1           | 2 | 3 | 4 | 5            |

**9. Please indicate your perceived levels of Behaviour Control at the subsidiary firm:**

|  | Very<br>Low |   |   |   | Very<br>High |
|--|-------------|---|---|---|--------------|
| HQ weighs evaluations based on behaviour                         | 1           | 2 | 3 | 4 | 5            |
| Sub is held accountable regardless of outcome                    | 1           | 2 | 3 | 4 | 5            |
| There is consideration for procedure or methods                  | 1           | 2 | 3 | 4 | 5            |
| Performs programs imposed from the top down                      | 1           | 2 | 3 | 4 | 5            |
| Frequency of Sub receives feedback or<br>performance information | 1           | 2 | 3 | 4 | 5            |

**10. Please indicate your perceived levels of Output Control at the subsidiary firm:**

|  | Very<br>Low |   |   |   | Very<br>High |
|--|-------------|---|---|---|--------------|
| HQ uses evaluations significantly based on results     | 1           | 2 | 3 | 4 | 5            |
| Pay (reward) is based on performance                   | 1           | 2 | 3 | 4 | 5            |
| Pre-established targets are used for evaluating staff  | 1           | 2 | 3 | 4 | 5            |
| Numerical records are used as indices of effectiveness | 1           | 2 | 3 | 4 | 5            |
| Performance is linked to concrete results              | 1           | 2 | 3 | 4 | 5            |
| Appraisals are based on achieving goals                | 1           | 2 | 3 | 4 | 5            |
| Lack of achievement will result in low ratings         | 1           | 2 | 3 | 4 | 5            |

**11. Please indicate the level of Information Exchange between your firm and Subsidiary:**

|   | Very<br>Low |   |   |   | Very<br>High |
|---|-------------|---|---|---|--------------|
| You know what's going on in the Sub       | 1           | 2 | 3 | 4 | 5            |
| Sub's willingness to listen to your firm  | 1           | 2 | 3 | 4 | 5            |
| Confide firm information to Sub           | 1           | 2 | 3 | 4 | 5            |
| Your firm is superior in the relationship | 1           | 2 | 3 | 4 | 5            |
| Sub seeks input or advice from your firm  | 1           | 2 | 3 | 4 | 5            |

*Appendix 1 Survey Documents – Headquarters Questionnaire English Version*

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| Your firm is a trusted assistant in the relationship | 1 | 2 | 3 | 4 | 5 |
| You let Sub know what's going on in your firm        | 1 | 2 | 3 | 4 | 5 |
| Sub confides firm information to your firm           | 1 | 2 | 3 | 4 | 5 |

**12. Please indicate the level of Negotiation Latitude between your firm and Subsidiary:**

|  | Very<br>Low |   |   |   | Very<br>High |
|--|-------------|---|---|---|--------------|
| The flexibility of Sub when dealing with your firm | 1           | 2 | 3 | 4 | 5            |
| Sub's willingness to solve your firm's problem     | 1           | 2 | 3 | 4 | 5            |
| Sub bails your firm out at Sub's expense           | 1           | 2 | 3 | 4 | 5            |
| Frequency of your firm gives suggestions to Sub    | 1           | 2 | 3 | 4 | 5            |

**13. Please indicate level of Managerial Exchange:**

|   | Strongly<br>Disagree |   |   |   | Strongly<br>Agree |
|---|----------------------|---|---|---|-------------------|
| I like the Sub manager very much as a person  | 1                    | 2 | 3 | 4 | 5                 |
| I would like to have Sub manager as a friend  | 1                    | 2 | 3 | 4 | 5                 |
| Sub manager is a lot of fun to work with  | 1                    | 2 | 3 | 4 | 5                 |
| Sub manager defends my work actions to a superior, even without complete knowledge of the issue | 1                    | 2 | 3 | 4 | 5                 |
| Sub manager comes to my defence if I were 'attacked'  | 1                    | 2 | 3 | 4 | 5                 |
| Sub manager defends me if I made an honest mistake  | 1                    | 2 | 3 | 4 | 5                 |
| I am willing to apply extra efforts for Sub manager that go beyond my job description           | 1                    | 2 | 3 | 4 | 5                 |
| I will apply extra efforts to further Sub's interest  | 1                    | 2 | 3 | 4 | 5                 |
| I am impressed with Sub manager's knowledge   | 1                    | 2 | 3 | 4 | 5                 |
| I respect Sub manager's knowledge and competence  | 1                    | 2 | 3 | 4 | 5                 |
| I admire Sub manager's professional skills  | 1                    | 2 | 3 | 4 | 5                 |

**14. Please indicate your perceived levels of Business Distance between China and Host Country:**

|                            | Very<br>Low |   |   |   | Very<br>High |
|----------------------------|-------------|---|---|---|--------------|
| Legal and political system | 1           | 2 | 3 | 4 | 5            |
| Market structure           | 1           | 2 | 3 | 4 | 5            |
| Economic environment       | 1           | 2 | 3 | 4 | 5            |
| Business practices         | 1           | 2 | 3 | 4 | 5            |
| Language                   | 1           | 2 | 3 | 4 | 5            |

**15. Please indicate your perceived levels of Cultural Distance between China and Host Country:**

|                | Very<br>Low |   |   |   | Very<br>High |
|----------------|-------------|---|---|---|--------------|
| Power distance | 1           | 2 | 3 | 4 | 5            |

|                       |   |   |   |   |   |
|-----------------------|---|---|---|---|---|
| Uncertainty avoidance | 1 | 2 | 3 | 4 | 5 |
| Individualism         | 1 | 2 | 3 | 4 | 5 |
| Masculinity           | 1 | 2 | 3 | 4 | 5 |
| Long-term orientation | 1 | 2 | 3 | 4 | 5 |

**16. Please indicate the levels of the following Subsidiary Organizational Culture Traits:**

|   | Very<br>Low |   |   |   | Very<br>High |
|---|-------------|---|---|---|--------------|
| <b>Involvement</b>  |             |   |   |   |              |
| Staff have input into decisions that affect them                            | 1           | 2 | 3 | 4 | 5            |
| Cooperation and collaboration across functional role is actively encouraged | 1           | 2 | 3 | 4 | 5            |
| <b>Consistency</b>  |             |   |   |   |              |
| Level of agreement about the way they do things in Sub                      | 1           | 2 | 3 | 4 | 5            |
| Sub's approach to doing business is very consistent and predictable         | 1           | 2 | 3 | 4 | 5            |
| <b>Adaptability</b>   |             |   |   |   |              |
| Customers' comments and recommendations often lead to changes in Sub        | 1           | 2 | 3 | 4 | 5            |
| Sub is very responsive and changes easily                                   | 1           | 2 | 3 | 4 | 5            |
| <b>Sense of Mission</b>   |             |   |   |   |              |
| Sub has a long-term purpose and direction                                   | 1           | 2 | 3 | 4 | 5            |
| Sub has a shared vision of what it will be like in the future               | 1           | 2 | 3 | 4 | 5            |
| <b>Others</b>   |             |   |   |   |              |
| Clarity of strategy/shared goals  | 1           | 2 | 3 | 4 | 5            |
| Systematic decision-making  | 1           | 2 | 3 | 4 | 5            |
| Integration/communication   | 1           | 2 | 3 | 4 | 5            |
| Innovation/Risk-taking  | 1           | 2 | 3 | 4 | 5            |
| Accountability  | 1           | 2 | 3 | 4 | 5            |
| Action orientation  | 1           | 2 | 3 | 4 | 5            |
| Fairness of rewards   | 1           | 2 | 3 | 4 | 5            |
| Development and promotion from within                                       | 1           | 2 | 3 | 4 | 5            |

**17. Please indicate the levels of the Subsidiary Manager's Organizational Identity:**

|   | Strongly<br>Disagree |   |   |   | Strongly<br>Agree |
|---|----------------------|---|---|---|-------------------|
| When someone criticizes Sub, it feels like a personal insult to the Sub manager | 1                    | 2 | 3 | 4 | 5                 |
| Sub manager is very interested in what others think about Sub                   | 1                    | 2 | 3 | 4 | 5                 |
| When the Sub manager talks about Sub, he/she usually                            |                      |   |   |   |                   |

*Appendix 1 Survey Documents – Headquarters Questionnaire English Version*

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| says 'we' rather than 'they'   | 1 | 2 | 3 | 4 | 5 |
| Sub's success is Sub manager's success                                       | 1 | 2 | 3 | 4 | 5 |
| When someone praises Sub, it feels like a personal compliment to Sub manager | 1 | 2 | 3 | 4 | 5 |
| If a story in the media criticized Sub, Sub manager would feel embarrassed   | 1 | 2 | 3 | 4 | 5 |

**18. Please indicate the level of Communication Effectiveness between Headquarters and Subsidiary:**

|   | Strongly Disagree |   |   | Strongly Agree |   |
|---|-------------------|---|---|----------------|---|
| We communicate candidly with each other             | 1                 | 2 | 3 | 4              | 5 |
| Sub always tell us everything we need to know       | 1                 | 2 | 3 | 4              | 5 |
| We are responsive to Sub's need for information     | 1                 | 2 | 3 | 4              | 5 |
| Our communication is open and effective             | 1                 | 2 | 3 | 4              | 5 |
| We have continuous interaction with each other      | 1                 | 2 | 3 | 4              | 5 |
| We both communicate clearly                         | 1                 | 2 | 3 | 4              | 5 |
| Our staff communicate openly                        | 1                 | 2 | 3 | 4              | 5 |
| We have extensive formal and informal communication | 1                 | 2 | 3 | 4              | 5 |

**19. Please indicate the level of Mutual Trust between Headquarters and Subsidiary:**

|  | Strongly Disagree |   |   | Strongly Agree |   |
|--|-------------------|---|---|----------------|---|
| Sub has been frank in dealing with us        | 1                 | 2 | 3 | 4              | 5 |
| Promises made by Sub are reliable            | 1                 | 2 | 3 | 4              | 5 |
| Sub is knowledgeable regarding its operation | 1                 | 2 | 3 | 4              | 5 |
| Sub does not make false claims               | 1                 | 2 | 3 | 4              | 5 |
| Sub is not open in dealing with us (R)       | 1                 | 2 | 3 | 4              | 5 |
| If problem arises, Sub is honest about it    | 1                 | 2 | 3 | 4              | 5 |
| Sub has problems answering our questions (R) | 1                 | 2 | 3 | 4              | 5 |

**20. Please indicate the level of Commitment towards the relationship:**

|  | Strongly Disagree |   |   | Strongly Agree |   |
|--|-------------------|---|---|----------------|---|
| We defend Sub when others criticize Sub                                    | 1                 | 2 | 3 | 4              | 5 |
| We have a strong sense of loyalty to each other                            | 1                 | 2 | 3 | 4              | 5 |
| We are considering establishing another Sub to replace the current one (R) | 1                 | 2 | 3 | 4              | 5 |
| We expect to be operating with this Sub for some time                      | 1                 | 2 | 3 | 4              | 5 |
| If another Sub operated better, we would drop this Sub (R)                 | 1                 | 2 | 3 | 4              | 5 |
| We are not very committed to this Sub (R)                                  | 1                 | 2 | 3 | 4              | 5 |

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| We are quite willing to make long-term investment in this Sub                                | 1 | 2 | 3 | 4 | 5 |
| Our relationship with this Sub is a long-term one  | 1 | 2 | 3 | 4 | 5 |
| We are patient with this Sub even when they cause us trouble                                 | 1 | 2 | 3 | 4 | 5 |
| We are willing to dedicate whatever people and resources it takes to improve Sub’s operation | 1 | 2 | 3 | 4 | 5 |

**21. Please indicate the level of Satisfaction with the Relationship:**

|   | Strongly Disagree |   |   |   | Strongly Agree |
|---|-------------------|---|---|---|----------------|
| Some aspects of our relationship could be better (R)  | 1                 | 2 | 3 | 4 | 5              |
| Overall, we are satisfied with the relationship       | 1                 | 2 | 3 | 4 | 5              |
| This is the best relationship we have experienced     | 1                 | 2 | 3 | 4 | 5              |
| We think Sub is pleased with our relationship         | 1                 | 2 | 3 | 4 | 5              |
| We would say our relationship couldn’t be much better | 1                 | 2 | 3 | 4 | 5              |
| We are not happy with the relationship (R)            | 1                 | 2 | 3 | 4 | 5              |

**22. Please indicate the level of Subsidiary Performance the Subsidiary has achieved with respect to the following attributes:**

|  | Poor |   |   |   | Outstanding |
|--|------|---|---|---|-------------|
| <b>Financial Performance</b>                     |      |   |   |   |             |
| Return on investment                             | 1    | 2 | 3 | 4 | 5           |
| Profitability                                    | 1    | 2 | 3 | 4 | 5           |
| Cash flow  | 1    | 2 | 3 | 4 | 5           |
| Productivity                                     | 1    | 2 | 3 | 4 | 5           |
| <b>Sales Performance</b>                         |      |   |   |   |             |
| Sales growth                                     | 1    | 2 | 3 | 4 | 5           |
| Sales volume                                     | 1    | 2 | 3 | 4 | 5           |
| New product /service sales                       | 1    | 2 | 3 | 4 | 5           |
| <b>Customer Performance</b>                      |      |   |   |   |             |
| Customer satisfaction                            | 1    | 2 | 3 | 4 | 5           |
| Customer retention                               | 1    | 2 | 3 | 4 | 5           |
| Customer response time                           | 1    | 2 | 3 | 4 | 5           |
| On time delivery                                 | 1    | 2 | 3 | 4 | 5           |
| <b>Internal Business Processes in Subsidiary</b> |      |   |   |   |             |
| Material efficiency variance                     | 1    | 2 | 3 | 4 | 5           |
| Manufacturing lead time                          | 1    | 2 | 3 | 4 | 5           |
| Rate of material scrap loss                      | 1    | 2 | 3 | 4 | 5           |
| Labour efficiency variance                       | 1    | 2 | 3 | 4 | 5           |
| <b>Innovation and Learning in Subsidiary</b>     |      |   |   |   |             |
| Number of new patents                            | 1    | 2 | 3 | 4 | 5           |

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| Number of new product/service launches | 1 | 2 | 3 | 4 | 5 |
| Time-to-market for new product/service | 1 | 2 | 3 | 4 | 5 |
| Employee satisfaction                  | 1 | 2 | 3 | 4 | 5 |

**23. Please indicate the level of your agreement on the following aspects, respectively:**

|   | Strongly<br>Disagree |   |   |   | Strongly<br>Agree |
|---|----------------------|---|---|---|-------------------|
| <b>23.1 Intention of International or Global Expansion</b>                            |                      |   |   |   |                   |
| We are very interested in moving the firm to foreign markets                          | 1                    | 2 | 3 | 4 | 5                 |
| We feel the possible gains of doing business overseas are well worth the costs        | 1                    | 2 | 3 | 4 | 5                 |
| We feel our most attractive opportunities for growth lie in overseas markets          | 1                    | 2 | 3 | 4 | 5                 |
| I think that firms like ours trying to do business overseas are really onto something | 1                    | 2 | 3 | 4 | 5                 |

**23.2 Economic Orientation**

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| We would rather take on work that will give us an excellent chance to increase revenues | 1 | 2 | 3 | 4 | 5 |
| We prefer situations that will allow us to stabilize market fluctuations                | 1 | 2 | 3 | 4 | 5 |
| We prefer situations that may stimulate new demand for our products                     | 1 | 2 | 3 | 4 | 5 |
| We prefer situations that will give us a chance to increase our profits                 | 1 | 2 | 3 | 4 | 5 |

**23.3 Learning Orientation**

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| We prefer situations that give us a chance to acquire new skills                   | 1 | 2 | 3 | 4 | 5 |
| We prefer situations that give us a chance to increase organizational capabilities | 1 | 2 | 3 | 4 | 5 |
| We prefer situations that will give us a chance to learn new technologies          | 1 | 2 | 3 | 4 | 5 |
| We prefer situations that will give us a chance to broaden organizational skills   | 1 | 2 | 3 | 4 | 5 |

**24. Internationalization Strategy**

**As the company internationalizes, the country operations most familiar to me will:**

|   | Strongly<br>Disagree |   |   |   | Strongly<br>Agree |
|---|----------------------|---|---|---|-------------------|
| <b>24.1 Global Integration Expectations</b>                   |                      |   |   |   |                   |
| Have global marketing responsibility for one or more products | 1                    | 2 | 3 | 4 | 5                 |
| Produce one or more products for global markets               | 1                    | 2 | 3 | 4 | 5                 |
| Go global with locally developed products                     | 1                    | 2 | 3 | 4 | 5                 |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| Lead global product development processes | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|

**24.2 Local Responsiveness Expectations**

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| Demonstrate clear benefits to the local economy                                   | 1 | 2 | 3 | 4 | 5 |
| Have flexibility to respond to local conditions                                   | 1 | 2 | 3 | 4 | 5 |
| Harmonize the company’s activities and products with national government policies | 1 | 2 | 3 | 4 | 5 |
| Adapt existing products to local markets  | 1 | 2 | 3 | 4 | 5 |

**24.3 Country Coordination Expectations**

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| Provide early warning of global competitive threats         | 1 | 2 | 3 | 4 | 5 |
| Put global objectives ahead of country bottom line          | 1 | 2 | 3 | 4 | 5 |
| Identify local business opportunities with global potential | 1 | 2 | 3 | 4 | 5 |
| Learn from the company’s operations in many other countries | 1 | 2 | 3 | 4 | 5 |

**24.4 Divisional Coordination Expectations**

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| Coordinate strategy on a global basis                | 1 | 2 | 3 | 4 | 5 |
| Take product development input from more countries   | 1 | 2 | 3 | 4 | 5 |
| Coordinate among countries to rationalize production | 1 | 2 | 3 | 4 | 5 |
| Anticipate countries’ needs                          | 1 | 2 | 3 | 4 | 5 |
| Balance price and market share objectives            | 1 | 2 | 3 | 4 | 5 |
| Respond quickly to countries’ requests and needs     | 1 | 2 | 3 | 4 | 5 |

**25. Please indicate the level of your agreement on the following aspects, respectively**

|                      |  |  |  |  |                   |
|----------------------|--|--|--|--|-------------------|
| Strongly<br>Disagree |  |  |  |  | Strongly<br>Agree |
|----------------------|--|--|--|--|-------------------|

**25.1 Conceptualization**

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| In my job, the best one can do is to plan ahead for at the most one year                         | 1 | 2 | 3 | 4 | 5 |
| I think it is necessary today to develop strategic alliances with organizations around the globe | 1 | 2 | 3 | 4 | 5 |
| Projects that involve international dealings are long term                                       | 1 | 2 | 3 | 4 | 5 |
| I take pride in belonging to an international organization                                       | 1 | 2 | 3 | 4 | 5 |
| I believe that in the next 10 years the world will be the same as it is today                    | 1 | 2 | 3 | 4 | 5 |
| In this interlinked world of ours, national boundaries are meaningless                           | 1 | 2 | 3 | 4 | 5 |
| Almost everybody agrees that international projects  |   |   |   |   |   |



*Appendix 1 Survey Documents – Headquarters Questionnaire English Version*

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| must have a shorter payback period than domestic ones  | 1 | 2 | 3 | 4 | 5 |
| We really live in a global village   | 1 | 2 | 3 | 4 | 5 |
| In discussions, I always drive for a bigger, broader picture   | 1 | 2 | 3 | 4 | 5 |
| I believe life is a balance of contradictory forces that are to be appreciated, pondered and managed | 1 | 2 | 3 | 4 | 5 |
| I consider it to be a disgrace when foreigners buy our land and buildings                            | 1 | 2 | 3 | 4 | 5 |
| I really believe that 5-10 years is the best planning horizon in our line of business                | 1 | 2 | 3 | 4 | 5 |
| I find it easy to rethink boundaries, and change direction and behaviour                             | 1 | 2 | 3 | 4 | 5 |
| I feel comfortable with change, surprise and ambiguity   | 1 | 2 | 3 | 4 | 5 |
| I get frustrated when someone is constantly looking for context                                      | 1 | 2 | 3 | 4 | 5 |
| Contradictors are time wasters that must be eliminated   | 1 | 2 | 3 | 4 | 5 |
| I have no time for somebody trying to paint a broader or bigger picture                              | 1 | 2 | 3 | 4 | 5 |
| I believe I can live a fulfilling life in another culture  | 1 | 2 | 3 | 4 | 5 |
| Five years is too long a planning horizon  | 1 | 2 | 3 | 4 | 5 |

**25.2 Contextualization**

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| I enjoy trying foods from other countries                                 | 1 | 2 | 3 | 4 | 5 |
| I find people from other countries to be boring                           | 1 | 2 | 3 | 4 | 5 |
| I enjoy working on world community projects                               | 1 | 2 | 3 | 4 | 5 |
| I get anxious around people from other cultures                           | 1 | 2 | 3 | 4 | 5 |
| I mostly watch and/or read the local news                                 | 1 | 2 | 3 | 4 | 5 |
| Most of my social affiliations are local                                  | 1 | 2 | 3 | 4 | 5 |
| I am at my best when I travel to worlds that I do not understand          | 1 | 2 | 3 | 4 | 5 |
| I get very curious when I meet somebody from another country              | 1 | 2 | 3 | 4 | 5 |
| I enjoy reading foreign books or watching foreign movies                  | 1 | 2 | 3 | 4 | 5 |
| I find the idea of working with a person from another culture unappealing | 1 | 2 | 3 | 4 | 5 |
| When I meet someone from another culture, I get very nervous              | 1 | 2 | 3 | 4 | 5 |
| Travelling in lands where I can't read the street names gives me anxiety  | 1 | 2 | 3 | 4 | 5 |
| Most of my professional affiliations are international                    | 1 | 2 | 3 | 4 | 5 |
| I get irritated when we don't accomplish on time                          |   |   |   |   |   |

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| what we set out to do  | 1 | 2 | 3 | 4 | 5 |
| I become impatient when people from other cultures seem to take a long time to do something      | 1 | 2 | 3 | 4 | 5 |
| I have a lot of empathy for people who struggle to speak my own language                         | 1 | 2 | 3 | 4 | 5 |
| I prefer to act in my local environment (community or organization)                              | 1 | 2 | 3 | 4 | 5 |
| When something unexpected happens, it is easier to change the process than the structure         | 1 | 2 | 3 | 4 | 5 |
| In trying to accomplish my objectives, I find, diversity, multicultural teams play valuable role | 1 | 2 | 3 | 4 | 5 |
| I have close friends from other cultural backgrounds   | 1 | 2 | 3 | 4 | 5 |

**26. Please indicate the level of your agreement on the following aspects, respectively**

|   | Strongly Disagree |   |   |   | Strongly Agree |
|---|-------------------|---|---|---|----------------|
| <b>26.1 Proactiveness in International Markets</b>  |                   |   |   |   |                |
| It is important for our company to internationalize rapidly   | 1                 | 2 | 3 | 4 | 5              |
| Internationalization is the only way to achieve our growth objectives   | 1                 | 2 | 3 | 4 | 5              |
| We will have to internationalize in order to succeed in the future  | 1                 | 2 | 3 | 4 | 5              |
| The growth we are aiming at can be achieved mainly through internationalization   | 1                 | 2 | 3 | 4 | 5              |
| <b>26.2 Commitment to Internationalization</b>  |                   |   |   |   |                |
| The founder/owner/manager of the company is willing to take the company to international markets  | 1                 | 2 | 3 | 4 | 5              |
| The company's management uses a lot of time in planning international operations  | 1                 | 2 | 3 | 4 | 5              |
| <b>26.3 International Vision</b>  |                   |   |   |   |                |
| The company's management sees the whole world as one big marketplace  | 1                 | 2 | 3 | 4 | 5              |
| <b>26.4 Openness in Internationalization</b>  |                   |   |   |   |                |
| Is your company a leader (rather than a laggard) in your industry discovering and pursuing emerging market opportunities in all corners of the world? | 1                 | 2 | 3 | 4 | 5              |
| Do you regard each and every customer, wherever they live in the world, as being as important as a customer in your own domestic market?              | 1                 | 2 | 3 | 4 | 5              |
| Do you draw your employees from the world wide talent pool?   | 1                 | 2 | 3 | 4 | 5              |
| Do employees of every nationality have the same   |                   |   |   |   |                |

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| opportunity to move up the career ladder all the way to the top?   | 1 | 2 | 3 | 4 | 5 |
| In scanning the horizon for potential competitors, do you examine all economic regions of the world?   | 1 | 2 | 3 | 4 | 5 |
| In selecting a location for any activity, do you seek to optimize the choice on a truly global basis?  | 1 | 2 | 3 | 4 | 5 |
| Do you view the global arena not just as a playground (i.e., market to exploit) but also as a school (i.e., a source of new ideas and technology?)                         | 1 | 2 | 3 | 4 | 5 |
| Do you perceive your company as having a universal identity and as a company with many homes or do you instead perceive your company as having a strong national identity? | 1 | 2 | 3 | 4 | 5 |

**27. Contributory Role:**

Does your subsidiary company have any international responsibilities or world mandates (that is, does it undertake any activity such as manufacturing, R&D or product management on behalf of the corporation as a whole?) Yes/No. If yes, please estimate \_\_\_\_\_% of your subsidiary company’s revenues that are gained as a result of your international responsibilities.

**28. Subsidiary Initiative**

Please indicate to what extent have the following activities occurred in your subsidiary over the past 10 years?

|   | Never |   |   | Plentifully |   |
|---|-------|---|---|-------------|---|
| New products developed in host country and then sold internationally              | 1     | 2 | 3 | 4           | 5 |
| Successful bids for corporate investments in host country                         | 1     | 2 | 3 | 4           | 5 |
| New international business activities that were first started in host country     | 1     | 2 | 3 | 4           | 5 |
| Enhancements to product lines which are already sold internationally              | 1     | 2 | 3 | 4           | 5 |
| New corporate investments in R&D or manufacturing attracted by Chinese management | 1     | 2 | 3 | 4           | 5 |

**29. Specialized Resources**

Please indicate your capability or distinctive expertise in the following areas relative to other subsidiaries in the corporation:

|                                   | Far below Average |   |   | Far above Average |   |
|-----------------------------------|-------------------|---|---|-------------------|---|
| Product or process R&D            | 1                 | 2 | 3 | 4                 | 5 |
| Manufacturing capability          | 1                 | 2 | 3 | 4                 | 5 |
| Marketing capability              | 1                 | 2 | 3 | 4                 | 5 |
| Managing international activities | 1                 | 2 | 3 | 4                 | 5 |
| Innovation and entrepreneurship   | 1                 | 2 | 3 | 4                 | 5 |

**30. Global Integration.**

Please indicate how characteristic each of the following statements is in describing your industry:

|   | Strongly Disagree |   | Strongly Agree |   |   |
|---|-------------------|---|----------------|---|---|
|   | 1                 | 2 | 3              | 4 | 5 |
| International competition is intense                                | 1                 | 2 | 3              | 4 | 5 |
| Business activities are susceptible to global scale economies       | 1                 | 2 | 3              | 4 | 5 |
| Product awareness exists worldwide                                  | 1                 | 2 | 3              | 4 | 5 |
| New product introductions occur in all major markets simultaneously | 1                 | 2 | 3              | 4 | 5 |

**31. Please indicate the Ownership Composition of China’s HQ firm:**

State government: \_\_\_\_\_ %  
 Foreign: \_\_\_\_\_ %  
 Private: \_\_\_\_\_ %  
 Others: \_\_\_\_\_ %, please specify \_\_\_\_\_  
 Total: 100%

32. How many Employees does your firm employ? \_\_\_\_\_ (number)

33. Which Year was your firm established? \_\_\_\_\_

34. What is the nature of your firm’s Core Business?  
 \_\_\_\_\_

35. Which Industry does your company operate in?  
 \_\_\_\_\_

36. Please indicate your firm’s Total Assets USD \_\_\_\_\_

37. Please indicate your firm’s Total Revenue generated by domestic operation USD  
 \_\_\_\_\_

38. Please indicate your firm’s Profitability \_\_\_\_\_ %

39. Please indicate your firm’s Sales Growth \_\_\_\_\_ %

40. Please indicate your firm’s Market Share Growth \_\_\_\_\_ %

41. Which Year did your firm start outward foreign direct investment? \_\_\_\_\_

42. Please name the Host Country that your firm invested in \_\_\_\_\_

43. Please indicate the Amount of the foreign direct investment USD \_\_\_\_\_

44. Please indicate the Total Assets of the foreign direct investment USD \_\_\_\_\_

45. Please indicate the Total Number of employees in all foreign operations \_\_\_\_\_

46. Please indicate \_\_\_\_\_ % of products is sold back to home country market

47. Please indicate \_\_\_\_\_ % of products is used as inputs to home country operations

48. Please indicate \_\_\_\_\_ % of products is used as inputs to foreign country operations

49. Please indicate your firm's Return on Investment \_\_\_\_\_ %

50. Please indicate the Primary Motivation of your firm's outward FDI:

Market Seeking                       Natural Resource Seeking                       Asset Seeking

51. Please indicate the Means of Establishment of your firm's outward FDI:

Acquisition     Greenfield

52. Please indicate the Primary Strategy of your firm's outward FDI:

- Global (i.e., standardize product or marketing strategy in different markets to reduce costs - high standardization and low cost)
- Multidomestic (i.e., match different national conditions by extensively customize product offering or marketing strategy - high adaptation and high cost)

53. Please indicate the Major Activity of the subsidiary conducted in the host country: (you can choose more than one)

- |   |  |
|---|--|
| <input type="checkbox"/> Sourcing of components and parts | <input type="checkbox"/> Sourcing of local production capabilities |
| <input type="checkbox"/> Marketing of final products      | <input type="checkbox"/> Obtain financial resources                |
| <input type="checkbox"/> Product design and innovation    | <input type="checkbox"/> Sourcing local natural resources          |
| <input type="checkbox"/> Hiring local labour              | <input type="checkbox"/> Obtain managerial skills                  |
| <input type="checkbox"/> Others _____ (Please specify)    |  |

54. Please indicate the Nationality of subsidiary manager \_\_\_\_\_

55. Please indicate your Gender:                       Male                       Female

56. What is your Current Position in your firm?

- CEO/President/Chairman                       General Manager                       Department Manager
- Other \_\_\_\_\_ (please specify)

**57. Please indicate your Age Range:**

- <26       26-30       31-35       36-40       41-45       46-50  
 51-55       56-60       >60

**58. Please indicate the Highest Level of formal educational qualification you have earned:**

- Junior school certificate/equivalent       High school certificate/equivalent  
 Junior college diploma       University diploma  
 Bachelor degree       Master degree  
 Doctorate       Other \_\_\_\_\_ (please specify)

**59. How many Years have you been working in this firm? \_\_\_\_\_**

**60. How many Years have you been working at this position? \_\_\_\_\_**

**61. How many Years have you known the subsidiary manager? \_\_\_\_\_**

**62. Have you ever worked overseas?**

- Yes, if so, in \_\_\_\_\_ for \_\_\_\_\_ years       No

**63. Have you ever lived overseas?**

- Yes, if so, in \_\_\_\_\_ for \_\_\_\_\_ years       No

**64. Did you obtain any of your degrees overseas?**

- Yes, if so, in \_\_\_\_\_ (country)       No

**65. Please tell us how confident you are in using English Language (reading, listening, speaking, and writing):**

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| 66. Please choose either <u>A</u> or <u>B</u> only for each question below |  |           |   |  |
|--|--|-----------|---|--|
| <i>What is the direction and focus of your personal energy?</i>            |  |           |   |  |
| 1  | (A) Outgoing, expressive               | <i>or</i> | (B) Reflective, quiet                     |  |
| 2  | (A) Energized by interaction           | <i>or</i> | (B) Energized by being alone              |  |
| 3  | (A) Initiate conversation              | <i>or</i> | (B) Wait to be invited                    |  |
| 4  | (A) Act before reflecting              | <i>or</i> | (B) Reflect before acting                 |  |
| 5  | (A) Sociable – easy to get to know     | <i>or</i> | (B) Reserved – takes time to get to know  |  |
| 6  | (A) Have many interests                | <i>or</i> | (B) Focus on a few things at depth        |  |
| 7  | (A) Need regular interaction           | <i>or</i> | (B) Need privacy for concentration        |  |
| 8  | (A) Interested more in external events | <i>or</i> | (B) Interested more in internal reactions |  |
| 9  | (A) Communicate more easily by talking | <i>or</i> | (B) Communicate more easily by writing    |  |
| 10   | (A) Learn best by doing or interacting | <i>or</i> | (B) Learn best by reading and reflecting  |  |

Appendix 1 Survey Documents – Headquarters Questionnaire English Version

| <i>How do you prefer to gather information?</i>                          |  |           |   |  |
|--|--|-----------|---|--|
| 1  | (A) Perceive mainly through the 5 senses                 | <i>or</i> | (B) Perceive mainly patterns and connections      |  |
| 2  | (A) Focus on facts and details                           | <i>or</i> | (B) Focus on possibilities and hunches            |  |
| 3  | (A) Trust concrete experience                            | <i>or</i> | (B) Trust theory and abstract concepts            |  |
| 4  | (A) Realistic and observant                              | <i>or</i> | (B) Imaginative and innovative                    |  |
| 5  | (A) Prefer practical matters                             | <i>or</i> | (B) Prefer the imagination                        |  |
| 6  | (A) Use a step-by-step approach                          | <i>or</i> | (B) Use a random approach                         |  |
| 7  | (A) Focus on the present or the past                     | <i>or</i> | (B) Focus on the future                           |  |
| 8  | (A) Seek stability                                       | <i>or</i> | (B) Seek change                                   |  |
| 9  | (A) Build up the big picture                             | <i>or</i> | (B) Begin with the big picture                    |  |
| 10   | (A) Need to see the parts to understand the whole        | <i>or</i> | (B) Need to see the whole to understand the parts |  |
| <i>How do you prefer to make decisions?</i>                              |  |           |   |  |
| 1  | (A) Use logic to make decisions                          | <i>or</i> | (B) Use personal values to make decisions         |  |
| 2  | (A) Seek honesty and truth                               | <i>or</i> | (B) Seek personal approval                        |  |
| 3  | (A) Need to be competent                                 | <i>or</i> | (B) Need to be appreciated                        |  |
| 4  | (A) Analyse and critique                                 | <i>or</i> | (B) Empathize                                     |  |
| 5  | (A) Firm and tough-minded                                | <i>or</i> | (B) Persuasive and warm-hearted                   |  |
| 6  | (A) Focus on justice and fairness                        | <i>or</i> | (B) Focus on mercy and compassion                 |  |
| 7  | (A) Questioning – focus on Why?                          | <i>or</i> | (B) Accepting – focus on Who?                     |  |
| 8  | (A) Seek logical reasons                                 | <i>or</i> | (B) Seek harmony with values and others           |  |
| 9  | (A) Focus on goals and tasks                             | <i>or</i> | (B) Focus on people and relationships             |  |
| 10   | (A) Consider principles and consequences                 | <i>or</i> | (B) Consider the impact on people                 |  |
| <i>How much structure or flexibility do you need in the outer world?</i> |  |           |   |  |
| 1  | (A) Prefer a definite order and structure                | <i>or</i> | (B) Flexible                                      |  |
| 2  | (A) Organized and planned                                | <i>or</i> | (B) Adapt easily to change                        |  |
| 3  | (A) Seek closure   | <i>or</i> | (B) Open-ended                                    |  |
| 4  | (A) Focus on reaching the goal                           | <i>or</i> | (B) Focus on experiencing life                    |  |
| 5  | (A) Like to control events                               | <i>or</i> | (B) Like to respond to the moment                 |  |
| 6  | (A) Make decisions quickly                               | <i>or</i> | (B) Explore all the options before deciding       |  |
| 7  | (A) Systematic and methodical                            | <i>or</i> | (B) Casual, easy-going                            |  |
| 8  | (A) Comfortable with plans and timetables                | <i>or</i> | (B) Prefer to be spontaneous                      |  |
| 9  | (A) Enjoy completing one project before starting another | <i>or</i> | (B) Enjoy working on several projects at once     |  |
| 10   | (A) Punctual, meet deadlines easily                      | <i>or</i> | (B) Energized by approaching deadlines            |  |

**Additional Comments:** if you feel that we have overlooked any important issues, or you wish to add further comments, please tell us about them.

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Thank you very much for your cooperation in completing this survey. All the information provided from you in this questionnaire will remain **STRICTLY CONFIDENTIAL**. We will send you a report on the major research findings for your reference upon the completion of this study.



**Survey Questionnaire (Subsidiary)**

**1. Please indicate your perceived levels of Regulative Distance between China and Host Country:**

|  | Very<br>Low |   |   |   | Very<br>High |
|--|-------------|---|---|---|--------------|
| Fiscal policy                                | 1           | 2 | 3 | 4 | 5            |
| Anti-trust regulation                        | 1           | 2 | 3 | 4 | 5            |
| Political transparency                       | 1           | 2 | 3 | 4 | 5            |
| Intellectual property protection             | 1           | 2 | 3 | 4 | 5            |
| Judiciary system efficiency                  | 1           | 2 | 3 | 4 | 5            |
| Rarity of market dominance in key industries | 1           | 2 | 3 | 4 | 5            |
| Inflation                                    | 1           | 2 | 3 | 4 | 5            |

**2. Please indicate your perceived levels of Normative Distance between China and Host Country:**

|  | Very<br>Low |   |   |   | Very<br>High |
|--|-------------|---|---|---|--------------|
| Political system's adaptation to economic challenges   | 1           | 2 | 3 | 4 | 5            |
| Government policies' adaptation to economic realities  | 1           | 2 | 3 | 4 | 5            |
| Transparency of government toward its citizens         | 1           | 2 | 3 | 4 | 5            |
| Political risk   | 1           | 2 | 3 | 4 | 5            |
| Degree of bureaucracy hinders economic development     | 1           | 2 | 3 | 4 | 5            |
| Bureaucratic corruption                                | 1           | 2 | 3 | 4 | 5            |
| Local authority's independence from central government | 1           | 2 | 3 | 4 | 5            |

**3. Please indicate your perceived levels of Implementation of Headquarters (HQ) Practices at the subsidiary firm:**

|  | Very<br>Low |   |   |   | Very<br>High |
|--|-------------|---|---|---|--------------|
| The HQ practices as a whole                          | 1           | 2 | 3 | 4 | 5            |
| Leadership (e.g., work area objectives)              | 1           | 2 | 3 | 4 | 5            |
| Information and analysis                             | 1           | 2 | 3 | 4 | 5            |
| Planning (e.g., overall strategic business planning) | 1           | 2 | 3 | 4 | 5            |
| People (e.g., authority to make decisions, training) | 1           | 2 | 3 | 4 | 5            |
| Process management (e.g., problem prevention)        | 1           | 2 | 3 | 4 | 5            |
| Business results (e.g., improvement)                 | 1           | 2 | 3 | 4 | 5            |
| Customer focus and satisfaction                      | 1           | 2 | 3 | 4 | 5            |

**4. Please indicate your perceived levels of Internalization of Headquarters Practices at the subsidiary (Sub) firm:**

|   | Very Low |   |   |   | Very High |
|---|----------|---|---|---|-----------|
| Willingness to put in a great deal of effort beyond that normally expected in order to help implement practices | 1        | 2 | 3 | 4 | 5         |
| HQ practices are a great way to reorganize business   | 1        | 2 | 3 | 4 | 5         |
| HQ practices and Sub practices values are similar   | 1        | 2 | 3 | 4 | 5         |
| HQ practices inspire the best in Sub's involvement  | 1        | 2 | 3 | 4 | 5         |
| Sub is really happy to adopt the HQ practices   | 1        | 2 | 3 | 4 | 5         |
| Sub really cares about HQ practices and its future  | 1        | 2 | 3 | 4 | 5         |
| Sub often finds it difficult to agree with HQ practices (R)   | 1        | 2 | 3 | 4 | 5         |

**5. Please indicate your perceived levels of Centralization at the subsidiary firm:**

|   | Very Low |   |   |   | Very High |
|---|----------|---|---|---|-----------|
| Degree of local autonomy (R)                | 1        | 2 | 3 | 4 | 5         |
| Degree of direct supervision                | 1        | 2 | 3 | 4 | 5         |
| The existence of integrated planning system | 1        | 2 | 3 | 4 | 5         |
| The utilization of reporting system         | 1        | 2 | 3 | 4 | 5         |

**6. Please indicate your perceived levels of Formalization at the subsidiary firm:**

|   | Very Low |   |   |   | Very High |
|---|----------|---|---|---|-----------|
| Emphasis placed on standardized process and procedure | 1        | 2 | 3 | 4 | 5         |
| Degree of formalized rules and policies are enforced  | 1        | 2 | 3 | 4 | 5         |
| Degree of use of technical standards                  | 1        | 2 | 3 | 4 | 5         |
| Existence of standardized reports to other units      | 1        | 2 | 3 | 4 | 5         |

**7. Please indicate your perceived levels of Socialization at the subsidiary firm:**

|   | Very Low |   |   |   | Very High |
|---|----------|---|---|---|-----------|
| Degree of shared values                           | 1        | 2 | 3 | 4 | 5         |
| Use of expatriates                                | 1        | 2 | 3 | 4 | 5         |
| Frequency of R&D personnel exchange between units | 1        | 2 | 3 | 4 | 5         |
| Degree to which Sub managers participated in      |          |   |   |   |           |

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| international trainings                                    | 1 | 2 | 3 | 4 | 5 |
| Sub management’s involvement in joint team and task forces | 1 | 2 | 3 | 4 | 5 |

**8. Please indicate your perceived levels of Input Control at the subsidiary firm:**

|   | Very Low |   |   |   | Very High |
|---|----------|---|---|---|-----------|
| Provides substantial training before assuming responsibility  | 1        | 2 | 3 | 4 | 5         |
| Establish the best staffing procedures available  | 1        | 2 | 3 | 4 | 5         |
| Involved in the skills development of employees   | 1        | 2 | 3 | 4 | 5         |
| Performs multiple evaluations before hiring staff   | 1        | 2 | 3 | 4 | 5         |
| Provides chances for broadening a skill set of staff takes pride in hiring the best employee possible | 1        | 2 | 3 | 4 | 5         |
| Overall commitment to training and development  | 1        | 2 | 3 | 4 | 5         |

**9. Please indicate your perceived levels of Behaviour Control at the subsidiary firm:**

|   | Very Low |   |   |   | Very High |
|---|----------|---|---|---|-----------|
| HQ weighs evaluations based on behaviour                      | 1        | 2 | 3 | 4 | 5         |
| Sub is held accountable regardless of outcome                 | 1        | 2 | 3 | 4 | 5         |
| There is consideration for procedure or methods               | 1        | 2 | 3 | 4 | 5         |
| Performs programs imposed from the top down                   | 1        | 2 | 3 | 4 | 5         |
| Frequency of Sub receives feedback or performance information | 1        | 2 | 3 | 4 | 5         |

**10. Please indicate your perceived levels of Output Control at the subsidiary firm:**

|  | Very Low |   |   |   | Very High |
|--|----------|---|---|---|-----------|
| HQ uses evaluations significantly based on results     | 1        | 2 | 3 | 4 | 5         |
| Pay (reward) is based on performance                   | 1        | 2 | 3 | 4 | 5         |
| Pre-established targets are used for evaluating staff  | 1        | 2 | 3 | 4 | 5         |
| Numerical records are used as indices of effectiveness | 1        | 2 | 3 | 4 | 5         |
| Performance is linked to concrete results              | 1        | 2 | 3 | 4 | 5         |
| Appraisals are based on achieving goals                | 1        | 2 | 3 | 4 | 5         |
| Lack of achievement will result in low ratings         | 1        | 2 | 3 | 4 | 5         |

**11. Please indicate the level of Information Exchange between your firm and Headquarters:**

|  | Very Low |   |   |   | Very High |
|--|----------|---|---|---|-----------|
| You know what's going on in the HQ                   | 1        | 2 | 3 | 4 | 5         |
| HQ's willingness to listen to your firm              | 1        | 2 | 3 | 4 | 5         |
| Confide firm information to HQ                       | 1        | 2 | 3 | 4 | 5         |
| Your firm is a hired hand in the relationship        | 1        | 2 | 3 | 4 | 5         |
| HQ seeks input or advice from your firm              | 1        | 2 | 3 | 4 | 5         |
| Your firm is a trusted assistant in the relationship | 1        | 2 | 3 | 4 | 5         |
| You let HQ know what's going on in your firm         | 1        | 2 | 3 | 4 | 5         |
| HQ confides firm information to your firm            | 1        | 2 | 3 | 4 | 5         |

**12. Please indicate the level of Negotiation Latitude between your firm and Headquarters:**

|   | Very Low |   |   |   | Very High |
|---|----------|---|---|---|-----------|
| The flexibility of HQ when dealing with your firm | 1        | 2 | 3 | 4 | 5         |
| HQ's willingness to solve your firm's problem     | 1        | 2 | 3 | 4 | 5         |
| HQ bails your firm out at HQ's expense            | 1        | 2 | 3 | 4 | 5         |
| Frequency of your firm gives suggestion to HQ     | 1        | 2 | 3 | 4 | 5         |

**13. Please indicate level of Managerial Exchange:**

|  | Strongly Disagree |   |   |   | Strongly Agree |
|--|-------------------|---|---|---|----------------|
| I like the HQ manager very much as a person  | 1                 | 2 | 3 | 4 | 5              |
| I would like to have HQ manager as a friend  | 1                 | 2 | 3 | 4 | 5              |
| HQ manager is a lot of fun to work with  | 1                 | 2 | 3 | 4 | 5              |
| HQ manager defends my work actions to a superior, even without complete knowledge of the issue | 1                 | 2 | 3 | 4 | 5              |
| HQ manager comes to my defence if I were 'attacked'  | 1                 | 2 | 3 | 4 | 5              |
| HQ manager defends me if I made an honest mistake  | 1                 | 2 | 3 | 4 | 5              |
| I am willing to apply extra efforts for HQ manager that go beyond my job description           | 1                 | 2 | 3 | 4 | 5              |
| I will apply extra efforts to further HQ's interest  | 1                 | 2 | 3 | 4 | 5              |
| I am impressed with HQ manager's knowledge   | 1                 | 2 | 3 | 4 | 5              |
| I respect HQ manager's knowledge and competence  | 1                 | 2 | 3 | 4 | 5              |



*Appendix 1 Survey Documents – Subsidiary Questionnaire English Version*

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| Sub is very responsive and changes easily                     | 1 | 2 | 3 | 4 | 5 |
| <b>Sense of Mission</b>                                       |   |   |   |   |   |
| Sub has a long-term purpose and direction                     | 1 | 2 | 3 | 4 | 5 |
| Sub has a shared vision of what it will be like in the future | 1 | 2 | 3 | 4 | 5 |
| Clarity of strategy/shared goals                              | 1 | 2 | 3 | 4 | 5 |
| Systematic decision-making                                    | 1 | 2 | 3 | 4 | 5 |
| Integration/communication                                     | 1 | 2 | 3 | 4 | 5 |
| Innovation/Risk-taking  | 1 | 2 | 3 | 4 | 5 |
| Accountability  | 1 | 2 | 3 | 4 | 5 |
| Action orientation  | 1 | 2 | 3 | 4 | 5 |
| Fairness of rewards   | 1 | 2 | 3 | 4 | 5 |
| Development and promotion from within                         | 1 | 2 | 3 | 4 | 5 |

**17. Please indicate the levels of the Subsidiary Manager's Organizational Identity:**

|   | Strongly Disagree |   |   | Strongly Agree |   |
|---|-------------------|---|---|----------------|---|
| When someone criticizes Sub, it feels like a personal insult to the Sub manager   | 1                 | 2 | 3 | 4              | 5 |
| Sub manager is very interested in what others think about Sub                     | 1                 | 2 | 3 | 4              | 5 |
| When the Sub manager talks about Sub, he/she usually says 'we' rather than 'they' | 1                 | 2 | 3 | 4              | 5 |
| Sub's success is Sub manager's success  | 1                 | 2 | 3 | 4              | 5 |
| When someone praises Sub, it feels like a personal compliment to Sub manager      | 1                 | 2 | 3 | 4              | 5 |
| If a story in the media criticized Sub, Sub manager would feel embarrassed        | 1                 | 2 | 3 | 4              | 5 |

**18. Please indicate the level of Communication Effectiveness between Headquarters and Subsidiary:**

|  | Strongly Disagree |   |   | Strongly Agree |   |
|--|-------------------|---|---|----------------|---|
| We communicate candidly with each other        | 1                 | 2 | 3 | 4              | 5 |
| HQ always tell us everything we need to know   | 1                 | 2 | 3 | 4              | 5 |
| We are responsive to HQ's need for information | 1                 | 2 | 3 | 4              | 5 |
| Our communication is open and effective        | 1                 | 2 | 3 | 4              | 5 |
| We have continuous interaction with each other | 1                 | 2 | 3 | 4              | 5 |

*Appendix 1 Survey Documents – Subsidiary Questionnaire English Version*

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| We both communicate clearly                         | 1 | 2 | 3 | 4 | 5 |
| Our staff communicate openly                        | 1 | 2 | 3 | 4 | 5 |
| We have extensive formal and informal communication | 1 | 2 | 3 | 4 | 5 |

**19. Please indicate the level of Mutual Trust between Headquarters and Subsidiary:**

|   | Strongly Disagree |   |   | Strongly Agree |   |
|---|-------------------|---|---|----------------|---|
| HQ has been frank in dealing with us        | 1                 | 2 | 3 | 4              | 5 |
| Promises made by HQ are reliable            | 1                 | 2 | 3 | 4              | 5 |
| HQ is knowledgeable regarding its operation | 1                 | 2 | 3 | 4              | 5 |
| HQ does not make false claims               | 1                 | 2 | 3 | 4              | 5 |
| HQ is not open in dealing with us (R)       | 1                 | 2 | 3 | 4              | 5 |
| If problem arises, HQ is honest about it    | 1                 | 2 | 3 | 4              | 5 |
| HQ has problems answering our questions     | 1                 | 2 | 3 | 4              | 5 |

**20. Please indicate the level of Commitment towards the relationship:**

|   | Strongly Disagree |   |   | Strongly Agree |   |
|---|-------------------|---|---|----------------|---|
| We defend HQ when others criticize HQ   | 1                 | 2 | 3 | 4              | 5 |
| We have a strong sense of loyalty to each other   | 1                 | 2 | 3 | 4              | 5 |
| We are not very committed to our HQ (R)   | 1                 | 2 | 3 | 4              | 5 |
| We are quite willing to make a long-term contribution back to HQ                            | 1                 | 2 | 3 | 4              | 5 |
| Our relationship with this HQ is a long-term one  | 1                 | 2 | 3 | 4              | 5 |
| We are patient with our HQ even when they cause us trouble                                  | 1                 | 2 | 3 | 4              | 5 |
| We are willing to dedicate whatever people and resources it takes to improve HQ's operation | 1                 | 2 | 3 | 4              | 5 |

**21. Please indicate the level of Satisfaction with the Relationship:**

|   | Strongly Disagree |   |   | Strongly Agree |   |
|---|-------------------|---|---|----------------|---|
| Some aspects of our relationship could be better (R)  | 1                 | 2 | 3 | 4              | 5 |
| Overall, we are satisfied with the relationship       | 1                 | 2 | 3 | 4              | 5 |
| This is the best relationship we have experienced     | 1                 | 2 | 3 | 4              | 5 |
| We think HQ is pleased with our relationship          | 1                 | 2 | 3 | 4              | 5 |
| We would say our relationship couldn't be much better | 1                 | 2 | 3 | 4              | 5 |





25. Please indicate the subsidiary last financial year's Return on Asset

(ROA) : \_\_\_\_\_%

26. Please indicate the subsidiary last financial year's Profitability : \_\_\_\_\_%

27. Please indicate the level of your agreement on the following aspects, respectively:

|   | Strongly<br>Disagree |   |   |   | Strongly<br>Agree |
|---|----------------------|---|---|---|-------------------|
| <b>27.1 Intention of International or Global Expansion</b>                              |                      |   |   |   |                   |
| We are very interested in moving the firm to foreign markets                            | 1                    | 2 | 3 | 4 | 5                 |
| We feel the possible gains of doing business overseas are well worth the costs          | 1                    | 2 | 3 | 4 | 5                 |
| We feel our most attractive opportunities for growth lie in overseas markets            | 1                    | 2 | 3 | 4 | 5                 |
| I think that firms like ours trying to do business overseas are really onto something   | 1                    | 2 | 3 | 4 | 5                 |
| <b>27.2 Economic Orientation</b>  |                      |   |   |   |                   |
| We would rather take on work that will give us an excellent chance to increase revenues | 1                    | 2 | 3 | 4 | 5                 |
| We prefer situations that will allow us to stabilize market fluctuations                | 1                    | 2 | 3 | 4 | 5                 |
| We prefer situations that may stimulate new demand for our products                     | 1                    | 2 | 3 | 4 | 5                 |
| We prefer situations that will give us a chance to increase our profits                 | 1                    | 2 | 3 | 4 | 5                 |
| <b>27.3 Learning Orientation</b>  |                      |   |   |   |                   |
| We prefer situations that give us a chance to acquire new skills                        | 1                    | 2 | 3 | 4 | 5                 |
| We prefer situations that give us a chance to increase organizational capabilities      | 1                    | 2 | 3 | 4 | 5                 |
| We prefer situations that will give us a chance to learn new technologies               | 1                    | 2 | 3 | 4 | 5                 |
| We prefer situations that will give us a chance to broaden organizational skills        | 1                    | 2 | 3 | 4 | 5                 |

28. Internationalization Strategy

As the company internationalizes, the country operations most familiar to me will:

|   | Strongly<br>Disagree |   |   |   | Strongly<br>Agree |
|---|----------------------|---|---|---|-------------------|
| <b>28.1 Global Integration Expectations</b>                   |                      |   |   |   |                   |
| Have global marketing responsibility for one or more products | 1                    | 2 | 3 | 4 | 5                 |
| Produce one or more products for global markets               | 1                    | 2 | 3 | 4 | 5                 |



|   |   |   |   |   |   |
|---|---|---|---|---|---|
| Almost everybody agrees that international projects must have a shorter payback period than domestic ones | 1 | 2 | 3 | 4 | 5 |
| We really live in a global village  | 1 | 2 | 3 | 4 | 5 |
| In discussions, I always drive for a bigger, broader picture  | 1 | 2 | 3 | 4 | 5 |
| I believe life is a balance of contradictory forces that are to be appreciated, pondered and managed      | 1 | 2 | 3 | 4 | 5 |
| I consider it to be a disgrace when foreigners buy our land and buildings                                 | 1 | 2 | 3 | 4 | 5 |
| I really believe that 5-10 years is the best planning horizon in our line of business                     | 1 | 2 | 3 | 4 | 5 |
| I find it easy to rethink boundaries, and change direction and behaviour                                  | 1 | 2 | 3 | 4 | 5 |
| I feel comfortable with change, surprise and ambiguity  | 1 | 2 | 3 | 4 | 5 |
| I get frustrated when someone is constantly looking for context   | 1 | 2 | 3 | 4 | 5 |
| Contradictors are time wasters that must be eliminated  | 1 | 2 | 3 | 4 | 5 |
| I have no time for somebody trying to paint a broader or bigger picture                                   | 1 | 2 | 3 | 4 | 5 |
| I believe I can live a fulfilling life in another culture   | 1 | 2 | 3 | 4 | 5 |
| Five years is too long a planning horizon   | 1 | 2 | 3 | 4 | 5 |

## 29.2 Contextualization

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| I enjoy trying foods from other countries                                 | 1 | 2 | 3 | 4 | 5 |
| I find people from other countries to be boring                           | 1 | 2 | 3 | 4 | 5 |
| I enjoy working on world community projects                               | 1 | 2 | 3 | 4 | 5 |
| I get anxious around people from other cultures                           | 1 | 2 | 3 | 4 | 5 |
| I mostly watch and/or read the local news                                 | 1 | 2 | 3 | 4 | 5 |
| Most of my social affiliations are local                                  | 1 | 2 | 3 | 4 | 5 |
| I am at my best when I travel to worlds that I do not understand          | 1 | 2 | 3 | 4 | 5 |
| I get very curious when I meet somebody from another country              | 1 | 2 | 3 | 4 | 5 |
| I enjoy reading foreign books or watching foreign movies                  | 1 | 2 | 3 | 4 | 5 |
| I find the idea of working with a person from another culture unappealing | 1 | 2 | 3 | 4 | 5 |
| When I meet someone from another culture, I get very nervous              | 1 | 2 | 3 | 4 | 5 |
| Travelling in lands where I can't read the street names gives me anxiety  | 1 | 2 | 3 | 4 | 5 |
| Most of my professional affiliations are international                    | 1 | 2 | 3 | 4 | 5 |

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| I get irritated when we don't accomplish on time what we set out to do                             | 1 | 2 | 3 | 4 | 5 |
| I become impatient when people from other cultures seem to take a long time to do something        | 1 | 2 | 3 | 4 | 5 |
| I have a lot of empathy for people who struggle to speak my own language                           | 1 | 2 | 3 | 4 | 5 |
| I prefer to act in my local environment (community or organization)                                | 1 | 2 | 3 | 4 | 5 |
| When something unexpected happens, it is easier to change the process than the structure           | 1 | 2 | 3 | 4 | 5 |
| In trying to accomplish my objectives, I find, diversity, multicultural teams play a valuable role | 1 | 2 | 3 | 4 | 5 |
| I have close friends from other cultural backgrounds   | 1 | 2 | 3 | 4 | 5 |

**30. Please indicate the level of your agreement on the following aspects, respectively**

|   | Strongly Disagree |   |   |   | Strongly Agree |
|---|-------------------|---|---|---|----------------|
| <b>30.1 Proactiveness in International Markets</b>  |                   |   |   |   |                |
| It is important for our company to internationalize rapidly   | 1                 | 2 | 3 | 4 | 5              |
| Internationalization is the only way to achieve our growth objectives   | 1                 | 2 | 3 | 4 | 5              |
| We will have to internationalize in order to succeed in the future  | 1                 | 2 | 3 | 4 | 5              |
| The growth we are aiming at can be achieved mainly through internationalization   | 1                 | 2 | 3 | 4 | 5              |
| <b>30.2 Commitment to Internationalization</b>  |                   |   |   |   |                |
| The founder/owner/manager of the company is willing to take the company to international markets  | 1                 | 2 | 3 | 4 | 5              |
| The company's management uses a lot of time in planning international operations  | 1                 | 2 | 3 | 4 | 5              |
| <b>30.3 International Vision</b>  |                   |   |   |   |                |
| The company's management sees the whole world as one big marketplace  | 1                 | 2 | 3 | 4 | 5              |
| <b>30.4 Openness in Internationalization</b>  |                   |   |   |   |                |
| Is your company a leader (rather than a laggard) in your industry discovering and pursuing emerging market opportunities in all corners of the world? | 1                 | 2 | 3 | 4 | 5              |
| Do you regard each and every customer, wherever they live in the world, as being as important as a customer in your own domestic market?              | 1                 | 2 | 3 | 4 | 5              |
| Do you draw your employees from the world wide talent pool?   | 1                 | 2 | 3 | 4 | 5              |

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| Do employees of every nationality have the same opportunity to move up the career ladder all the way to the top?   | 1 | 2 | 3 | 4 | 5 |
| In scanning the horizon for potential competitors, do you examine all economic regions of the world?   | 1 | 2 | 3 | 4 | 5 |
| In selecting a location for any activity, do you seek to optimize the choice on a truly global basis?  | 1 | 2 | 3 | 4 | 5 |
| Do you view the global arena not just as a playground (i.e, market to exploit) but also as a school (i.e, a source of new ideas and technology?)                           | 1 | 2 | 3 | 4 | 5 |
| Do you perceive your company as having a universal identity and as a company with many homes or do you instead perceive your company as having a strong national identity? | 1 | 2 | 3 | 4 | 5 |

**31. Contributory Role:**

Does your subsidiary company have any international responsibilities or world mandates (that is, does it undertake any activity such as manufacturing, R&D or product management on behalf of the corporation as a whole?) Yes/No. If yes, please estimate \_\_\_\_\_% of your subsidiary company’s revenues that are gained as a result of your international responsibilities.

**32. Subsidiary Initiative**

Please indicate to what extent have the following activities occurred in your subsidiary over the past 10 years?

|   | Never |   |   | Plentifully |   |
|---|-------|---|---|-------------|---|
| New products developed in host country and then sold internationally              | 1     | 2 | 3 | 4           | 5 |
| Successful bids for corporate investments in host country                         | 1     | 2 | 3 | 4           | 5 |
| New international business activities that were first started in host country     | 1     | 2 | 3 | 4           | 5 |
| Enhancements to product lines which are already sold internationally              | 1     | 2 | 3 | 4           | 5 |
| New corporate investments in R&D or manufacturing attracted by Chinese management | 1     | 2 | 3 | 4           | 5 |

**33. Specialized Resources**

Please indicate your capability or distinctive expertise in the following areas relative to other subsidiaries in the corporation:

|                                   | Far below Average |   |   | Far above Average |   |
|-----------------------------------|-------------------|---|---|-------------------|---|
| Product or process R&D            | 1                 | 2 | 3 | 4                 | 5 |
| Manufacturing capability          | 1                 | 2 | 3 | 4                 | 5 |
| Marketing capability              | 1                 | 2 | 3 | 4                 | 5 |
| Managing international activities | 1                 | 2 | 3 | 4                 | 5 |
| Innovation and entrepreneurship   | 1                 | 2 | 3 | 4                 | 5 |

**34. Subsidiary Entrepreneurship.**

Indicate how characteristic each of the following statements is in describing your subsidiary:

|   | Strongly Disagree |   |   | Strongly Agree |   |
|---|-------------------|---|---|----------------|---|
| There is top management support of entrepreneurial activity     | 1                 | 2 | 3 | 4              | 5 |
| Top management has experience with innovation                   | 1                 | 2 | 3 | 4              | 5 |
| Individual risk-takers are recognized whether successful or not | 1                 | 2 | 3 | 4              | 5 |
| There is encouragement for calculated risks                     | 1                 | 2 | 3 | 4              | 5 |
| Risk-taking is considered a positive attribute                  | 1                 | 2 | 3 | 4              | 5 |

**35. Subsidiary Leadership.**

Please indicate how characteristic the following statements are in describing your subsidiary:

|  | Strongly Disagree |   |   | Strongly Agree |   |
|--|-------------------|---|---|----------------|---|
| The subsidiary has a history of strong, internationally respected leaders                                      | 1                 | 2 | 3 | 4              | 5 |
| The credibility of subsidiary top management is high   | 1                 | 2 | 3 | 4              | 5 |
| The subsidiary CEO or president works with managers to focus their efforts towards the subsidiary's objectives | 1                 | 2 | 3 | 4              | 5 |

**36. Global Integration.**

Please indicate how characteristic each of the following statements is in describing your industry:

|   | Strongly Disagree |   |   | Strongly Agree |   |
|---|-------------------|---|---|----------------|---|
| International competition is intense                                | 1                 | 2 | 3 | 4              | 5 |
| Business activities are susceptible to global scale economies       | 1                 | 2 | 3 | 4              | 5 |
| Product awareness exists worldwide                                  | 1                 | 2 | 3 | 4              | 5 |
| New product introductions occur in all major markets simultaneously | 1                 | 2 | 3 | 4              | 5 |

**37. Local competition.**

Please indicate how characteristic each of the following statements is in describing your business environment:

|  | Strongly Disagree |   |   | Strongly Agree |   |
|--|-------------------|---|---|----------------|---|
| Competition in the host country is cutthroat   | 1                 | 2 | 3 | 4              | 5 |
| There are many promotional wars in this host country   | 1                 | 2 | 3 | 4              | 5 |
| Anything that one competitor can offer, others can match readily                                   | 1                 | 2 | 3 | 4              | 5 |
| We are witnessing demand for our products and services from customers who never bought them before | 1                 | 2 | 3 | 4              | 5 |

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| New customers tend to have product-related needs that are different from those of our existing customers | 1 | 2 | 3 | 4 | 5 |
| We cater to many of the same customers that we used to in the past                                       | 1 | 2 | 3 | 4 | 5 |

38. Please indicate the Ownership Composition of the subsidiary: (please go to Question 39 if subsidiary is NOT a joint venture)

Chinese parent firm: \_\_\_\_\_%

Host country investing firm: \_\_\_\_\_%

Host country government: \_\_\_\_\_%

Total: 100%

39. Please indicate the Ownership Composition of the Host Country Investing Firm:

Private: \_\_\_\_\_%

Government: \_\_\_\_\_%

Total: 100%

40. How many Employees does your firm employ? \_\_\_\_\_ (number)

41. Which Year was your firm established? \_\_\_\_\_

42. What is the nature of your firm's Core Business? \_\_\_\_\_

43. Which Industry does your company operate in? \_\_\_\_\_

44. Please name the Host Country that your firm invested in \_\_\_\_\_

45. Please indicate the Amount of the foreign direct investment USD \_\_\_\_\_

46. Please indicate the Primary Motivation of your parent firm's outward FDI:

Market Seeking       Natural Resource Seeking       Asset Seeking

47. Please indicate the Means of Establishment of your firm:

Acquisition       Greenfield

48. Please indicate the Primary Strategy of your parent firm's outward FDI:

Global (i.e., standardize product or marketing strategy in different markets to reduce costs - high standardization and low cost)

Multidomestic (i.e., match different national conditions by extensively customize product offering or marketing strategy - high adaptation and high cost)

**49. Please indicate the Major Activity of your firm conducted in the host country: (you can choose more than one)**

- |   |  |
|---|--|
| <input type="checkbox"/> Sourcing of components and parts | <input type="checkbox"/> Sourcing of local production capabilities |
| <input type="checkbox"/> Marketing of final products      | <input type="checkbox"/> Obtain financial resources                |
| <input type="checkbox"/> Product design and innovation    | <input type="checkbox"/> Sourcing local natural resources          |
| <input type="checkbox"/> Hiring local labour              | <input type="checkbox"/> Obtain managerial skills                  |
| <input type="checkbox"/> Others _____(Please specify)     |  |

**50. Please indicate the Nationality of subsidiary manager \_\_\_\_\_**

**51. What is your Current Position in your firm?**

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> CEO/President/Chairman       | <input type="checkbox"/> General Manager | <input type="checkbox"/> Department Manager |
| <input type="checkbox"/> Other _____ (please specify) |  |   |

**52. Please indicate your Age Range:**

- |                                |                                |                                |                                |                                |                                |
|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| <input type="checkbox"/> <26   | <input type="checkbox"/> 26-30 | <input type="checkbox"/> 31-35 | <input type="checkbox"/> 36-40 | <input type="checkbox"/> 41-45 | <input type="checkbox"/> 46-50 |
| <input type="checkbox"/> 51-55 | <input type="checkbox"/> 56-60 | <input type="checkbox"/> >60   |                                |                                |                                |

**53. Please indicate the Highest Level of formal educational qualification you have earned:**

- |   |   |
|---|---|
| <input type="checkbox"/> Junior school certificate/equivalent | <input type="checkbox"/> High school certificate/equivalent |
| <input type="checkbox"/> Junior college diploma               | <input type="checkbox"/> University diploma                 |
| <input type="checkbox"/> Bachelor degree                      | <input type="checkbox"/> Master degree                      |
| <input type="checkbox"/> Doctorate                            | <input type="checkbox"/> Other _____ (please specify)       |

**54. How many Years have you been working in this firm? \_\_\_\_\_**

**55. How many Years have you been working at this position? \_\_\_\_\_**

**56. How many Years have you known the headquarters manager? \_\_\_\_\_**

**57. How many Years have you worked overseas? \_\_\_\_\_**

**58. How many Years have you lived overseas? \_\_\_\_\_**

**59. Have you studied overseas?  Yes, in \_\_\_\_\_(country)  No**

**60. Please tell us how confident you are in using English Language (reading, listening, speaking, and writing):**



| <b>61. Please choose either <u>A</u> or <u>B</u> only for each question below</b> |   |           |   |  |
|---|---|-----------|---|--|
| <b><i>What is the direction and focus of your personal energy?</i></b>            |   |           |   |  |
| 1   | (A) Outgoing, expressive                          | <i>or</i> | (B) Reflective, quiet                             |  |
| 2   | (A) Energized by interaction                      | <i>or</i> | (B) Energized by being alone                      |  |
| 3   | (A) Initiate conversation                         | <i>or</i> | (B) Wait to be invited                            |  |
| 4   | (A) Act before reflecting                         | <i>or</i> | (B) Reflect before acting                         |  |
| 5   | (A) Sociable – easy to get to know                | <i>or</i> | (B) Reserved – takes time to get to know          |  |
| 6   | (A) Have many interests                           | <i>or</i> | (B) Focus on a few things at depth                |  |
| 7   | (A) Need regular interaction                      | <i>or</i> | (B) Need privacy for concentration                |  |
| 8   | (A) Interested more in external events            | <i>or</i> | (B) Interested more in internal reactions         |  |
| 9   | (A) Communicate more easily by talking            | <i>or</i> | (B) Communicate more easily by writing            |  |
| 10  | (A) Learn best by doing or interacting            | <i>or</i> | (B) Learn best by reading and reflecting          |  |
| <b><i>How do you prefer to gather information?</i></b>                            |   |           |   |  |
| 1   | (A) Perceive mainly through the 5 senses          | <i>or</i> | (B) Perceive mainly patterns and connections      |  |
| 2   | (A) Focus on facts and details                    | <i>or</i> | (B) Focus on possibilities and hunches            |  |
| 3   | (A) Trust concrete experience                     | <i>or</i> | (B) Trust theory and abstract concepts            |  |
| 4   | (A) Realistic and observant                       | <i>or</i> | (B) Imaginative and innovative                    |  |
| 5   | (A) Prefer practical matters                      | <i>or</i> | (B) Prefer the imagination                        |  |
| 6   | (A) Use a step-by-step approach                   | <i>or</i> | (B) Use a random approach                         |  |
| 7   | (A) Focus on the present or the past              | <i>or</i> | (B) Focus on the future                           |  |
| 8   | (A) Seek stability                                | <i>or</i> | (B) Seek change                                   |  |
| 9   | (A) Build up the big picture                      | <i>or</i> | (B) Begin with the big picture                    |  |
| 10  | (A) Need to see the parts to understand the whole | <i>or</i> | (B) Need to see the whole to understand the parts |  |
| <b><i>How do you prefer to make decisions?</i></b>                                |   |           |   |  |
| 1   | (A) Use logic to make decisions                   | <i>or</i> | (B) Use personal values to make decisions         |  |
| 2   | (A) Seek honesty and truth                        | <i>or</i> | (B) Seek personal approval                        |  |
| 3   | (A) Need to be competent                          | <i>or</i> | (B) Need to be appreciated                        |  |
| 4   | (A) Analyse and critique                          | <i>or</i> | (B) Empathize                                     |  |
| 5   | (A) Firm and tough-minded                         | <i>or</i> | (B) Persuasive and warm-hearted                   |  |
| 6   | (A) Focus on justice and fairness                 | <i>or</i> | (B) Focus on mercy and compassion                 |  |
| 7   | (A) Questioning – focus on Why?                   | <i>or</i> | (B) Accepting – focus on Who?                     |  |
| 8   | (A) Seek logical reasons                          | <i>or</i> | (B) Seek harmony with values and others           |  |
| 9   | (A) Focus on goals and tasks                      | <i>or</i> | (B) Focus on people and relationships             |  |
| 10  | (A) Consider principles and consequences          | <i>or</i> | (B) Consider the impact on people                 |  |
| <b><i>How much structure or flexibility do you need in the outer world?</i></b>   |   |           |   |  |
| 1   | (A) Prefer a definite order and structure         | <i>or</i> | (B) Flexible                                      |  |
| 2   | (A) Organized and planned                         | <i>or</i> | (B) Adapt easily to change                        |  |
| 3   | (A) Seek closure                                  | <i>or</i> | (B) Open-ended                                    |  |

*Appendix 1 Survey Documents – Subsidiary Questionnaire English Version*

|    |  |           |   |  |
|----|--|-----------|---|--|
| 4  | (A) Focus on reaching the goal                           | <i>or</i> | (B) Focus on experiencing life                |  |
| 5  | (A) Like to control events                               | <i>or</i> | (B) Like to respond to the moment             |  |
| 6  | (A) Make decisions quickly                               | <i>or</i> | (B) Explore all the options before deciding   |  |
| 7  | (A) Systematic and methodical                            | <i>or</i> | (B) Casual, easy-going                        |  |
| 8  | (A) Comfortable with plans and timetables                | <i>or</i> | (B) Prefer to be spontaneous                  |  |
| 9  | (A) Enjoy completing one project before starting another | <i>or</i> | (B) Enjoy working on several projects at once |  |
| 10 | (A) Punctual, meet deadlines easily                      | <i>or</i> | (B) Energized by approaching deadlines        |  |

**Additional Comments:** if you feel that we have overlooked any important issues, or you wish to add further comments, please tell us about them.

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Thank you very much for your cooperation in completing this survey. All the information provided from you in this questionnaire will remain STRICTLY CONFIDENTIAL. We will send you a report on the major research findings for your reference upon the completion of this study.

## Information Sheet for Survey Questionnaire (Chinese Version)

### 问卷介绍

#### 研究课题:

中国跨国公司的总公司—子公司关系质量（优劣）的决定因素

#### 研究目的:

自 2001 年中国加入世界贸易组织（WTO）以来，中国企业加快了他们国际化的步伐。在向较本国市场在文化，经济以及政治方面有着差异的国家投资时，往往给中国跨国公司的管理高层带来诸多挑战，其中最重要的一个就是对总公司—子公司关系的处理。此研究目的在于了解影响总公司—子公司关系质量（优劣）的决定因素。此研究结果将使大家以当代中国跨国公司为背景，对于总公司—子公司关系质量（优劣）的决定因素有更深刻的了解，并且加深对与对外投资相关的国际贸易理论的了解，同时还会给实践者带来一些有益的帮助。

#### 调查方式:

在此次研究中，一份设计好的调查问卷将被用来收集资料和信息。在此调查问卷中将包含一系列有关您所在企业的问题，包括体制差异，公司内部体制，总公司—子公司之间的交流，心理差异，总公司—子公司关系质量（优劣）和海外子公司的业绩。我们同时希望了解一些您与您公司的基本信息。在问卷上有具体说明如何回答问题。完成此问卷大概需要 35 分钟。您在此次调查的参与是完全自愿的，您可以在调查期间任何时间退出此次调查并且不遭受任何处罚。

#### 保密性:

您的身份和您所提供的所有答复在澳大利亚法律允许范围内将会被严格保密。同意表和完成的问卷将会被单独储藏在位于澳大利亚科廷大学的保险柜里。资料会被编码并被输入到电脑中，该电脑只能由研究人员用密码打开。此次研究结果将会以整体形式发表，因此回答问卷的个人将不会被他人从资料以及出版物中鉴别。澳大利亚科廷大学人文研究道德委员会已批准该研究课题。

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**Consent Form for Research Subjects (Chinese Version)**

**研究课题同意表**

**研究课题:**

中国跨国公司的总公司—子公司关系质量（优劣）的决定因素

**研究者:**

李继钟，管理系，科廷商学院, 科廷大学

1. 我，<请规范填写你的姓名>.....在此同意参加题为“中国跨国公司的总公司—子公司关系质量（优劣）的决定因素”的研究调查。我明白此次参与纯属自愿，我明白我可以在调查期间任何时间退出此次调查并且不遭受任何处罚。如果我觉得一些问题涉及到我个人或者公司的隐私，我可以拒绝回答这些问题。
2. 我明白如果我同意参加此次研究调查我将被要求完成一份调查问卷。完成此问卷大约需要 35 分钟，问卷问题涉及到我的企业和我个人的信息。
3. 我明白我的身份和我所提供的答案在澳大利亚法律所允许的范围内将会被严格保密。该表和完成的问卷将会被单独储藏在位于澳大利亚科廷大学的保险柜里。资料会被编码并被输入到电脑中，该电脑只能由研究人员用密码打开。此次研究结果将会以整体形式发表，因此回答问卷的个人将不会被他人从资料以及出版物中鉴别。
4. 我明白澳大利亚科廷大学人文研究道德委员会已经批准该调查（批号 SOM-33-11）。

签名: \_\_\_\_\_ 日期: \_\_\_\_\_

**研究者填写:**

我，李继钟，在此证明我已经在我的问卷介绍里对所有调查参与者解释了整个调查项目的性质和程序，并且认为参与者在填写调查问卷之前明白了相关事宜。

签名: \_\_\_\_\_ 日期: \_\_\_\_\_

**Survey Questionnaire (Headquarters) Chinese Version**

**1. 请指出您感觉中国和投资所在国相比较在以下制度规范上的差异程度:**

|             | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 财政政策        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 反垄断政策       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 政治透明度       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 知识产权的保护     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 司法系统的效率     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 主要行业很少有市场垄断 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 通货膨胀        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**2. 请指出您感觉中国和投资所在国相比较在以下标准规范上的差异程度:**

|                  | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 政治体制对于经济挑战的适应能力  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 政府政策对于实际经济情况的适应性 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 政府对老百姓的透明度       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 政治风险             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 官僚主义对于经济发展产生的阻碍  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 官僚腐败             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 地方政府机构的自主性       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**3. 请指出您感觉贵公司的制度在子公司的运用执行程度:**

|                   | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 贵公司制度总体的执行程度      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 领导力方面（例如工作上目标的制定） | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 信息与分析方面           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 规划方面（例如总体业务的战略规划） | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 人事方面（例如决策权，培训）    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 程序管理方面（例如对问题的预防）  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 对待业绩方面（例如如何提高业绩）  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 以客户为中心，满足客户方面     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

4. 请指出您感觉总公司的制度在子公司的内在化程度（使其成为子公司制度）：

|                          | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 为了执行贵公司制度投入超常的精力         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司制度对子公司改组业务的帮助         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司和子公司在制度标准的相似性         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司制度激励子公司的投入的程度         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司乐于采用贵公司制度的程度          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司对贵公司制度及其前景的关心程度       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司 <b>很难</b> 认同贵公司制度（R） | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

5. 请指出您感觉子公司受贵公司控制的程度：

|                     | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 子公司的 <b>自主权</b> （R） | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司对子公司的监督          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总体 / 整合规划系统的使用      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 报告系统的使用             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

6. 请指出您感觉子公司被贵公司规范化（组织正式化）的程度：

|               | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 强调工序和程序的标准化   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 实行规范的条例和政策的程度 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 使用技术标准的程度     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 对其他单位使用标准化的报告 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

7. 请指出您感觉子公司和贵公司之间在工作上交际的程度：

|                  | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 共用价值观念的程度        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 使用驻外 / 外派人员的程度   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 各单位之间研发人员交换的频繁程度 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司经理参与国际培训的程度   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司经理参与联合工作组的程度  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

8. 请指出您感觉贵公司对子公司在人力资源投入方面的管理程度:

|                     | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 在赋予责任前提供大量的培训       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 建立在现有条件下最好的招聘流程     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司参与员工技能的拓展        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 在雇用员工之前对其进行多样的评估    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 以雇用最优秀员工为傲，帮助员工拓展技能 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 对培训和发展方面总体的投入       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

9. 请指出您感觉总公司对子公司在行为表现方面的管理程度:

|                  | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 贵公司看重基于表现的评估     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司严格让子公司担当应负的责任 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司对程序或方法的重视程度   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司对来自上级的安排的执行程度 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司收到反馈和表现信息的频率  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

10. 请指出您感觉总公司对子公司在产出方面的管理程度:

|                   | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 贵公司的评估考核基于工作结果的程度 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 报酬（奖励）基于结果的程度     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 用制定好的标准来评估员工的程度   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 以数据做为衡量效能的指标的程度   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 成绩和工作结果挂钩的程度      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 以达到目标做为提拔标准       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 不好的成绩会导致低的评级      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

11. 请指出贵公司和子公司在信息交流的程度:

|                   | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 贵公司对子公司发生了什么事的了解  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司乐意听取你们的意见      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 你们向子公司透露总公司信息     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司对子公司来说只是一般上级关系 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司会从总公司寻求投入和建议   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



|                   |                          |                          |                          |                          |                          |
|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 贵公司对子公司来说是值得信赖的助手 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司会把发生的事通告给子公司   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司向贵公司透露公司信息     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

12. 请指出总公司和子公司在协商问题时的自由度:

|                  | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 子公司在和贵公司打交道时的灵活性 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司帮助解决总公司问题的意愿  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司让利来帮助贵公司的意愿   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司给予子公司建议的频率    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

13. 请指出总公司和子公司在管理层上的交流:

|                     | 很不同意                     | 不同意                      | 一般                       | 同意                       | 非常同意                     |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 我很喜欢子公司经理本人         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我愿意和子公司经理成为个人朋友     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我和子公司经理合作起来很愉快      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司经理会在上级面前帮我辩护     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司管理层在我受到抨击时会帮我辩护  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司经理在我犯错时会帮我辩护     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我愿意为子公司经理做我本职工作之外的事 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 为了增加子公司的利益我愿意额外付出   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司经理的学识给我留下深刻印象    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我敬佩子公司经理的学识以及能力     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我对子公司经理的专业技能表示钦佩    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

14. 请指出您感觉中国和投资所在国在以下商业环境差异的程度:

|           | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|-----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 法律体系和政治制度 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 市场结构      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 经济环境      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 商业行为 / 规矩 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 商务语言      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

15. 请指出您感觉中国和投资所在国在以下文化差异的程度:

|                | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|----------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 对权力的畏惧（例如畏惧上级） | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|                     |                          |                          |                          |                          |                          |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 对不确定性因素避免（例如躲避风险）   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 个人主义（例如以自我为中心）      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 男性气质（例如自信武断，进取好胜等）  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 长期取向（例如强调长期承诺，尊重传统） | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

16. 请指出您感觉子公司企业文化在以下方面的程度：

|                    | 非常<br>低                  | 较低                       | 一般                       | 较高                       | 非常<br>高                  |
|--------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <b>参与性</b>         |                          |                          |                          |                          |                          |
| 员工对与他们有关的公司决策的影响力  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 积极的鼓励不同功能岗位间的合作与协作 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>一致性</b>         |                          |                          |                          |                          |                          |
| 处理内部事务方式的一致程度      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 处理外部事务步骤的一致性和可预测性  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>适应性</b>         |                          |                          |                          |                          |                          |
| 客户的建议致使子公司有所改变     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司反应灵敏并容易作出变化     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>使命感</b>         |                          |                          |                          |                          |                          |
| 子公司有长期目标以及方向       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司对未来将会如何有着一个规划   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>其他</b>          |                          |                          |                          |                          |                          |
| 对战略和共同目标的清晰程度      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 决策的系统性             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 一体化 / 沟通 / 交流      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 创新性 / 敢于冒风险        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 责任感                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 行动派（倾向用实际行动）       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 奖励的公平性             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 发展和提拔都以内部优先        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

17. 请指出子公司经理的组织认同：

|                      | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 有人批评子公司时对他 / 她如同个人冒犯 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 他 / 她很关心其他人对子公司的看法   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 提起子公司时他 / 她会说我们而不是他们 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 他 / 她视子公司的成功为自己的成功   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 有人称赞子公司时对他 / 她如同个人赞赏 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

当媒体批评子公司时他 / 她会感到不安

18. 请指出总公司和子公司之间在沟通上的效率:

|                     | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 我们彼此坦诚的沟通           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司总是把我们需要知道的信息告诉我们 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司需要信息时我们会及时反馈     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们有着开放并且有效的沟通       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们彼此有持续的交流          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们彼此有清楚的沟通          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们彼此有公开的沟通          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们有广泛的正式及非正式的沟通     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

19. 请指出总公司和子公司之间在相互信任方面的程度:

|                             | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|-----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 子公司和我们打交道时都是坦诚的             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司做出的承诺都是可信的               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司对自己的业务是很在行的              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司不会提出不正当的索求               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司和我们打交道时 <b>不够坦率</b> (R)  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司在出现问题时会很诚实               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 子公司在回答我们疑问时 <b>会有问题</b> (R) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

20. 请指出总公司对子公司的投入:

|                                    | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 子公司被批评时我们会为其辩护                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们彼此都很忠于对方                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们在考虑建立新的子公司来 <b>代替它</b> (R)       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们会在将来继续运营子公司                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 如果其他子公司运营更好我们将会 <b>放弃现有子公司</b> (R) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们对子公司 <b>不想投入太多</b> (R)           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们愿意为子公司做长期投入                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们的之间关系是长期的关系                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 即使子公司给我们造成不便也无所谓                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 愿意投入任何人力物力提高子公司的运营                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

21. 请指出您对总公司和子公司关系的满意程度:

|                      | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 我们的关系还有改善空间 (R)      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们对总公司和子公司的关系表示满意    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 这是我们经历过的最好关系         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们认为子公司也很满意和总公司的关系   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司和分公司的关系达到了顶峰      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们对总公司和子公司的关系不满意 (R) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

22. 请指出子公司在以下方面的业绩表现:

|                  | 非常<br>低                  | 较低                       | 一般                       | 较高                       | 非常<br>高                  |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <b>财政方面:</b>     |                          |                          |                          |                          |                          |
| 投资回报率            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 利润               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 流动资金             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 生产效率             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>销售方面:</b>     |                          |                          |                          |                          |                          |
| 销售增长             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 销售总量             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 新产品 / 新服务的销量     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>客户方面:</b>     |                          |                          |                          |                          |                          |
| 客户满意度            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 客户维系             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 给客户答复的时间         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 准时出货             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>内部工作流程方面:</b> |                          |                          |                          |                          |                          |
| 使用材料效率上的差别       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 订货到交货的时间         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 材料废弃率            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 在人工效率上的差别        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>创新与学习方面:</b>  |                          |                          |                          |                          |                          |
| 新专利的数量           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 发布新产品 / 提供新服务的数量 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 新产品 / 新服务上市的周期   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 员工满意度            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

23. 请指出您对下列方面的赞同程度:

|                         | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <b>23.1 国际/全球拓展的意向:</b> |                          |                          |                          |                          |                          |
| 我们对进入海外市场很感兴趣           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 海外业务的潜在收益将很值得我们投入       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 海外市场能为我们业务增长提供最佳机遇      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 其它类似想开展海外业务的公司正也在做准备    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>23.2 经济取向</b>        |                          |                          |                          |                          |                          |
| 我们更愿意做能为我们大大增加收益的工作     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们更喜欢我们能稳定市场波动的环境       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们更喜欢能刺激对我们产品有需求的环境     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们更喜欢能增加我们利润的环境         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>23.3 学习取向</b>        |                          |                          |                          |                          |                          |
| 我们更喜欢给我们机会学习新技能的环境      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们更喜欢给我们机会提高企业能力的环境     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们更喜欢给我们机会学习新技术的环境      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们更喜欢给我们机会拓展组织能力的环境     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

## 24. 国际化战略: 随着公司的国际化, 我最熟悉经营情况的那个国家的下属公司将会:

|                        | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <b>24.1 全球一体化方面</b>    |                          |                          |                          |                          |                          |
| 对一个或多个产品负责全球的营销        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 为全球市场生产一个或多个产品         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 让本地生产的产品走向国际市场         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 引领全球产品的开发过程            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>24.2 本地市场反应方面</b>   |                          |                          |                          |                          |                          |
| 清楚地展示对本地经济带来的益处        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 对本地市场情况能做出灵活调整         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 让公司的活动/产品符合当地的政策       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 为适应本地市场对现有产品做出调整       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>24.3 各个国家间的协调方面</b> |                          |                          |                          |                          |                          |
| 对全球有竞争性的威胁做出早期预警       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 把全球目标放到本国目标之前          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 发现具有国际潜力的本地商机          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 从本公司在其他国家的业务中学习提高      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**24.4 各个组织间的协调方面**

|                  |                          |                          |                          |                          |                          |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 基于全球视野来协调发展战略    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 从更多国家来获取对产品开发的投入 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 在各国间协调致使生产合理化    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 预测各个国家的需求        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 在售价与市场份额目标之间取得均衡 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 对各国市场的需求做出及时调整   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**25. 请指出您对下列方面的赞同程度:**

很不  
同意    不同意    一般    同意    非常  
同意

**25.1 思维上**

|                           |                          |                          |                          |                          |                          |
|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 我工作中最多能够提出一年计划            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我认为现今有必要和其他组织建立战略联盟       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 那些涉及国际交易的项目是长期的           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我以能为一个国际性组织工作为傲           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我认为未来 10 年的世界和现在一样        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 在如今相互关联的世界，国界已经不具意义       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 几乎每人都认同国际项目比国内项目有更短的投资回收期 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们确实生活在一个地球村              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 在讨论问题时我总是具有更宽广的视野         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 人生就是一个协调矛盾的过程             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我认为老外买我们的土地和建筑是一种耻辱       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 对我们业务来说 5-10 年是规划的最佳时间段   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 考虑新界限，改变方向和行为对我来说不难       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我很能适应突然的变化和模棱两可的状态        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 有人在一直寻找前因后果时会令我沮丧         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我认为应避免与意见不同者浪费时间          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我没空理会那些试着勾勒更广阔前景的人        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我相信我在另一种文化背景中也能过得充实       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 以规划范围来说，5 年太长了            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

很不  
同意    不同意    一般    同意    非常  
同意

**25.2 现实生活中**

|               |                          |                          |                          |                          |                          |
|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 我喜欢尝试其他国家的食物  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我感觉其他国家的人比较无聊 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我喜欢做那些国际间的项目  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|                                |                          |                          |                          |                          |                          |
|--------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 和来自其他文化背景的人接触时我感到不安            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 大多数时候我只读和（或）看本地新闻              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我的大部分社会关系是本地的                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我在陌生环境里的状态是最好的                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 当我遇到外国人时我会对他们充满好奇              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我喜欢看外国的电影和书籍                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 和来自不同文化的人合作对我没有吸引力             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 遇到来自其他文化背景的人时我感到紧张             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我在语言不通的国家旅行时会焦虑                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我大部分的职业关系网是国际性的                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 若没在我预定时间完成工作我会很生气              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 当来自其他文化背景的人花长时间做一件事时，我会变得不耐烦   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 对那些努力学习我的语言的人有好感               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我更喜欢待在本地的环境里（社区或组织）            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 出乎预料的事发生时改变过程比改变结构容易           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我认为多样性和多元文化团队在完成我的目标时扮演着很重要的角色 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我的密友中有来自其他文化背景的人               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

26. 请指出您对下列方面的赞同程度：

|                          | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <b>26.1 国际市场上的主动性</b>    |                          |                          |                          |                          |                          |
| 迅速的国际化对我们公司来说很重要         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 国际化是实现企业增长的唯一出路          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 为了将来的成功我们必须国际化           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们预定的增长会主要靠国际化来完成        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>26.2 在实现国际化付出的努力</b>  |                          |                          |                          |                          |                          |
| 公司的创立者/所有者/经理愿意让公司进入国际市场 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 公司管理层花了大量时间来筹划国际业务       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>26.3 公司的国际化视野</b>     |                          |                          |                          |                          |                          |
| 公司管理层把全球看作一个大的市场         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>26.4 国际化的开放程度</b>     |                          |                          |                          |                          |                          |
| 公司是所在行业中发现和追求全球商机的先锋     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|  |                          |                          |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 你认为海外客户和国内客户一样重要                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 公司从全世界吸纳人才                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 不同国籍的员工有着平等的晋升机会                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 公司在全球范围内搜索潜在的竞争对手                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 公司在全球范围内选择最佳位置进行活动                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 公司不仅把国际市场看作一个舞台（即待开发的市场），同时也是学校（即新思想和新技术的源泉） | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 你们公司是一家分布全球的国际性公司                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 你们公司是一家有着很强国家认同感的公司                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**27. 做出贡献的角色：**子公司是否拥有全球责任或特殊授予的职责（即子公司代表整个公司承担例如生产制造，产品研发以及管理）。  是  否 如果是，请估计这种全球责任或特殊授予的职责给子公司带来的收入占其总收入的\_\_\_\_\_%

**28. 子公司的主动性/自创性：**请指出在过去10年中，在子公司发生了以下事件的频率：

|                      | 从未<br>发生                 | 不经常                      | 一般                       | 经常                       | 非常<br>频繁                 |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 把当地开发的新产品销往国际市场      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 为公司在当地投资竞标成功         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 起源于当地的新的国际业务         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 采用国际上通行的办法来优化生产线     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 被中方管理层引进来最为研发和制造的投资者 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**29. 子公司的专长：**请指出和其他子公司相比，这个子公司在以下方面具备的能力或经验：

|             | 远低于<br>平均                | 低于<br>平均                 | 平均                       | 高于<br>平均                 | 远超<br>平均                 |
|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 产品或者工作流程的研发 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 生产能力        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 市场营销能力      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 管理国际事务的能力   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 创新和创业精神     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



30. 全球一体化：请指出您对下列描述在世界范围内你所在行业各方面的赞同程度：

|                  | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 国际竞争很激烈          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 业务易受全球经济总量的影响    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 产品在全球有认知度        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 新产品会在全球各主要市场同时发售 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

31. 总公司的资产结构：

中国政府： \_\_\_\_\_ %

外资： \_\_\_\_\_ %

私有： \_\_\_\_\_ %

其他： \_\_\_\_\_ % (请说明 \_\_\_\_\_ )

**总共：                    100%**

32. 总公司现有员工共 \_\_\_\_\_ 人。

33. 总公司成立于 \_\_\_\_\_ 年。

34. 总公司的主要经营范围是 \_\_\_\_\_

35. 总公司所在行业是 \_\_\_\_\_

36. 总公司总资产是 \_\_\_\_\_ 美元

37. 总公司在国内市场的收入是 \_\_\_\_\_ 美元

38. 总公司的利润是 \_\_\_\_\_ %

39. 总公司的销售增幅是 \_\_\_\_\_ %

40. 总公司的市场份额增幅是 \_\_\_\_\_ %

41. 总公司是从 \_\_\_\_\_ 年开始进行对外投资的。

42. 总公司投资所在国家是 \_\_\_\_\_

43. 总公司的对外投资总金额为 \_\_\_\_\_ 美元

44. 总公司的海外员工总数为 \_\_\_\_\_ 人。

45. 总公司有 \_\_\_\_\_ % 的产品销往国内市场。

46. 总公司有 \_\_\_\_\_ % 的产品作为国内业务的投入。

47. 总公司有 \_\_\_\_\_ % 的产品作为国外业务的投入。

48. 总公司的投资回报率是 \_\_\_\_\_ %

49. 总公司对外投资的主要动机是:

- 寻找新的市场       寻找自然资源       寻找战略资源 (如技术等)

50. 总公司对外投资的模式是:

- 收购现有公司       自主建立新公司       其他 \_\_\_\_\_ (请说明)

51. 请指出总公司对外投资的主要战略:

- 全球战略 (即把产品 / 服务或者市场营销战略标准化运用到不同市场以降低  
成本—高度标准化, 低成本)  
 多国战略 (即为了满足不同国家市场的情况把产品 / 服务或者市场营销战略  
差异化—高度差异化, 高成本)

52. 请指出子公司在海外市场进行的主要活动: (可以选择多个)

- 采购原料和部件       吸取当地生产能力  
 营销最终产品       获取资金  
 产品设计与创新       获取当地自然资源  
 雇用当地劳力       获取管理技能  
 其他 \_\_\_\_\_ (请说明)

53. 请指出子公司经理的国籍是 \_\_\_\_\_

54. 您的性别是:     男       女

55. 您在公司里的职位是:

- 首席执行官/总裁/主席       总经理       部门经理  
 其他 (请说明 \_\_\_\_\_)

56. 您的年龄范围是:

- <21 岁       21-25 岁       26-30 岁       31-35 岁       36-40 岁  
 41-45 岁       46-50 岁       51-55 岁       56-60 岁       >60 岁

57. 您的最高学历是:

- 初中       高中       中专       大专       本科  
 硕士       博士       其他 (请说明) \_\_\_\_\_

58. 您已经在贵公司工作了 \_\_\_\_\_ 年

59. 您已经在这个职位工作了 \_\_\_\_\_ 年

60. 您认识子公司经理 \_\_\_\_\_ 年

61. 您有没有在海外工作过?  有, 一共 \_\_\_\_\_ 年  没有

62. 您有没有在海外生活过?  有, 一共 \_\_\_\_\_ 年  没有

63. 您有任何在海外取得的学位么?

有, 在 \_\_\_\_\_ (国家)  没有

64. 请描述您英语各方面的水平 (听, 说, 读, 写)

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| 65. 请在下列选项选择 A 或者 B |                  |   |                  |
|---------------------|------------------|---|------------------|
| 您个人精力投入的方向和焦点是?     |                  |   |                  |
| 1                   | (A) 大方开朗, 善于表达   | 或 | (B) 深思熟虑的, 安静的   |
| 2                   | (A) 喜欢和别人交流      | 或 | (B) 喜欢独自一人       |
| 3                   | (A) 发启话题、对话      | 或 | (B) 等待别人来邀请      |
| 4                   | (A) 在沉思前行动       | 或 | (B) 在行动前沉思       |
| 5                   | (A) 善于交际 – 容易结识  | 或 | (B) 保守 – 需要花时间了解 |
| 6                   | (A) 兴趣广泛         | 或 | (B) 只是深度研究个别事物   |
| 7                   | (A) 需要有规律的社交     | 或 | (B) 专注时需要个人空间    |
| 8                   | (A) 对外部事物感兴趣     | 或 | (B) 对内部反应感兴趣     |
| 9                   | (A) 善于口头上的交流, 沟通 | 或 | (B) 善于文笔上的交流, 沟通 |
| 10                  | (A) 善于从实践和互动中学习  | 或 | (B) 善于从阅读和思考中学习  |
| 你喜欢如何搜集信息?          |                  |   |                  |
| 1                   | (A) 主要通过感官来察觉    | 或 | (B) 主要通过模式和关联来察觉 |
| 2                   | (A) 关注已有的事实与细节   | 或 | (B) 关注可能发生的事     |
| 3                   | (A) 信任可靠的经验      | 或 | (B) 信任理论和抽象的概念   |
| 4                   | (A) 务实并且善于观察     | 或 | (B) 富有想象力和创造力    |
| 5                   | (A) 喜欢实际         | 或 | (B) 喜欢幻想         |
| 6                   | (A) 做事喜欢按部就班     | 或 | (B) 做事喜欢随意       |
| 7                   | (A) 重视现在和过去      | 或 | (B) 重视将来         |
| 8                   | (A) 寻找稳定         | 或 | (B) 寻找变化         |
| 9                   | (A) 聚集小的细节来看全貌   | 或 | (B) 从总体出发去看细节    |
| 10                  | (A) 需要通过局部来了解全貌  | 或 | (B) 需要通过全貌来了解局部  |
| 你更喜欢怎样做出决定?         |                  |   |                  |
| 1                   | (A) 利用逻辑做出决定     | 或 | (B) 利用个人价值观做出决定  |
| 2                   | (A) 遵循事实与真相      | 或 | (B) 根据他人的认同      |
| 3                   | (A) 需要具备能力       | 或 | (B) 需要能够被欣赏      |
| 4                   | (A) 分析与研究        | 或 | (B) 个人的感性        |
| 5                   | (A) 坚定并且固执       | 或 | (B) 有说服力并且热心肠    |
| 6                   | (A) 重视公平与公正      | 或 | (B) 重视怜悯与同情      |

|                      |                |   |                   |  |
|----------------------|----------------|---|-------------------|--|
| 7                    | (A) 更多考虑事情的起因  | 或 | (B) 更多考虑他人的因素     |  |
| 8                    | (A) 寻求逻辑因果关系   | 或 | (B) 寻求与价值观与他人的一致性 |  |
| 9                    | (A) 重视目标和工作    | 或 | (B) 重视人际关系        |  |
| 10                   | (A) 考虑原则和后果    | 或 | (B) 考虑对人的影响       |  |
| <b>在外你需要规章还是灵活度?</b> |                |   |                   |  |
| 1                    | (A) 喜欢秩序和规章制度  | 或 | (B) 喜欢灵活          |  |
| 2                    | (A) 有组织有计划     | 或 | (B) 很能适应改变        |  |
| 3                    | (A) 寻求一个结果     | 或 | (B) 无所谓结果         |  |
| 4                    | (A) 重视达到目标     | 或 | (B) 重视体验生活        |  |
| 5                    | (A) 喜欢控制全局     | 或 | (B) 喜欢针对细节        |  |
| 6                    | (A) 快速做出决定     | 或 | (B) 深思熟虑后作出决定     |  |
| 7                    | (A) 讲究系统和方法    | 或 | (B) 喜欢随意          |  |
| 8                    | (A) 喜欢计划和时间表   | 或 | (B) 喜欢随机的         |  |
| 9                    | (A) 喜欢逐个的做项目   | 或 | (B) 喜欢同时做多个项目     |  |
| 10                   | (A) 准时, 按时完成工作 | 或 | (B) 快到最后才全力以赴     |  |

如果您还有其他意见或建议, 或者觉得我们忽略了某些问题, 请告诉我们:

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非常感谢您的配合完成此次调查。你在问卷里提供的信息都会保持严格保密。  
 在此次研究结束后, 我们将会发给您一份此次研究的主要结果。

## Survey Questionnaire (Subsidiary) Chinese Version

1. 请指出您感觉中国和投资所在国相比较在以下制度规范上的差异程度:

|             | 非常<br>低                  | 较低                       | 一般                       | 较高                       | 非常<br>高                  |
|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 财政政策        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 反垄断政策       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 政治透明度       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 知识产权的保护     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 司法系统的效率     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 主要行业很少有市场垄断 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 通货膨胀        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

2. 请指出您感觉中国和投资所在国相比较在以下标准规范上的差异程度:

|                  | 非常<br>低                  | 较低                       | 一般                       | 较高                       | 非常<br>高                  |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 政治体制对于经济挑战的适应能力  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 政府政策对于实际经济情况的适应性 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 政府对老百姓的透明度       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 政治风险             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 官僚主义对于经济发展产生的阻碍  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 官僚腐败             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 地方政府机构的自主性       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

3. 请指出您感觉总公司的制度在贵公司的运用执行程度:

|                   | 非常<br>低                  | 较低                       | 一般                       | 较高                       | 非常<br>高                  |
|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 总公司制度总体的执行程度      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 领导力方面（例如工作上目标的制定） | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 信息与分析方面           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 规划方面（例如总体业务的战略规划） | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 人事方面（例如决策权，培训）    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 程序管理方面（例如对问题的预防）  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 对待业绩方面（例如如何提高业绩）  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 以客户为中心，满足客户方面     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

4. 请指出您感觉总公司的制度在贵公司的内在化程度（使其成为子公司制度）：

|                          | 非常<br>低                  | 较低                       | 一般                       | 较高                       | 非常<br>高                  |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 为了执行总公司制度投入超常的精力         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司制度对贵公司改组业务的帮助         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司和贵公司在制度标准的相似性         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司制度激励贵公司的投入的程度         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司乐于采用总公司制度的程度          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司对总公司制度及其前景的关心程度       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司 <b>很难</b> 认同总公司制度（R） | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

5. 请指出您感觉贵公司受总公司控制的程度：

|                     | 非常<br>低                  | 较低                       | 一般                       | 较高                       | 非常<br>高                  |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 贵公司的 <b>自主权</b> （R） | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司对贵公司的监督          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总体 / 整合规划系统的使用      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 报告系统的使用             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

6. 请指出您感觉贵公司受总公司规范化（组织正式化）的程度：

|               | 非常<br>低                  | 较低                       | 一般                       | 较高                       | 非常<br>高                  |
|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 强调工序和程序的标准化   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 实行规范的条例和政策的程度 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 使用技术标准的程度     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 对其他单位使用标准化的报告 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

7. 请指出您感觉贵公司和总公司之间在工作上交际的程度：

|                  | 非常<br>低                  | 较低                       | 一般                       | 较高                       | 非常<br>高                  |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 共用价值观念的程度        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 使用驻外 / 外派人员的程度   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 各单位之间研发人员交换的频繁程度 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司经理参与国际培训的程度   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司经理参与联合工作组的程度  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

8. 请指出您感觉总公司对贵公司在人力资源投入方面的管理程度:

|                     | 非常                       |                          |                          |                          | 非常                       |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                     | 低                        | 较低                       | 一般                       | 较高                       | 高                        |
| 在赋予责任前提供大量的培训       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 建立在现有条件下最好的招聘流程     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司参与员工技能的拓展        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 在雇用员工之前对其进行多样的评估    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 以雇用最优秀员工为傲，帮助员工拓展技能 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 对培训和发展方面总体的投入       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

9. 请指出您感觉总公司对贵公司在行为表现方面的管理程度:

|                  | 非常                       |                          |                          |                          | 非常                       |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                  | 低                        | 较低                       | 一般                       | 较高                       | 高                        |
| 总公司看重基于表现的评估     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司严格让贵公司担当应负的责任 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司对程序或方法的重视程度   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司对来自上级的安排的执行程度 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司收到反馈和表现信息的频率  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

10. 请指出您感觉总公司对贵公司在产出方面的管理程度:

|                   | 非常                       |                          |                          |                          | 非常                       |
|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                   | 低                        | 较低                       | 一般                       | 较高                       | 高                        |
| 总公司的评估考核基于工作结果的程度 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 报酬（奖励）基于结果的程度     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 用制定好的标准来评估员工的程度   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 以数据做为衡量效能的指标的程度   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 成绩和工作结果挂钩的程度      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 以达到目标做为提拔标准       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 不好的成绩会导致低的评级      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

11. 请指出总公司和贵公司在信息交流的程度:

|                   | 非常                       |                          |                          |                          | 非常                       |
|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                   | 低                        | 较低                       | 一般                       | 较高                       | 高                        |
| 总公司对贵公司发生了什么事的了解  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司乐意听取你们的意见      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 你们向总公司透露子公司信息     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司对总公司来说只是一般下级关系 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|                   |                          |                          |                          |                          |                          |
|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 总公司会从贵公司寻求投入和建议   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司对总公司来说是值得信赖的助手 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司会把发生的事通告给总公司   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司向贵公司透露公司信息     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

12. 请指出总公司和贵公司在协商问题时的自由度:

|                  |                          |                          |                          |                          |                          |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                  | 非常<br>低                  | 较低                       | 一般                       | 较高                       | 非常<br>高                  |
| 总公司在和贵公司打交道时的灵活性 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司帮助解决贵公司问题的意愿  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司让利来帮助贵公司的意愿   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司给予总公司建议的频率    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

13. 请指出总公司和贵公司在管理层上的交流:

|                     |                          |                          |                          |                          |                          |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                     | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
| 我很喜欢总公司经理的本人        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我愿意和总公司经理成为个人朋友     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我和总公司经理合作起来很愉快      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司经理会在上级面前帮我辩护     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司管理层在我受到抨击时会帮我辩护  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司经理在我犯错时会帮我辩护     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我愿意为总公司经理做我本职工作之外的事 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 为了增加总公司的利益我愿意额外付出   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司经理的学识给我留下深刻印象    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我敬佩总公司经理的学识以及能力     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我对总公司经理的专业技能表示钦佩    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

14. 请指出您感觉中国和投资所在国在以下商业环境差异的程度:

|           |                          |                          |                          |                          |                          |
|-----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|           | 非常<br>低                  | 较低                       | 一般                       | 较高                       | 非常<br>高                  |
| 法律体系和政治制度 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 市场结构      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 经济环境      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 商业行为 / 规矩 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 商务语言      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



15. 请指出您感觉中国和投资所在国在以下文化差异的程度:

|                     | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 对权力的畏惧（例如畏惧上级）      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 对不确定因素的避免（例如躲避风险）   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 个人主义（例如以自我为中心）      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 男性气质（例如自信武断，进取好胜等）  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 长期取向（例如强调长期承诺，尊重传统） | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

16. 请指出您感觉贵公司企业文化在以下方面的程度:

|                    | 非常低                      | 较低                       | 一般                       | 较高                       | 非常高                      |
|--------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <b>参与性</b>         |                          |                          |                          |                          |                          |
| 员工对与他们有关的公司决策的影响力  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 积极的鼓励不同功能岗位间的合作与协作 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>一致性</b>         |                          |                          |                          |                          |                          |
| 处理内部事务方式的一致程度      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 处理外部事务步骤的一致性和可预测性  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>适应性</b>         |                          |                          |                          |                          |                          |
| 客户的建议致使贵公司有所改变     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司反应灵敏并容易作出变化     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>使命感</b>         |                          |                          |                          |                          |                          |
| 贵公司有长期目标以及方向       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 贵公司对未来将会如何有着一个规划   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>其他</b>          |                          |                          |                          |                          |                          |
| 对战略和共同目标的清晰程度      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 决策的系统性             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 一体化 / 沟通 / 交流      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 创新性 / 敢于冒风险        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 责任感                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 行动派（倾向用实际行动）       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 奖励的公平性             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 发展和提拔都以内部优先        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

17. 请指出贵公司经理的组织认同:

|                      | 很不同意                     | 不同意                      | 一般                       | 同意                       | 非常同意                     |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 有人批评贵公司时对他 / 她如同个人冒犯 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|                      |                          |                          |                          |                          |                          |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 他 / 她很关心其他人对贵公司的看法   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 提起贵公司时他 / 她会说我们而不是他们 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 他 / 她视贵公司的成功为自己的成功   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 有人称赞贵公司时对他 / 她如同个人赞赏 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 当媒体批评贵公司时他 / 她会感到不安  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

18. 请指出总公司和贵公司之间在沟通上的效率:

|                     | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 我们彼此坦诚的沟通           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司总是把我们需要知道的信息告诉我们 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司需要信息时我们会及时反馈     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们有着开放并且有效的沟通       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们彼此有持续的交流          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们彼此有清楚的沟通          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们彼此有公开的沟通          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们有广泛的正式及非正式的沟通     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

19. 请指出总公司和贵公司之间在相互信任方面的程度:

|                             | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|-----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 总公司和我们打交道时都是坦诚的             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司做出的承诺都是可信的               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司对自己的业务是很在行的              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司不会提出不正当的索求               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司和我们打交道时 <u>不够坦率</u> (R)  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司在出现问题时会很诚实               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 总公司在回答我们疑问时 <u>会有问题</u> (R) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

20. 请指出贵公司对总公司的投入:

|                          | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 总公司被批评时我们会为其辩护           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们彼此都很忠于对方               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们对总公司 <u>不想投入太多</u> (R) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们愿意为总公司做长期投入            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们的之间关系是长期的关系            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

即使总公司给我们造成不便也无所谓

愿意投入任何人力物力提高总公司的运营

**21. 请指出您对贵公司和总公司关系的满意程度:**

|                         | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 我们的关系 <b>还有改善空间 (R)</b> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们对我和总公司的关系表示满意         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 这是我们经历过的最好关系            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们认为总公司也很满意和我们的关系       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们公司和总公司的关系达到了顶峰        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们对我和总公司的关系不满意 (R)      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**22. 请指出贵公司在以下方面的业绩表现:**

|                  | 非常<br>低                  | 较低                       | 一般                       | 较高                       | 非常<br>高                  |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 投资回报率            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 利润               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 流动资金             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 生产效率             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>销售方面:</b>     |                          |                          |                          |                          |                          |
| 销售增长             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 销售总量             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 新产品 / 新服务的销量     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>客户方面:</b>     |                          |                          |                          |                          |                          |
| 客户满意度            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 客户维系             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 给客户答复的时间         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 准时出货             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>内部工作流程方面:</b> |                          |                          |                          |                          |                          |
| 使用材料效率差别         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 订货到交货的时间         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 材料废弃率            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 在人工效率上的差别        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>创新与学习方面:</b>  |                          |                          |                          |                          |                          |
| 新专利的数量           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 发布新产品 / 提供新服务的数量 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 新产品 / 新服务上市的周期   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

员工满意度

23. 请指出子公司上一财政年度的投资回报率: \_\_\_\_\_ %

24. 请指出子公司上一财政年度的销售收益率: \_\_\_\_\_ %

25. 请指出子公司上一财政年度的资产回报率: \_\_\_\_\_ %

26. 请指出子公司上一财政年度的利润率: \_\_\_\_\_ %

27. 请指出您对下列方面的赞同程度:

很不  
同意    不同意    一般    同意    非常  
同意

**27.1 国际/全球拓展的意向:**

我们对进入海外市场很感兴趣

海外业务的潜在收益将很值得我们投入

海外市场能为我们业务增长提供最佳机遇

其它类似想开展海外业务的公司也正在做准备

**27.2 经济取向**

我们更愿意做能为我们大大增加收益的工作

我们更喜欢我们能稳定市场波动的环境

我们更喜欢能刺激对我们产品有需求的环境

我们更喜欢能增加我们利润的环境

**27.3 学习取向**

我们更喜欢给我们机会学习新技能的环境

我们更喜欢给我们机会提高企业能力的环境

我们更喜欢给我们机会学习新技术的环境

我们更喜欢给我们机会拓展组织能力的环境

28. 国际化战略: 随着公司的国际化, 我最熟悉经营情况的那个国家的下属公司将会:

很不  
同意    不同意    一般    同意    非常  
同意

**28.1 全球一体化方面**

对一个或多个产品负责全球的营销

为全球市场生产一个或多个产品

让本地生产的产品走向国际市场

引领全球产品的开发过程

**28.2 本地市场反应方面**

清楚地展示对本地经济带来的益处

|                  |                          |                          |                          |                          |                          |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 对本地市场情况能做出灵活调整   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 让公司的活动/产品符合当地的政策 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 为适应本地市场对现有产品做出调整 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**28.3 各个国家间的协调方面**

|                   |                          |                          |                          |                          |                          |
|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 对全球有竞争性的威胁做出早期预警  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 把全球目标放到本国目标之前     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 发现具有国际潜力的本地商机     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 从本公司在其他国家的业务中学习提高 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**28.4 各个组织间的协调方面**

|                  |                          |                          |                          |                          |                          |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 基于全球视角协调发展战略     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 从更多国家来获取对产品开发的投入 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 在各国间协调致使生产合理化    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 预测各个国家的需求        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 在售价与市场份额目标之间取得均衡 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 对各国市场的需求做出及时调整   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**29. 请指出您对下列方面的赞同程度：**

很不  
同意

不同意

一般

同意

非常  
同意

**29.1 思维上**

|                           |                          |                          |                          |                          |                          |
|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 我工作中最多能够提出一年的计划           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我认为现今有必要和其他组织建立战略联盟       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 那些涉及国际交易的项目是长期的           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我以能为一个国际性组织工作为傲           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我认为未来 10 年的世界和现在一样        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 在如今相互关联的世界，国界已经不具意义       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 几乎每人都认同国际项目比国内项目有更短的投资回收期 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们确实生活在一个地球村              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 在讨论问题时我总是具有更宽广的视野         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 人生就是一个协调矛盾的过程             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我认为老外买我们的土地和建筑是一种耻辱       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 对我们业务来说 5-10 年是规划的最佳时间段   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 考虑新界限，改变方向和行为对我来说不难       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我很能适应突然的变化和模棱两可的状态        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 有人在一直寻找前因后果时会令我沮丧         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我认为应避免与意见不同者浪费时间          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我没空理会那些试着勾勒更广阔前景的人        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

我相信我在另一种文化背景中也能过得充实       
 以规划范围来说，5 年太长了

很不  
同意 不同意 一般 同意 非常  
同意

**29.2 现实生活中**

我喜欢尝试其他国家的食物       
 我感觉其他国家的人比较无聊       
 我喜欢做那些国际间的项目       
 和来自其他文化背景的人接触时我感到不安       
 大多数时候我只读和（或）看本地新闻       
 我的大部分社会关系是本地的       
 我在陌生环境里的状态是最好的       
 当我遇到外国人时我会对他们充满好奇       
 我喜欢看外国的电影和书籍       
 和来自不同文化的人合作对我没有吸引力       
 遇到来自其他文化背景的人时我感到紧张       
 我在语言不通的国家旅行时会焦虑       
 我大部分的职业关系网是国际性的       
 若没在我预定时间完成工作我会很生气       
 当来自其他文化背景的人花长时间做一件事  
 时，我会变得不耐烦       
 对那些努力学习我的语言的人有好感       
 我更喜欢待在本地的环境里（社区或组织）       
 出乎预料的事发生时改变过程比改变结构容易       
 我认为多样性和多元文化团队在完成我的  
 目标时扮演着很重要的角色       
 我的密友中有来自其他文化背景的人

**30. 请指出您对下列方面的赞同程度：**

很不  
同意 不同意 一般 同意 非常  
同意

**30.1 国际市场上的主动性**

迅速的国际化对我们公司来说很重要       
 国际化是实现企业增长的唯一出路       
 为了将来的成功我们必须国际化       
 我们预定的增长会主要靠国际化来完成

|  | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <b>30.2 在实现国际化付出的努力</b>                      |                          |                          |                          |                          |                          |
| 公司的创立者/所有者/经理愿意让公司进入国际市场                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 公司管理层花了大量时间来筹划国际业务                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>30.3 公司的国际化视野</b>                         |                          |                          |                          |                          |                          |
| 公司管理层把全球看作一个大的市场                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>30.4 国际化的开放程度</b>                         |                          |                          |                          |                          |                          |
| 公司是所在行业中发现和追求全球商机的先锋                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 你认为海外客户和国内客户一样重要                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 公司从全世界吸纳人才                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 不同国籍的员工有着平等的晋升机会                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 公司在全球范围内搜索潜在的竞争对手                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 公司在全球范围内选择最佳位置进行活动                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 公司不仅把国际市场看作一个舞台（即待开发的市場），同时也是学校（即新思想和新技术的源泉） | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 你们公司是一家分布全球的国际性公司                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 你们公司是一家有着很强国家认同感的公司                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**31. 做出贡献的角色:** 贵公司是否拥有全球责任或特殊授予的职责（即贵公司代表整个公司承担例如生产制造，产品研发以及管理）。  是  否  
如果是，请估计这种全球责任或特殊授予的职责给贵公司带来的收入占其总收入的 \_\_\_\_\_%

**32. 贵公司的主动性/自创性:** 请指出在过去10年中，在贵公司发生了以下事件的频率：

|                      | 从未<br>发生                 | 不经常                      | 一般                       | 经常                       | 非常<br>频繁                 |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 把当地开发的新产品销往国际市场      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 为公司在当地投资竞标成功         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 起源于当地的新的国际业务         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 采用国际上通行的办法来优化生产线     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 被中方管理层引进来作为研发和制造的投资者 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**33. 贵公司的专长:** 请指出和其他子公司相比，贵公司在以下方面具备的能力或经验：

|             | 远低<br>平均                 | 低于<br>平均                 | 平均                       | 高于<br>平均                 | 远超<br>平均                 |
|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 产品或者工作流程的研发 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|           |                          |                          |                          |                          |                          |
|-----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 生产能力      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 市场营销能力    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 管理国际事务的能力 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 创新和创业精神   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**34. 贵公司的创业精神：**请指出您对下列方面的赞同程度：

|                    | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|--------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 公司高级管理层支持创业        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 公司高级管理层有创新的经验      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 无论成功与否，勇于冒险的人都能被肯定 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 公司鼓励去冒已被评估过的风险     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 个人冒险被认为是优点         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**35. 贵公司的领导能力：**请指出您对下列方面的赞同程度：

|                     | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 公司曾有能力强并有国际声望的领导    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 公司高级管理层有着很好的信誉      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 公司 CEO 与部门经理协作来达到目标 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**36. 全球一体化：**请指出您对下列描述在世界范围内你所在行业各方面的赞同程度：

|                  | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 国际竞争很激烈          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 业务易受全球经济总量的影响    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 产品在全球有认知度        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 新产品会在全球各主要市场同时发售 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**37. 本地市场竞争：**请指出您对下列描述本地市场竞争方面的赞同程度：

|                    | 很不<br>同意                 | 不同意                      | 一般                       | 同意                       | 非常<br>同意                 |
|--------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 本地市场竞争相当激烈         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 本地市场有很多促销活动        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 任何产品刚上市其他竞争对手能马上跟进 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 有新的客户来购买我们的产品和服务   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 新来的客户对除了产品外还有其他需求  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 我们现在也同以前的老客户有生意往来  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



**38. 贵公司的资产结构：（如果贵公司是独资公司，请回答第 39 题）**

中国总公司 \_\_\_\_\_ %

投资所在国伙伴公司 \_\_\_\_\_ %

投资所在国政府 \_\_\_\_\_ %

**总共： 100%**

**39. 投资所在国伙伴公司的资产结构：**

私有 \_\_\_\_\_ %

国有 \_\_\_\_\_ %

**总共： 100%**

**40. 贵公司现有员工共\_\_\_\_\_人。**

**41. 贵公司成立于\_\_\_\_\_年。**

**42. 贵公司的主要经营范围是\_\_\_\_\_**

**43. 贵公司所在行业是\_\_\_\_\_**

**44. 贵公司投资所在国家是\_\_\_\_\_**

**45. 贵公司的投资总金额为\_\_\_\_\_ 美元**

**46. 总公司对外投资的主要动机是：**

寻找新的市场       寻找自然资源       寻找战略资源（如技术等）

**47. 贵公司对外投资的模式是：**

收购现有公司       自主建立新公司       其他\_\_\_\_\_（请说明）

**48. 请指出总公司对外投资的主要战略：**

全球战略（即把产品 / 服务或者市场营销战略标准化运用到不同市场以降低  
成本—高度标准化，低成本）

多国战略（即为了满足不同国家市场的情况把产品 / 服务或者市场营销战略  
差异化—高度差异化，高成本）

**49. 请指出贵公司在海外市场进行的主要活动：（可以选择多个）**

采购原料和部件       吸取当地生产能力

营销最终产品       获取资金

产品设计与创新       获取当地自然资源



|                      |                  |   |                   |  |
|----------------------|------------------|---|-------------------|--|
| 3                    | (A) 发启话题、对话      | 或 | (B) 等待别人来邀请       |  |
| 4                    | (A) 在沉思前行动       | 或 | (B) 在行动前沉思        |  |
| 5                    | (A) 善于交际 – 容易结识  | 或 | (B) 保守 – 需要花时间了解  |  |
| 6                    | (A) 兴趣广泛         | 或 | (B) 只是深度研究个别事物    |  |
| 7                    | (A) 需要有规律的社交     | 或 | (B) 专注时需要个人空间     |  |
| 8                    | (A) 对外部事物感兴趣     | 或 | (B) 对内部反应感兴趣      |  |
| 9                    | (A) 善于口头上的交流, 沟通 | 或 | (B) 善于文笔上的交流, 沟通  |  |
| 10                   | (A) 善于从实践和互动中学习  | 或 | (B) 善于从阅读和思考中学习   |  |
| <b>你喜欢如何搜集信息?</b>    |                  |   |                   |  |
| 1                    | (A) 主要通过感官来察觉    | 或 | (B) 主要通过模式和关联来察觉  |  |
| 2                    | (A) 关注已有的事实与细节   | 或 | (B) 关注可能发生的事      |  |
| 3                    | (A) 信任可靠的经验      | 或 | (B) 信任理论和抽象的概念    |  |
| 4                    | (A) 务实并且善于观察     | 或 | (B) 富有想象力和创造力     |  |
| 5                    | (A) 喜欢实际         | 或 | (B) 喜欢幻想          |  |
| 6                    | (A) 做事喜欢按部就班     | 或 | (B) 做事喜欢随意        |  |
| 7                    | (A) 重视现在和过去      | 或 | (B) 重视将来          |  |
| 8                    | (A) 寻找稳定         | 或 | (B) 寻找变化          |  |
| 9                    | (A) 聚集小的细节来看全貌   | 或 | (B) 从总体出发去看细节     |  |
| 10                   | (A) 需要通过局部来了解全貌  | 或 | (B) 需要通过全貌来了解局部   |  |
| <b>你更喜欢怎样做出决定?</b>   |                  |   |                   |  |
| 1                    | (A) 利用逻辑做出决定     | 或 | (B) 利用个人价值观做出决定   |  |
| 2                    | (A) 遵循事实与真相      | 或 | (B) 根据他人的认同       |  |
| 3                    | (A) 需要具备能力       | 或 | (B) 需要能够被欣赏       |  |
| 4                    | (A) 分析与研究        | 或 | (B) 个人的感性         |  |
| 5                    | (A) 坚定并且固执       | 或 | (B) 有说服力并且热心肠     |  |
| 6                    | (A) 重视公平与公正      | 或 | (B) 重视怜悯与同情       |  |
| 7                    | (A) 更多考虑事情的起因    | 或 | (B) 更多考虑他人的因素     |  |
| 8                    | (A) 寻求逻辑因果关系     | 或 | (B) 寻求与价值观与他人的一致性 |  |
| 9                    | (A) 重视目标和工作      | 或 | (B) 重视人际关系        |  |
| 10                   | (A) 考虑原则和后果      | 或 | (B) 考虑对人的影响       |  |
| <b>在外你需要规章还是灵活度?</b> |                  |   |                   |  |
| 1                    | (A) 喜欢秩序和规章制度    | 或 | (B) 喜欢灵活          |  |
| 2                    | (A) 有组织有计划       | 或 | (B) 很能适应改变        |  |
| 3                    | (A) 寻求一个结果       | 或 | (B) 无所谓结果         |  |
| 4                    | (A) 重视达到目标       | 或 | (B) 重视体验生活        |  |
| 5                    | (A) 喜欢控制全局       | 或 | (B) 喜欢针对细节        |  |
| 6                    | (A) 快速做出决定       | 或 | (B) 深思熟虑后作出决定     |  |
| 7                    | (A) 讲究系统和方法      | 或 | (B) 喜欢随意          |  |
| 8                    | (A) 喜欢计划和时间表     | 或 | (B) 喜欢随机的         |  |
| 9                    | (A) 喜欢逐个的做项目     | 或 | (B) 喜欢同时做多个项目     |  |
| 10                   | (A) 准时, 按时完成工作   | 或 | (B) 快到最后才全力以赴     |  |

如果您还有其他意见或建议，或者觉得我们忽略了某些问题，请告诉我们：

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非常感谢您的配合完成此次调查。你在问卷里提供的信息都会保持严格保密。  
在此次研究结束后，我们将会发给您一份此次研究的主要结果。

**APPENDIX 2 DATABASE**

Appendix 2 Database: Company 1 – Company 80

| ID | hi1 | hi2 | hi3 | hi4 | hi5 | hi6 | hi7 | hi8 | hi9 | hi10 | hi11 | hi12 | hi13 | hi14 | hi15 | hi16 | hi17 | hi18 | hi19 | hi20 | hi21 | hi22 | hi23 | hi24 | hi25 | hi26 | hi27 | hi28 | hi29 | hi30 |   |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
| 1  | 3   | 2   | 3   | 5   | 4   | 4   | 5   | 4   | 4   | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 5    | 5    | 5    | 5    | 3    | 4    | 3    | 4    | 5    | 4    | 3    | 4    |   |
| 2  | 4   | 1   | 3   | 4   | 4   | 4   | 4   | 4   | 4   | 1    | 3    | 2    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 2    |   |
| 3  | 2   | 2   | 3   | 3   | 3   | 2   | 2   | 4   | 3   | 2    | 3    | 2    | 3    | 3    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 2    |   |
| 4  | 3   | 2   | 4   | 4   | 4   | 3   | 2   | 4   | 3   | 4    | 3    | 4    | 3    | 3    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 2    |   |
| 5  | 3   | 4   | 3   | 3   | 3   | 3   | 4   | 3   | 2   | 3    | 2    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 5    | 4    |   |
| 6  | 4   | 3   | 3   | 5   | 3   | 4   | 2   | 3   | 4   | 5    | 3    | 1    | 1    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 5    | 4    | 4    | 2    | 3    | 2    | 4    | 2    | 2    |   |
| 7  | 5   | 3   | 3   | 4   | 3   | 4   | 4   | 4   | 3   | 4    | 5    | 2    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 1    |   |
| 8  | 2   | 3   | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 2    | 3    | 2    | 3    | 4    | 5    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 2    | 3    | 4    | 5    | 4    | 2    | 2    |   |
| 9  | 4   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5    | 5    | 5    | 5    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 2    | 2    | 3    | 2    |   |
| 10 | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5    | 5    | 5    | 5    | 2    | 4    | 3    | 2    | 4    | 3    | 1    | 1    | 2    | 2    | 3    | 3    | 2    | 2    | 2    | 5    |      |   |
| 11 | 5   | 2   | 5   | 5   | 5   | 2   | 1   | 4   | 2   | 5    | 5    | 5    | 5    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 3    | 3    | 2    | 2    | 3    | 1    | 2    |   |
| 12 | 4   | 4   | 4   | 4   | 4   | 3   | 1   | 3   | 4   | 3    | 1    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 5    | 4    |   |
| 13 | 3   | 4   | 4   | 3   | 3   | 4   | 3   | 3   | 3   | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 2    |   |
| 14 | 3   | 3   | 4   | 4   | 3   | 4   | 3   | 4   | 4   | 3    | 4    | 2    | 2    | 1    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 2    |   |
| 15 | 3   | 3   | 3   | 4   | 4   | 3   | 3   | 3   | 4   | 4    | 3    | 2    | 2    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    |   |
| 16 | 4   | 4   | 4   | 4   | 4   | 3   | 3   | 3   | 4   | 4    | 4    | 2    | 1    | 2    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 4    |   |
| 17 | 3   | 3   | 3   | 4   | 3   | 2   | 3   | 3   | 3   | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 2    | 2    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 4    | 4    |   |
| 18 | 3   | 3   | 3   | 4   | 3   | 2   | 3   | 3   | 3   | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 2    | 2    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 4    | 4    |   |
| 19 | 3   | 3   | 3   | 4   | 3   | 2   | 3   | 3   | 3   | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 2    | 2    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 4    | 4    |   |
| 20 | 3   | 3   | 3   | 4   | 3   | 2   | 3   | 3   | 3   | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 2    | 2    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 4    | 4    |   |
| 21 | 3   | 3   | 3   | 4   | 4   | 2   | 3   | 3   | 3   | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 2    | 2    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 4    | 4    |   |
| 22 | 3   | 2   | 3   | 2   | 3   | 2   | 3   | 4   | 3   | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 2    | 2    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 4    | 2    |   |
| 23 | 3   | 4   | 3   | 3   | 2   | 2   | 4   | 4   | 2   | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    |   |
| 24 | 3   | 3   | 3   | 3   | 3   | 2   | 3   | 3   | 4   | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 3    |   |
| 25 | 4   | 3   | 4   | 4   | 3   | 4   | 4   | 4   | 3   | 2    | 4    | 4    | 3    | 3    | 5    | 5    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 5    | 3    |   |
| 26 | 4   | 3   | 2   | 5   | 4   | 4   | 1   | 2   | 4   | 4    | 2    | 2    | 1    | 3    | 5    | 4    | 4    | 3    | 3    | 4    | 5    | 3    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 2    |   |
| 27 | 3   | 3   | 3   | 4   | 3   | 3   | 2   | 3   | 3   | 4    | 2    | 2    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    |   |
| 28 | 4   | 3   | 2   | 3   | 4   | 4   | 3   | 2   | 4   | 4    | 2    | 3    | 3    | 3    | 5    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 5    | 4    | 4    | 4    | 5    | 3    | 2    |   |
| 29 | 3   | 4   | 4   | 3   | 1   | 4   | 2   | 3   | 2   | 2    | 3    | 4    | 5    | 3    | 4    | 3    | 4    | 2    | 5    | 3    | 4    | 2    | 4    | 5    | 4    | 3    | 4    | 5    | 5    | 2    |   |
| 30 | 3   | 2   | 3   | 3   | 3   | 4   | 4   | 3   | 3   | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    |   |
| 31 | 4   | 3   | 3   | 2   | 3   | 4   | 4   | 4   | 3   | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 5    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 2    |   |
| 32 | 4   | 3   | 3   | 4   | 3   | 4   | 2   | 4   | 4   | 3    | 2    | 2    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 4    | 2    |   |
| 33 | 4   | 4   | 3   | 5   | 2   | 5   | 4   | 4   | 3   | 2    | 3    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 4    | 5    | 5    |   |
| 34 | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5    | 5    | 5    | 5    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 5    | 3    | 3    | 3    | 2    | 4    | 2    | 4    | 1    |      |   |
| 35 | 4   | 4   | 2   | 5   | 2   | 5   | 5   | 5   | 3   | 2    | 2    | 4    | 4    | 5    | 5    | 3    | 4    | 3    | 5    | 3    | 5    | 4    | 3    | 3    | 4    | 3    | 4    | 5    | 4    | 1    |   |
| 36 | 4   | 2   | 1   | 3   | 4   | 3   | 2   | 3   | 4   | 3    | 2    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    |   |
| 37 | 4   | 3   | 3   | 2   | 3   | 2   | 2   | 4   | 3   | 2    | 2    | 3    | 2    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 5    | 3    | 3    | 4    | 3    | 4    | 3    | 4    |   |
| 38 | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 3   | 3   | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 2    | 3    |   |
| 39 | 4   | 3   | 3   | 4   | 4   | 3   | 3   | 4   | 3   | 4    | 3    | 2    | 4    | 4    | 3    | 4    | 4    | 5    | 3    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 2    |   |
| 40 | 4   | 3   | 2   | 5   | 4   | 2   | 1   | 2   | 3   | 4    | 2    | 3    | 3    | 5    | 4    | 2    | 3    | 3    | 4    | 2    | 3    | 3    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 4    |   |
| 41 | 3   | 2   | 4   | 4   | 4   | 3   | 3   | 3   | 3   | 3    | 3    | 3    | 2    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3    |   |
| 42 | 5   | 3   | 4   | 3   | 3   | 4   | 3   | 4   | 3   | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 4    |   |
| 43 | 5   | 2   | 5   | 3   | 5   | 2   | 1   | 4   | 2   | 3    | 3    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 2    | 3    | 3    | 2    | 2    | 4    | 1    | 4 |
| 44 | 4   | 3   | 4   | 4   | 3   | 2   | 3   | 4   | 4   | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 2 |
| 45 | 3   | 2   | 3   | 3   | 4   | 2   | 4   | 3   | 2   | 4    | 5    | 4    | 1    | 2    | 4    | 5    | 3    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 3    | 2    | 4    | 4    | 5    | 3    |   |
| 46 | 3   | 3   | 4   | 4   | 4   | 3   | 3   | 4   | 4   | 4    | 3    | 3    | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 3    | 5    | 4    | 4    | 5    | 2    |   |
| 47 | 3   | 3   | 4   | 4   | 4   | 3   | 3   | 4   | 4   | 4    | 3    | 3    | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 3    | 5    | 4    | 4    | 5    | 2    |   |
| 48 | 3   | 3   | 4   | 4   | 4   | 3   | 3   | 4   | 4   | 4    | 3    | 3    | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 3    | 5    | 4    | 4    | 5    | 2 |
| 49 | 3   | 3   | 4   | 4   | 4   | 3   | 3   | 4   | 4   | 4    | 4    | 3    | 3    | 4    | 3    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 2 |
| 50 | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 3   | 3   | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 5    | 3    |   |
| 51 | 3   | 2   | 3   | 3   | 2   | 3   | 2   | 4   | 3   | 3    | 2    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 2    | 3    | 2    | 4    | 2    | 3 |
| 52 | 4   | 2   | 5   | 4   | 4   | 3   | 4   | 5   | 4   | 5    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 2    |   |
| 53 | 4   | 4   | 3   | 4   | 4   | 3   | 3   | 4   | 4   | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    |   |
| 54 | 3   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 2    | 1    |      |   |
| 55 | 3   | 2   | 2   | 1   | 2   | 2   | 3   | 3   | 2   | 2    | 3    | 3    | 4    | 4    | 3    | 3    | 2    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 2    |   |
| 56 | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 4   | 3    | 2    | 2    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 5    | 2    |   |
| 57 | 3   | 3   | 4   | 4   | 4   | 2   | 3   | 3   | 3   | 2    | 2    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3 |
| 58 | 2   | 4   | 4   | 3   | 3   | 2   | 2   | 4   | 4   | 4    | 4    | 4    | 2    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 2    | 3    |   |
| 59 | 3   | 3   | 3   | 3   | 4   | 3   | 3   | 3   | 4   | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 5    | 5    | 4    | 3 |
| 60 | 4   | 4   | 3   | 5   | 2   | 5   | 3   | 5   | 3   | 4    | 3    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 3    | 1    |   |
| 61 | 3   | 4   | 2   | 3   | 3   | 4   | 2   | 3   | 2   | 2    | 3    | 4    | 3    | 5    | 3    | 4    | 3    | 4    | 3    | 5    | 3    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 5    | 3    | 2 |
| 62 | 4   | 3   | 3   | 2   | 4   | 4   | 3   | 4   | 3   | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 2    |   |
| 63 | 4   | 3   | 3   | 2   | 4   | 4   | 3   | 4   | 3   | 3    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |

Appendix 2 Database: Company 1 – Company 80

| hi31 | hi32 | hi33 | hi34 | hi35 | hi36 | hi37 | hi38 | hi39 | hi40 | hi41 | hi42 | hi43 | hi44 | hi45 | hi46 | hi47 | hi48 | hi49 | hi50 | hi51 | hi52 | hi53 | hi54 | hi55 | hi56 | hi57 | hi58 | hi59 | hi60 |   |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|---|
| 4    | 3    | 4    | 4    | 4    | 3    | 4    | 5    | 3    | 4    | 3    | 4    | 5    | 5    | 4    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 5    | 5    | 5    | 5    | 4    | 5    | 4    | 4    | 4 |   |
| 3    | 4    | 2    | 4    | 4    | 4    | 3    | 5    | 3    | 3    | 1    | 3    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 5    | 5    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 5    | 5 |   |
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| 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 5    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 4    | 4 |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4 |   |
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| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3 |   |
| 4    | 4    | 3    | 3    | 3    | 4    | 3    | 5    | 4    | 3    | 3    | 3    | 2    | 3    | 3    | 2    | 4    | 3    | 3    | 5    | 4    | 4    | 3    | 2    | 3    | 3    | 4    | 5    | 4    | 4    | 3 |   |
| 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4 |   |
| 3    | 2    | 4    | 2    | 2    | 2    | 2    | 3    | 3    | 3    | 3    | 3    | 2    | 2    | 2    | 4    | 5    | 5    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 5    | 3    | 2    |   |   |
| 1    | 2    | 2    | 2    | 2    | 2    | 2    | 3    | 2    | 1    | 2    | 1    | 1    | 1    | 1    | 1    | 2    | 4    | 2    | 1    | 2    | 2    | 2    | 5    | 1    | 2    | 2    | 2    | 1    | 3    |   |   |
| 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 2    | 4    | 3    | 3 |   |
| 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 2    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |   |
| 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 2    | 2    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 3 |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |   |
| 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 5    | 5    | 4    | 4    | 5    | 3    | 2 |   |
| 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 2    | 2    | 3    | 2    | 3    | 3    | 4    | 2    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3 |   |
| 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 2    | 2    | 3    | 2    | 3    | 3    | 4    | 2    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 3 |   |
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| 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 2    | 2    | 3    | 2    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 3 |   |
| 4    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 4    | 3    | 3    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |   |
| 3    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 2    | 2    | 3    | 2    | 4    | 4    | 3    | 5    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3 |   |
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| 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 2    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |   |
| 4    | 2    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 2    | 4    | 4    | 4    | 4    | 2    | 4    | 1    | 3    | 4    | 2    | 4    | 4    | 4    | 2    | 3 |   |
| 4    | 4    | 3    | 3    | 2    | 4    | 3    | 4    | 3    | 1    | 2    | 4    | 5    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 5    | 5    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3 |   |
| 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3 |   |
| 4    | 4    | 4    | 5    | 4    | 5    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |   |
| 5    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 3    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5 |   |
| 4    | 3    | 3    | 4    | 4    | 4    | 3    | 5    | 4    | 3    | 2    | 2    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 2    | 4    | 3    | 2    | 4 | 3 |
| 5    | 4    | 4    | 3    | 3    | 3    | 3    | 5    | 5    | 3    | 5    | 5    | 3    | 3    | 2    | 2    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3 |   |
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Appendix 2 Database: Company 1 – Company 80

| hi61 | hi62 | hi63 | hi64 | hi65 | hi66 | hi67 | hi68 | hi69 | hi70 | hi71 | hi72 | hi73 | hi74 | hi75 | hi76 | hi77 | hi78 | hi79 | hi80 | hi81 | hi82 | hi83 | hi84 | hi85 | hi86 | hi87 | hi88 | hi89 | hi90 |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
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| 3    | 3    | 4    | 2    | 3    | 3    | 4    | 4    | 5    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3 |
| 4    | 3    | 3    | 4    | 4    | 3    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 4    | 4    | 4 |
| 4    | 3    | 3    | 2    | 4    | 3    | 5    | 4    | 5    | 3    | 2    | 3    | 3    | 2    | 3    | 2    | 2    | 2    | 2    | 2    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3 |
| 4    | 5    | 4    | 2    | 5    | 5    | 3    | 5    | 4    | 5    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 5    | 5    | 4    | 5    | 5    | 5    | 5    |   |
| 3    | 4    | 3    | 3    | 3    | 4    | 2    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 2    | 2    | 3    | 2    | 3    | 4    | 2    | 4    | 3    | 4    | 2    | 4    | 3    | 2    | 4    |   |
| 3    | 3    | 4    | 2    | 3    | 3    | 4    | 4    | 5    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3 |
| 3    | 3    | 4    | 2    | 3    | 3    | 4    | 4    | 5    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3 |
| 4    | 3    | 3    | 4    | 4    | 3    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 4    | 4    | 4 |
| 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3 |
| 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3 |
| 4    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 2    | 3    | 3    | 4    | 4    | 5    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4 |
| 4    | 5    | 4    | 2    | 5    | 5    | 3    | 5    | 4    | 5    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 5    | 5    | 4    | 5    | 5    | 5    | 5    |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 4    | 4 |
| 3    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 3    | 3    | 4    | 3    | 3    | 2    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |





Appendix 2 Database: Company 1 – Company 80

| hi121 | hi122 | hi123 | hi124 | hi125 | hi126 | hi127 | hi128 | hi129 | hi130 | hi131 | hi132 | hi133 | hi134 | hi135 | hi136 | hi137 | hi138 | hi139 | hi140 | hi141 | hi142 | hi143 | hi144 | hi145 | hi146 | hi147 | hi148 | hi149 | hi150 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 5     | 5     |   |
| 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     |   |
| 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     |   |
| 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 2     | 4     | 2     | 2     | 3     | 3     |   |
| 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 2     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     |   |
| 4     | 4     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 4     | 2     | 3     | 2     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 3     | 3     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 2     | 2     | 1     | 1     | 1     | 1     | 3     | 2     | 2     | 3     | 1     | 1     | 4     | 5     | 3     | 4     | 3     | 4     | 4     | 4     | 1     | 2     | 1     | 1     | 1     | 2     | 2     | 2     | 2     | 2     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 2     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 2     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 4     | 1     | 1     | 2     | 3     |       |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 2     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     |   |
| 5     | 5     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 2     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 3     | 3     | 3     |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 3     | 3     | 3     |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     |   |
| 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 3     | 3     | 3     |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 2     |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 2     | 4     | 3     | 3     | 3     | 3     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     |   |
| 5     | 5     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 2     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 3     | 3     | 3     |   |
| 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 3     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     |   |
| 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 2     | 4     | 2     | 4     | 4     | 2     | 4     | 2     | 2     | 2     |   |
| 2     | 2     | 1     | 3     | 2     | 4     | 2     | 2     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 4     | 2     | 4     | 4     | 3     | 2     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 2     |   |
| 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 2     | 4     | 2     | 3     | 3     | 4     | 2     | 4     | 2     | 2     | 3     |   |
| 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 2     | 3     | 4     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 3     |   |
| 3     | 3     | 3     | 4     | 4     | 5     | 5     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 2     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     |   |
| 3     | 3     | 2     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     |   |
| 2     | 2     | 3     | 3     | 3     | 4     | 1     | 4     | 1     | 3     | 3     | 3     | 4     | 2     | 4     | 4     | 1     | 1     | 2     | 3     | 2     | 1     | 3     | 3     | 2     | 4     | 3     | 3     | 2     | 3     |   |
| 3     | 4     | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 1     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 1     | 3     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 4     | 4     |   |
| 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 2     | 4     | 2     | 4     | 4     | 2     | 4     | 2     | 2     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 3     | 3     | 3     |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 2     | 3     | 3     | 2     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 4     | 4     | 1     | 3     | 4     | 3     | 3     | 2     | 4     | 4     | 2     | 4     | 3     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 2     | 4     | 4     | 2     | 2     | 4     | 2     | 4     | 2     | 3     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     |   |
| 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 2     | 3     | 3     | 4     | 3     | 4     | 2     | 2     | 3     | 3     | 4     | 4     | 3     | 4     | 2     | 3     | 3     | 3     | 2     | 1     | 2     | 3     |   |
| 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 2     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     |   |
| 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 2     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     |   |
| 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 1     | 2     | 3 |
| 4     | 4     | 3     | 4     | 3     | 3     | 2     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 2     | 3     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 2     | 2     | 3     | 3     | 3     | 2     | 4     | 2     | 2     | 2     |   |
| 4     | 4     | 4     | 5     | 3     | 5     | 4     | 5     | 4     | 1     | 5     | 1     | 2     | 5     | 5     | 4     | 5     | 2     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 2     | 4     | 2     | 2     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4 |
| 3     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4 |
| 4     | 4     | 4     | 4     | 5     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 4     | 4     | 2     | 4     | 4     | 3     | 3     | 4     | 4 |
| 2     | 2     | 3     | 3     | 3     | 4     | 1     | 4     | 1     | 3     | 3     | 3     | 4     | 2     | 4     | 4     | 1     | 1     | 2     | 3     | 2     | 1     | 3     | 3     | 2     | 4     | 3     | 3     | 2     | 3     |   |
| 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 2     | 4     | 4     | 4     | 2     | 4     | 2     | 2     | 2     | 2     |   |
| 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 5     | 3     | 5     | 5     | 5     | 2     | 5     | 2     | 3     | 3     | 4     | 3     | 5     | 4     | 4     | 4     | 3     | 4     |   |
| 4     | 2     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 2     | 4     | 4     | 3     | 3     | 2     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 3     | 2     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 2     | 2     | 4     | 4     | 3     | 3     | 2     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 2     | 3     | 2     | 4     | 3     | 4     | 2     | 4     | 3     | 2     | 2     | 3     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 3     | 3     | 3     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     |   |
| 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 2     | 4     | 2     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4 |
| 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 2     | 4     | 2     | 4     | 4     | 4     | 2     | 4     | 2     | 2     | 2     | 2     |   |
| 4     | 4     | 4     | 4     | 5     | 3     | 2     | 3     | 3     | 3     | 4     | 4     | 2     | 3     | 3     | 3     | 5     | 5     | 3     | 4     | 3     | 4     | 4     | 4     | 2     | 4     | 3     | 3     | 3     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 2     | 4     | 3     | 2     | 4     | 3     |       |       |       |       |       |       |   |

Appendix 2 Database: Company 1 – Company 80

| hi151 | hi152 | hi153 | hi154 | hi155 | hi156 | hi157 | hi158 | hi159 | hi160 | hi161 | hi162 | hi163 | hi164 | hi165 | hi166 | hi167 | hi168 | hi169 | hi170 | hi171 | hi172 | hi173 | hi174 | hi175 | hi176 | hi177 | hi178 | hi179 | hi180 |   |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|
| 4     | 4     | 3     | 4     | 5     | 5     | 5     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 3     | 5     | 5     | 5     | 4     | 3     | 3     | 4     | 4     |   |   |
| 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 1     | 3     | 1     | 3     | 3     | 4     | 5     | 5     | 3     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 2 |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 2     | 2     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4 |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 2     | 2     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4 |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |   |
| 2     | 2     | 2     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |   |
| 5     | 5     | 5     | 5     | 5     | 5     | 5     | 1     | 1     | 1     | 1     | 4     | 4     | 3     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5 |   |
| 3     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 2     | 2     | 3     | 2     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 5 |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 3 |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 |   |
| 3     | 3     | 2     | 3     | 3     | 2     | 2     | 4     | 2     | 4     | 2     | 1     | 1     | 1     | 1     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 3     | 3     | 2 |   |
| 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4 |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |   |
| 2     | 2     | 1     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 2     | 2     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3 | 3 |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 |   |
| 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 2     | 3     | 3     | 3     | 3     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4 |   |
| 2     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 4     | 3     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 5     | 5     | 5     | 4     | 4     | 4 |   |
| 2     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 4     | 3     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 5     | 5     | 5     | 5     | 4     | 4 |   |
| 2     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 4     | 3     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 5     | 5     | 5     | 5     | 4     | 4 |   |
| 2     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 4     | 3     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 5     | 5     | 5     | 4     | 4     | 4 |   |
| 3     | 3     | 4     | 3     | 4     | 3     | 3     | 2     | 3     | 4     | 4     | 3     | 2     | 3     | 3     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4 |   |
| 2     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 5     | 5     | 5     | 4     | 4     | 4 |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4 | 4 |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3 | 3 |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 3     | 3     | 3     | 4     | 4     | 3     | 4     | 2     | 3     | 3     | 2     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3 | 4 |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 3     | 4     | 3     | 4     | 4     | 2     | 5     | 3     | 4     | 3     | 2     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 3     | 3     | 2     | 3     | 4     | 3 |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4 | 4 |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4 | 4 |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 2     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4 | 5 |
| 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 5     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4 | 4 |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3 | 3 |
| 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 2     | 2     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 2     | 2     | 2     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 2     | 2     | 2     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 3 |
| 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 4     | 4     | 4     | 5     | 5     | 5     | 3     | 4     | 2     | 3     | 3     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 5 |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 2     | 2     | 2     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4 | 4 |
| 3     | 3     | 2     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 5     | 5     | 5     | 4     | 4     | 4 | 4 |
| 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 2     | 2     | 2     | 2     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 3     | 3     | 2     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 4     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 2     | 2     | 3     | 3     | 4     | 4     | 2     | 4     | 4     | 2     | 2     | 3     | 3     | 4     | 3     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4 | 4 |
| 3     | 4     | 3     | 4     | 4     | 2     | 5     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 3     | 4 | 3 |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3 | 4 |
| 3     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 2     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 2     | 2     | 3     | 3     | 4     | 4     | 2     | 4     | 4     | 2     | 2     | 3     | 3     | 3     | 4     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4 | 4 |
| 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 2     | 2     | 2     | 2     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 2     | 2     | 2     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 3 |
| 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 2     | 2     | 2     | 3     | 4     | 4     | 2     | 4     | 4     | 2     | 2     | 3     | 3     | 3     | 4     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4 | 4 |
| 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3 | 4 |
| 2     | 2     | 2     | 3     | 4     | 4     | 2     | 4     | 4     | 2     | 2     | 3     | 3     | 3     | 4     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4 | 4 |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 2     | 2     | 2     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4 | 4 |
| 2     | 2     | 2     | 3     | 4     | 4     | 2     | 4     | 4     | 2     | 2     | 3     | 3     | 3     | 4     | 5     | 4     | 5     | 5     | 5     | 5     | 5     |       |       |       |       |       |       |       |       |   |   |



Appendix 2 Database: Company 1 – Company 80

| hi211 | hi212 | hi213 | hi214 | hi215 | hi216 | hi217 | hi218 | hi219 | hi220 | hi221 | hi222 | hi223 | hi224 | hi225 | hi226 | hi227 | hi228 | hi229 | hi230 | hi231 | hi232 | hi233 | hi234 | hi235 | hi236 | hi237 | hi238 | hi239 | hi240 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 2     | 2     | 4     | 3     | 5     | 1     | 5     | 2     | 2     | 2     | 3     | 2     | 4     | 4     | 2     | 2     | 2     | 4     | 4     | 3     | 4     | 3     | 1     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 5 |
| 5     | 2     | 2     | 4     | 2     | 3     | 3     | 4     | 3     | 4     | 2     | 3     | 3     | 2     | 4     | 1     | 4     | 2     | 3     | 4     | 5     | 4     | 2     | 3     | 1     | 3     | 1     | 4     | 1     |       |   |
| 2     | 2     | 3     | 2     | 4     | 2     | 4     | 2     | 2     | 2     | 2     | 3     | 3     | 2     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 2     | 2     | 3     | 2     | 3     | 3     | 4     | 3     | 2     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 2     | 2     | 4     | 2     | 4     | 2     | 4     | 2     | 4     | 2     | 4     | 4     | 4     | 2     | 2     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 2     | 3     | 2     | 4     |   |
| 2     | 2     | 4     | 4     | 4     | 2     | 3     | 2     | 2     | 2     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 3     | 3     | 4     |   |
| 2     | 2     | 3     | 1     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 3     | 2     | 1     | 1     | 3     | 2     | 4     | 2     | 3     | 2     | 2     | 4     | 4     | 4     | 2     | 2     | 4     | 5     | 4     |   |
| 3     | 2     | 3     | 1     | 4     | 2     | 4     | 2     | 1     | 3     | 2     | 3     | 5     | 2     | 1     | 1     | 2     | 4     | 4     | 3     | 4     | 4     | 4     | 2     | 5     | 2     | 4     | 2     | 4     | 3     |   |
| 3     | 3     | 4     | 3     | 4     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 3     | 4     | 5     | 5     | 2     | 4     | 3     | 2     | 1     | 3     | 3     | 5     | 1     | 3     | 3     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 3     | 2     | 4     | 2     | 4     | 2     | 4     | 2     | 2     | 2     | 4     | 2     | 4     | 2     | 2     | 2     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 2     | 3     | 3     | 3     | 3     |   |
| 2     | 3     | 3     | 3     | 3     | 2     | 2     | 3     | 2     | 4     | 3     | 3     | 3     | 3     | 2     | 2     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 4     | 4     | 3     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 2     | 2     | 4     | 2     | 5     | 2     | 4     | 2     | 3     | 2     | 3     | 3     | 4     | 2     | 2     | 3     | 3     | 3     | 2     | 4     | 3     | 3     | 5     | 4     | 4     | 3     | 3     | 3     | 4     | 4     |   |
| 3     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 2     | 2     | 2     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 2     |   |
| 3     | 3     | 4     | 3     | 4     | 3     | 3     | 2     | 2     | 2     | 2     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 2     |   |
| 3     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 2     | 3     | 2     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 3     | 2     | 2     | 2     | 2     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 2     |   |
| 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 2     | 2     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 2     |   |
| 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 2     | 3     | 4     | 4     | 2     | 4     | 3     | 3     | 3     | 3     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 2     |   |
| 3     | 3     | 4     | 2     | 4     | 2     | 4     | 2     | 2     | 3     | 3     | 3     | 4     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     |   |
| 3     | 3     | 3     | 3     | 4     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 1     | 3     | 4     | 4     | 2     | 4     | 3     | 2     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 3     | 2     | 2     | 3     | 4     | 2     | 3     | 3     | 4     | 2     | 4     | 4     | 4     | 3     |   |
| 4     | 2     | 4     | 2     | 4     | 2     | 3     | 3     | 2     | 4     | 2     | 4     | 3     | 2     | 3     | 4     | 2     | 3     | 2     | 4     | 4     | 3     | 3     | 2     | 2     | 2     | 2     | 2     | 4     | 3     |   |
| 4     | 2     | 3     | 4     | 4     | 2     | 4     | 3     | 2     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 3     | 2     | 2     | 3     | 4     | 2     | 3     | 3     | 4     | 2     | 4     | 4     | 4     | 3     |   |
| 1     | 3     | 4     | 1     | 4     | 1     | 4     | 1     | 2     | 4     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 4     | 2     | 3     | 4     | 3     | 2     | 4     | 1     | 4     | 3     | 3     | 2     |   |
| 3     | 2     | 3     | 3     | 4     | 2     | 2     | 2     | 3     | 2     | 4     | 2     | 2     | 2     | 4     | 3     | 2     | 2     | 4     | 3     | 2     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     |   |
| 3     | 3     | 2     | 3     | 3     | 3     | 2     | 2     | 2     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 2     | 4     | 2     | 3     | 2     | 3     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 2     |   |
| 2     | 2     | 4     | 2     | 4     | 2     | 4     | 2     | 2     | 4     | 3     | 3     | 4     | 1     | 2     | 3     | 2     | 2     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     |   |
| 2     | 2     | 3     | 2     | 4     | 2     | 2     | 2     | 3     | 3     | 3     | 4     | 2     | 2     | 3     | 3     | 3     | 3     | 4     | 2     | 4     | 3     | 5     | 3     | 2     | 4     | 2     | 4     | 2     | 4     |   |
| 4     | 4     | 3     | 2     | 4     | 2     | 2     | 2     | 2     | 3     | 2     | 3     | 4     | 2     | 2     | 4     | 2     | 3     | 3     | 4     | 2     | 4     | 3     | 1     | 4     | 2     | 3     | 4     | 4     | 4     |   |
| 4     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 3 |
| 3     | 2     | 2     | 2     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 2     | 4     | 2     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 2     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 |
| 2     | 3     | 4     | 2     | 3     | 2     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 3     | 4     | 2     | 4     | 2     | 3     | 4     | 4     | 4     |   |
| 4     | 1     | 3     | 4     | 4     | 2     | 3     | 4     | 2     | 5     | 2     | 3     | 4     | 2     | 3     | 4     | 3     | 2     | 3     | 5     | 4     | 2     | 3     | 2     | 4     | 2     | 4     | 2     | 4     | 4     | 3 |
| 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 3     | 4     | 5     | 5     | 2     | 4     | 2     | 2     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4 |
| 4     | 4     | 4     | 2     | 4     | 2     | 3     | 2     | 2     | 2     | 3     | 4     | 4     | 2     | 2     | 2     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 4 |
| 2     | 3     | 2     | 3     | 2     | 3     | 4     | 3     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 4     | 2     | 4     | 3     | 3     | 4     | 4     | 3     | 2     | 3     | 2     | 3     | 4     |   |
| 3     | 3     | 3     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 3     | 4     | 4     | 2     | 2     | 2     | 3     | 2     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4 |
| 3     | 3     | 3     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 3     | 4     | 4     | 2     | 2     | 2     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     |   |
| 3     | 3     | 4     | 4     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 2     | 2     | 2     | 2     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     |   |
| 3     | 2     | 3     | 2     | 4     | 2     | 4     | 2     | 2     | 3     | 3     | 4     | 4     | 2     | 2     | 3     | 2     | 3     | 2     | 4     | 3     | 4     | 4     | 2     | 3     | 2     | 3     | 2     | 2     | 3     | 3 |
| 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 2     | 2     | 2     | 3     | 2     |   |
| 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 2     | 4     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 4     | 2     | 4     | 2     | 4     | 2     | 4     | 2     | 2     | 2     | 2     | 4     | 2     | 2     | 2     | 3     | 4     | 2     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 3     | 3     | 2     | 2     | 3     | 2     | 3     | 3     | 2     | 4     | 2     | 2     | 3     | 2     | 2     | 3     | 3     | 4     | 4     | 2     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     |   |
| 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 1     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 3     | 3     | 4     | 3 |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 2     | 3     | 4     | 2     | 3     | 2     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 2     | 4     | 2     | 3     | 4     | 4     | 4     | 4     |   |
| 2     | 2     | 3     | 2     | 4     | 2     | 3     | 2     | 2     | 3     | 3     | 4     | 2     | 2     | 3     | 3     | 3     | 3     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 4     | 4     | 4     | 4     | 4     | 2     | 4     | 2     | 3     | 3     | 2     | 2     | 4     | 3     | 2     | 2     | 3     | 2     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 2     | 2     | 3     | 3 |
| 2     | 2     | 3     | 3     | 4     | 2     | 3     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 2     | 4     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4 |
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3 |
| 2     | 2     | 2     | 2     | 4     | 2     | 3     | 2     | 2     | 3     | 3     | 4     | 2     | 2     | 3     | 3     | 3     | 3     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 4     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4 |
| 2     | 2     | 2     | 2     | 4     | 2     | 3     | 2     | 2     | 3     | 3     | 4     | 2     | 2     | 3     | 3     | 3     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 2     | 2     | 2     | 2     | 4     | 2     | 3     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |

Appendix 2 Database: Company 1 – Company 80

| hi241 | hi242 | hi243 | hi244 | hi245 | hi246 | hi247 | hi248 | hi249 | hi250 | hi251 | hi252 | hi253 | hi254 | hi255 | hi256 | hi257 | hi258 | hi259 | hi260 | hi261 | hi262 | hi263 | hi264 | hi265 | hi266 | hi267 | hi269 | hi270 |     |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 2     |       | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 100   | 0     | 0     |     |
| 4     | 1     | 2     | 2     | 3     | 1     | 4     | 4     | 3     | 4     | 2     |       | 2     | 1     | 1     | 3     | 2     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 1     | 1     | 0     | 0     | 100   |     |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     |       | 3     | 4     | 3     | 3     | 3     | 2     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 100   | 0     | 0     |     |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     |       | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 100   | 0     | 0     |     |
| 4     | 2     | 4     | 2     | 3     | 4     | 4     | 4     | 2     | 4     | 2     |       | 1     | 1     | 1     | 1     | 1     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 0     | 0     | 100   |     |
| 4     | 3     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     |       |       | 4     | 1     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 0     | 0     | 100 |
| 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 1     | 40    | 4     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 0     | 0     | 100   |     |
| 4     | 4     | 5     | 3     | 4     | 4     | 5     | 3     | 5     | 3     |       |       | 3     | 4     | 2     | 4     | 4     | 3     | 4     | 4     | 3     | 2     | 5     | 4     | 3     | 4     | 0     | 0     | 100   |     |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     |       | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 0     | 0     | 100   |     |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 1     | 47    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 0     | 0     | 100   |     |
| 4     | 1     | 4     | 4     | 1     | 2     | 3     | 1     | 1     | 5     | 1     | 50    | 1     | 4     | 4     | 3     | 3     | 2     | 2     | 2     | 2     | 2     | 5     | 3     | 1     | 1     | 80    | 0     | 20    |     |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 2     |       | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 0     | 0     | 50    |     |
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 2     | 4     | 2     |       | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 0     | 0     | 100   |     |
| 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 2     | 2     | 2     |       | 2     | 2     | 1     | 2     | 3     | 3     | 3     | 2     | 2     | 2     | 4     | 4     | 2     | 3     | 0     | 0     | 100   |     |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     |       | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 0     | 0     | 100   |     |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 1     | 70    | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 0     | 0     | 100   |     |
| 3     | 2     | 2     | 2     | 2     | 3     | 3     | 3     | 2     | 4     | 2     |       | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 2     | 2     | 0     | 0     | 100   |     |
| 3     | 2     | 2     | 2     | 2     | 3     | 3     | 3     | 2     | 4     | 2     |       | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 2     | 2     | 0     | 0     | 100   |     |
| 3     | 2     | 2     | 2     | 2     | 3     | 3     | 3     | 2     | 4     | 2     |       | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 2     | 2     | 0     | 0     | 100   |     |
| 3     | 2     | 2     | 2     | 2     | 3     | 3     | 3     | 2     | 4     | 2     |       | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 2     | 2     | 0     | 0     | 100   |     |
| 3     | 2     | 2     | 2     | 2     | 3     | 3     | 3     | 2     | 4     | 2     |       | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 2     | 2     | 0     | 0     | 100   |     |
| 4     | 3     | 4     | 3     | 4     | 4     | 2     | 3     | 3     | 2     |       |       | 1     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 0     | 0     | 100   |     |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 100   | 0     | 0   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     |       | 1     | 1     | 1     | 1     | 1     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 0     | 0     | 100   |     |
| 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 2     |       | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 40    | 35    | 15  |
| 3     | 2     | 4     | 3     | 3     | 3     | 3     | 4     | 2     | 2     | 2     |       | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 2     | 3     | 4     | 3     | 2     | 2     | 2     | 0     | 0     | 100   |     |
| 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 50    | 40    | 5     |     |
| 4     | 3     | 4     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 1     | 20    | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 0     | 40    | 60    |     |
| 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 1     | 50    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 0     | 0     | 100 |
| 4     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 2     |       | 2     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 3     | 0     | 0     | 80    |     |
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     |       |       | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 90    | 0     | 10    |     |
| 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 1     | 50    | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 5     | 5     | 4     | 5     | 5     | 58    | 42    | 0     |     |
| 3     | 2     | 2     | 2     | 4     | 3     | 3     | 3     | 3     | 3     | 2     |       | 2     | 4     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 4     | 2     | 4     | 3     | 3     | 0     | 0     | 100   |     |
| 4     | 3     | 3     | 2     | 3     | 5     | 5     | 5     | 2     | 2     | 1     | 50    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 5     | 5     | 4     | 5     | 0     | 0     | 100   |     |
| 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     |       |       | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 63    | 37    | 0     |     |
| 4     | 3     | 4     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 2     |       | 2     | 2     | 2     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 0     | 0     | 100   |     |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |       |       | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 0     | 0     | 100   |     |
| 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     |       |       | 3     | 5     | 3     | 4     | 3     | 3     | 4     | 4     | 2     | 2     | 4     | 3     | 3     | 2     | 0     | 0     | 100   |     |
| 4     | 3     | 3     | 2     | 4     | 3     | 1     | 2     | 3     | 3     | 2     |       | 3     | 2     | 3     | 2     | 3     | 4     | 3     | 3     | 1     | 4     | 5     | 3     | 2     | 2     | 0     | 0     | 100   |     |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |       |       | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 0     | 0     | 100   |     |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 1     | 50    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 51    | 49    | 0     |     |
| 4     | 2     | 4     | 4     | 3     | 2     | 3     | 4     | 4     | 5     | 1     | 50    | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 5     | 3     | 4     | 4     | 0     | 80    | 20    |     |
| 4     | 2     | 4     | 3     | 4     | 4     | 4     | 4     | 2     | 4     | 1     | 10    | 3     | 2     | 2     | 2     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 0     | 0     | 100 |
| 2     | 3     | 4     | 2     | 4     | 2     | 4     | 3     | 4     | 3     |       |       | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 2     | 4     | 3     | 4     | 2     | 4     | 3     | 0     | 0     | 100   |     |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 2     |       | 2     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 0     | 30    | 50    |     |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 2     |       | 2     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 0     | 30    | 50    |     |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 2     |       | 2     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 0     | 30    | 50    |     |
| 4     | 3     | 4     | 3     | 4     | 4     | 4     | 2     | 4     | 2     |       |       | 4     | 3     | 4     | 2     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 0     | 0     | 100   |     |
| 4     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 1     | 20    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 0     | 0     | 100   |     |
| 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 1     | 90    | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 80    | 0     | 20    |     |
| 4     | 4     | 4     | 2     | 3     | 3     | 4     | 3     | 2     | 4     | 2     |       | 3     | 2     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 2     | 100   | 0     | 0     |       |     |
| 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 2     | 2     |       |       | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 0     | 0     | 100   |       |     |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     |       | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 0     | 0     | 100   |     |
| 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 2     |       | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 0     | 0     | 100   |     |
| 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 4     |       |       | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 1     | 4     | 3     | 3     | 2     | 2     | 0     | 0     | 100   |     |
| 2     | 4     | 4     | 4     | 2     | 3     | 4     | 4     | 4     | 2     | 2     |       | 4     | 4     | 4     | 4     | 4     | 2     | 2     | 3     | 2     | 4     | 5     | 5     | 4     | 2     | 0     | 0     | 100   |     |
| 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     |       |       | 3     | 5     | 3     | 4     | 3     | 3     | 4     | 4     | 2     | 2     | 4     | 3     | 3     | 2     | 0     | 0     | 100   |     |
| 4     | 5     | 5     | 3     | 5     | 2     | 5     | 5     | 5     | 5     |       |       | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 5     | 5     | 4     | 5     | 0     | 0     | 100   |       |     |
| 4     | 3     | 4     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 1     | 11    | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 0     | 14    | 86    |     |
| 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     |       |       | 2     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 0     | 0     | 100   |     |
| 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     |       |       | 2     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 0     | 0     | 100   |     |
| 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 2     | 4     |       |       | 4     | 3     | 3     | 4     | 2     | 3     | 4     | 4     | 2     | 2     | 5     | 3     | 3     | 0     | 0     | 100   |       |     |
| 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     |       |       | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 0     | 0     | 100   |     |
| 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     |       |       | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 0     | 0     | 100   |     |
| 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     |       |       | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 0     | 0     | 100   |     |
| 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 3     |       |       | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 0     | 37    | 63    |     |
| 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     |       |       | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 5     | 5     | 4     | 5     | 0     | 0     | 100   |     |
| 4     | 2     | 4</   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |     |

Appendix 2 Database: Company 1 – Company 80

| hi271 | hi272  | hi273 | hi274 | hi275 | hi276 | hi277      | hi278 | hi279      | hi280 | hi281 | hi282 | hi283 | hi284 | hi285        | hi286      | hi287 | hi288 | hi289 | hi290 |
|-------|--------|-------|-------|-------|-------|------------|-------|------------|-------|-------|-------|-------|-------|--------------|------------|-------|-------|-------|-------|
| 0     | 1223   | 6     | 1958  | 14    | 5     | 800000000  | 1     |            |       | 20    |       | 2000  | 5     | Indonesia    | 100000000  |       | 50    | 50    |       |
| 0     | 180    | 3     | 2005  | 1     | 2     | 400000000  | 1     | 800000000  | 2.5   | 60    |       | 2007  | 7     | Vietnam      | 10000000   | 20    | 0     | 90    | 10    |
| 0     | 480    | 3     | 1983  | 16    | 5     | 1600000000 | 2     | 600000000  | 89    | 39    |       | 2008  | 7     | Thailand     | 60000000   | 200   | 6     | 6     | 94    |
| 0     | 480    | 4     | 1983  | 16    | 5     | 1600000000 | 2     | 600000000  | 89    | 39    |       | 2008  | 7     | HongKong     | 60000000   | 200   | 6     | 6     | 94    |
| 0     | 1100   | 6     | 1958  | 14    | 16    | 114000000  | 2     | 27740000   |       | 7.6   |       | 2006  | 7     | Singapore    | 100000     | 1     | 96    | 100   | 10    |
| 0     | 15     | 1     | 1998  | 14    | 16    | 500000     | 1     |            |       |       |       | 2008  | 7     | Canada       | 100000     | 3     |       |       | 90    |
| 0     | 200    | 3     | 1993  | 14    | 16    | 2000000    | 1     | 20000000   | 23    | 18    | 15    | 2010  | 7     | Vietnam      | 600000     | 7     | 40    | 60    | 40    |
| 0     | 2000   | 6     | 1997  | 5     | 20    |            | 1     |            |       |       |       | 2000  | 5     | HongKong     |            |       | 75    |       |       |
| 0     | 2000   | 6     | 2001  | 14    | 16    | 10000000   | 1     | 10000000   | 30    | 10    | 5     | 2006  | 7     | America      | 4000000    | 100   | 30    | 70    | 30    |
| 0     | 100    | 3     | 1998  | 2     | 1     |            | 1     |            |       |       |       | 2000  | 5     |              |            |       |       |       |       |
| 0     | 50000  | 8     | 1960  | 16    | 5     | 200000000  | 1     | 20000000   | 40    | 5     | 20    | 2004  | 6     | Algeria      | 5000000    | 300   | 20    | 80    | 20    |
| 50    | 458    | 4     | 1997  | 17    | 20    |            | 1     |            |       |       |       | 2009  | 7     | Zimbabwe     |            | 26    |       |       |       |
| 0     | 2300   | 6     | 1991  | 17    | 20    | 130000000  | 1     | 50000000   |       | 20    |       | 2007  | 7     | UAE          |            | 10    | 70    | 70    | 30    |
| 0     | 13     | 1     | 2006  | 17    | 20    |            | 1     |            |       |       |       | 2007  | 7     | Japan        |            | 7     |       | 100   |       |
| 0     | 2000   | 6     | 1996  | 17    | 20    |            | 1     |            |       |       |       | 2000  | 5     | America      |            |       |       |       |       |
| 0     | 80     | 2     | 2002  | 14    | 14    |            | 1     |            |       |       |       | 2010  | 7     | Canada       | 135000     | 10    | 10    | 50    | 20    |
| 0     | 286    | 4     | 1994  | 17    | 20    | 15870000   | 1     | 9520000    | 30    | 100   | 50    | 2006  | 7     | Laos         | 4850000    | 325   | 90    | 90    | 10    |
| 0     | 286    | 4     | 1994  | 17    | 20    | 15870000   | 1     | 9520000    | 30    | 100   | 50    | 2006  | 7     | Laos         | 4850000    | 325   | 90    | 90    | 10    |
| 0     | 286    | 4     | 1994  | 17    | 20    | 15870000   | 1     | 9520000    | 30    | 100   | 50    | 2006  | 7     | Laos         | 4850000    | 325   | 90    | 90    | 10    |
| 0     | 286    | 4     | 1994  | 17    | 20    | 15870000   | 1     | 9520000    | 30    | 100   | 50    | 2006  | 7     | Laos         | 4850000    | 325   | 90    | 90    | 10    |
| 0     | 286    | 4     | 1994  | 17    | 20    | 15870000   | 1     | 9520000    | 30    | 100   | 50    | 2006  | 7     | Laos         | 4850000    | 325   | 90    | 90    | 10    |
| 0     | 286    | 4     | 1994  | 17    | 20    | 15870000   | 1     | 9520000    | 30    | 100   | 50    | 2006  | 7     | Laos         | 4850000    | 325   | 90    | 90    | 10    |
| 0     | 180    | 3     | 1992  | 17    | 20    |            | 1     |            |       |       |       | 2007  | 7     | Vietnam      | 29800000   | 50    |       |       |       |
| 0     | 140    | 3     | 2008  | 14    | 15    | 95900000   | 1     | 4170000    | 95    | 20    | 15    | 2009  | 7     | South Korea  | 26000000   | 10    | 60    | 60    | 40    |
| 0     | 80     | 2     | 2004  | 17    | 20    |            | 1     |            |       |       |       | 2006  | 7     | Laos         | 8422800    |       |       |       |       |
| 10    | 350000 | 9     | 1991  | 5     | 19    | 1800000000 | 2     | 890000000  | 38    | 29    | 27    | 1997  | 5     | Laos         | 890000000  | 17000 | 80    | 50    | 50    |
| 0     | 1200   | 6     | 2002  | 10    | 8     | 31740000   | 1     | 1746000    | 5.5   | 2.3   | 0.5   | 2003  | 6     | Kyrgyzstan   | 6000000    | 12    | 0     | 85    | 15    |
| 5     | 16000  | 8     | 1958  | 14    | 16    | 3850000000 | 4     | 2360000000 | 40    | 31    | 30    | 2000  | 5     | HongKong     | 2550000000 | 14000 | 80    | 50    | 50    |
| 0     | 220    | 3     | 1994  | 14    | 14    | 400000000  | 1     | 280000000  | 8     | 1.5   | 0.8   | 2007  | 7     | Vietnam      | 80000000   | 45    | 68    | 80    | 20    |
| 0     | 530    | 5     | 2006  | 17    | 20    | 8000000    | 1     | 6800000    |       | 50    | 50    | 2010  | 7     | Japan        | 600000     | 20    |       |       |       |
| 20    | 120    | 3     | 2001  | 11    | 9     | 5000000    | 1     | 1000000    | 12    | 8     | 8     | 2007  | 7     | HongKong     | 500000     | 22    | 100   | 100   |       |
| 0     | 556    | 5     | 1995  | 14    | 14    | 50000000   | 1     | 40000000   | 40    | 35    | 30    | 2000  | 5     | Pakistan     | 3000000    | 45    | 80    | 80    | 20    |
| 0     | 2700   | 6     | 2007  | 17    | 20    | 2020000000 | 3     | 2200000000 | 18.2  | 250   | 0.6   | 2009  | 7     | America      | 50000000   | 8     | 30    | 30    | 70    |
| 0     | 131    | 3     | 2005  | 16    | 5     | 30000000   | 1     | 10650000   | 35    | 2.8   | 5.7   | 2009  | 7     | Angola       | 4980000    | 16    | 91    | 86    | 14    |
| 0     | 432    | 4     | 2001  | 1     | 2     | 16520000   | 1     | 6710000    | 40    | 18    | 5     | 2010  | 7     | Laos         | 2000000    | 46    | 90    | 90    | 10    |
| 0     | 2000   | 6     | 1994  | 14    | 14    | 250000000  | 1     | 140000000  | 65    | 2.1   | 0.8   | 2010  | 7     | Burma        | 2040000    | 32    | 86    | 91    | 9     |
| 0     | 1760   | 6     | 1970  | 17    | 20    | 500000000  | 1     | 600000000  | 14    | 11    | 23    | 2002  | 6     | Laos         | 81280000   | 54    | 93    | 93    | 7     |
| 0     | 1760   | 6     | 1970  | 17    | 20    | 500000000  | 1     | 600000000  | 14    | 11    | 23    | 2002  | 6     | Laos         | 3000000    | 24    | 93    | 93    | 7     |
| 0     | 1760   | 6     | 1970  | 17    | 20    | 500000000  | 1     | 600000000  | 14    | 11    | 23    | 2010  | 7     | Laos         | 9980000    | 15    | 90    | 90    | 10    |
| 0     | 1400   | 6     | 2001  | 6     | 11    | 500000000  | 1     | 1900000000 | 31    | 16    | 27    | 2005  | 6     | India        | 46170000   | 69    | 92    | 92    | 8     |
| 0     | 50     | 1     | 2006  | 17    | 20    | 20000000   | 1     | 1760000    | 8.8   | 1.1   | 0.3   | 2010  | 7     | New Zealand  | 2500000    | 5     | 81    | 75    | 25    |
| 0     | 10000  | 8     | 1986  | 2     | 1     | 5000000000 | 6     | 5000000000 | 3     | 10    |       | 2005  | 6     | UK           |            | 5     | 90    |       |       |
| 0     | 300    | 4     | 1996  | 11    | 9     | 20000000   | 1     | 3000000    | 40    | 5     | 20    | 2006  | 7     | Germany      | 5000000    | 50    | 30    | 70    | 20    |
| 0     | 4800   | 6     | 1995  | 6     | 11    | 550000000  | 1     |            |       | 15    |       | 2011  | 8     | Kenya        |            | 35    |       |       |       |
| 0     | 800    | 5     | 2000  | 10    | 8     |            | 1     |            |       |       |       | 2008  | 7     | Kyrgyzstan   |            | 12    | 90    | 90    | 10    |
| 20    | 183    | 3     | 1999  | 14    | 15    |            | 1     |            |       |       |       | 2003  | 7     | Iran         |            |       |       |       |       |
| 20    | 183    | 3     | 1999  | 14    | 15    |            | 1     |            |       |       |       | 2003  | 6     | South Africa |            |       |       |       |       |
| 20    | 183    | 3     | 1999  | 14    | 15    |            | 1     |            |       |       |       | 2003  | 6     | Morocco      |            |       |       |       |       |
| 20    | 183    | 3     | 1999  | 14    | 15    |            | 1     |            |       |       |       | 2003  | 6     | Egypt        |            |       |       |       |       |
| 60    | 60     | 2     | 2008  | 16    | 5     | 230000000  | 1     | 70000000   | 12    | 40    | 10    | 2009  | 7     | HongKong     | 100000     | 4     | 100   | 100   | 0     |
| 0     | 50     | 2     |       | 17    | 20    |            | 1     |            |       |       |       | 2000  | 5     |              |            |       |       |       |       |
| 0     | 75     | 2     | 2006  | 15    | 16    | 303000000  | 1     |            |       |       |       | 2000  | 5     | South Korea  | 99900000   | 182   |       |       |       |
| 0     | 50     | 3     | 1996  | 17    | 20    |            | 1     |            |       |       |       | 2000  | 5     |              |            |       |       |       |       |
| 0     | 150    | 3     | 1992  | 14    | 14    | 4000000    | 1     | 3000000    | 15    | 20    | 10    | 2009  | 7     | Pakistan     | 200000     | 11    | 70    | 70    | 30    |
| 0     | 2578   | 6     | 2006  | 14    | 14    | 620000000  | 1     | 28000000   |       |       |       | 2008  | 7     | America      | 3000000    | 100   | 10    |       |       |
| 0     | 318    | 4     | 1999  | 14    | 14    | 15562400   | 1     | 8843000    | 20.85 | 5.32  | 8     | 2008  | 7     | South Korea  | 195000     | 6     | 35    | 15    | 10    |
| 0     | 500    | 5     | 2003  | 17    | 20    | 30000000   | 1     | 16830000   | 52    | 16    | 0.7   | 2010  | 7     | Taiwan       | 440000     | 8     | 87    | 86    | 14    |
| 0     | 1625   | 6     | 1950  | 14    | 14    | 200000000  | 1     | 160000000  | 80    | 8     | 8     | 2003  | 6     | Vietnam      | 840000     | 18    | 86    | 75    | 25    |
| 0     | 45     | 1     | 2010  | 16    | 5     | 20000000   | 1     | 1620000    | 75    | 13    | 21    | 2011  | 8     | Kenya        | 10000000   | 10    | 93    | 76    | 24    |
| 0     | 1040   | 6     | 1998  | 2     | 1     | 300000000  | 1     | 500000000  | 231   | 12    | 24    | 2006  | 7     | Burma        | 3000000    | 16    | 85    | 80    | 20    |
| 0     | 162    | 3     | 2000  | 2     | 1     | 2000000    | 1     | 4000000    | 200   | 17    | 1.8   | 2009  | 7     | Vietnam      | 130000     | 8     | 86    | 81    | 29    |
| 0     | 2682   | 6     | 2004  | 16    | 5     | 500000000  | 1     | 420000000  | 93    | 14    | 3.4   | 2010  | 7     | Vietnam      | 2000000    | 200   | 86    | 72    | 28    |
| 0     | 2682   | 6     | 2004  | 16    | 5     | 500000000  | 1     | 420000000  | 93    | 14    | 3.4   | 2010  | 7     | Vietnam      | 2000000    | 200   | 86    | 72    | 28    |
| 0     | 2000   | 6     | 1997  | 16    | 5     | 1000000000 | 2     | 300000000  | 35    | 11    | 6     | 2010  | 7     | HongKong     | 67950000   | 35    | 86    | 68    | 32    |
| 0     | 78     | 2     | 2003  | 14    | 16    | 10000000   | 1     | 5000000    | 50    | 2.3   | 5.4   | 2010  | 7     | Burma        | 2000000    | 5     | 89    | 73    | 27    |
| 0     | 78     | 2     | 2003  | 17    | 20    | 10000000   | 1     | 5000000    | 50    | 2.3   | 5.4   | 2010  | 7     | Burma        | 2420000    | 5     | 89    | 73    | 27    |
| 0     | 78     | 2     | 2003  | 17    | 20    | 10000000   | 1     | 5000000    | 50    | 2.3   | 5.4   | 2010  | 7     | Burma        | 5000000    | 8     | 89    | 73    | 27    |
| 0     | 138    | 3     | 2006  | 17    | 20    | 3000000    | 1     | 4670000    | 152   | 13    | 0.62  | 2008  | 7     | Singapore    | 160000     | 8     | 94    | 88    | 12    |
| 0     | 1041   | 6     | 1998  | 2     | 1     | 300000000  | 1     | 500000000  | 231   | 12    | 24    | 2007  | 7     | India        | 50000      | 5     | 85    | 80    | 20    |
| 0     | 120    | 3     | 2001  | 16    | 5     | 10000000   | 1     | 12000000   | 120   | 8     | 8     | 2008  | 7     | Kenya        | 770000     | 10    | 95    | 92    | 8     |
| 90    | 75     | 2     | 2006  | 17    | 20    | 2815000000 | 3     |            | 30    |       |       | 2000  | 5     | HongKong     | 476000000  | 280   |       |       |       |
| 0     | 2000   | 6     | 2001  | 7     | 12    | 10000000   | 1     | 13870000   | 120   | 12    | 3.4   | 2007  | 7     | Laos         | 600000     | 28    | 90    | 85    | 15    |
| 0     | 38     | 1     | 2003  | 14    | 17    | 1000000    | 1     | 6000000    | 215   | 28    | 11    | 2009  | 7     | Uganda       | 9980000    | 5     | 85    | 78    | 22    |
| 10    | 65000  | 9     | 1958  | 14    | 16    | 1500000000 | 2     | 1500000    | 40    | 30    | 20    | 1980  | 1     | Singapore    | 100000     |       | 60    | 50    | 40    |
| 10    | 3500   | 6     | 1993  | 14    | 16    | 24170000   | 1     | 2000000    | 39    | 23    | 19    | 1995  | 4     | Cambodia     | 2300000    | 1530  | 60    | 30    | 30    |
| 11    | 980    | 5     | 1991  | 12    | 20    | 3200000    | 1     | 2100000    | 45    | 18    | 16    | 1993  | 4     | Zambia       | 1800000    | 899   | 70    | 30    | 40    |
| 10    | 1532   | 6     | 2003  | 14    | 15    | 3500000    | 1     | 5000000    | 43.5  | 23.5  | 13.5  | 2007  | 7     | HongKong     | 380000     | 65800 | 70    | 60    | 30    |
| 10    | 3500   | 6     | 1993  | 14    | 16    | 24170000   | 1     | 2000000    | 39    | 23    | 19    | 1995  | 4     | Georgia      | 2300000    | 1530  | 60    | 30    | 30    |
| 10    | 2890   | 6     | 1998  | 17    | 20    | 5000000    | 1     | 1000000    | 50    | 30    | 20    | 1999  | 5     | America      | 2500000    | 1500  | 60    | 20    | 20    |
| 10    | 3500   |       |       |       |       |            |       |            |       |       |       |       |       |              |            |       |       |       |       |

Appendix 2 Database: Company 1 – Company 80

| hi291 | hi292 | hi293 | hi294 | hi295 | hi296 | hi298 | hi299 | hi300 | hi301 | hi302 | hi303 | hi304 | hi305 | hi306 | hi307 | hi308 | hi309       | hi311 | hi312 | hi313 | hi314 | hi315 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|-------|-------|-------|-------|-------|
|       | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       |       | 1     | 1     |       |       | Canadian    | 1     | 3     | 7     | 6     | 27    |
| 35    | 1     |       |       |       | 1     |       | 2     | 1     | 1     | 1     |       |       |       | 1     |       |       | Chinese     | 1     | 4     | 6     | 6     | 7     |
| 20    |       |       | 1     | 1     | 1     |       | 2     |       |       |       |       |       | 1     |       |       |       | Chinese     | 1     | 3     | 4     | 6     | 7     |
| 20    |       |       | 1     |       | 1     |       | 2     |       |       |       |       |       | 1     |       |       |       | Chinese     | 1     | 3     | 4     | 6     | 7     |
| 7.7   |       |       | 1     |       | 1     |       | 2     |       |       |       | 1     |       |       |       |       |       | Chinese     | 1     | 3     | 6     | 5     | 20    |
|       | 1     |       |       |       | 1     |       | 2     | 1     |       | 1     |       |       |       |       |       |       | Chinese     | 2     | 2     | 5     | 5     | 14    |
| 27    |       |       | 1     |       | 1     |       | 1     |       |       | 1     |       | 1     |       |       | 1     | 1     | Chinese     | 1     | 3     | 5     | 5     | 10    |
|       | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     |       |       |       |       |       |       | Chinese     | 1     | 2     | 4     | 6     | 6     |
| 30    |       |       | 1     |       | 1     |       | 2     |       | 1     |       |       | 1     |       |       |       |       | Chinese     | 1     | 1     | 5     | 5     | 11    |
|       |       | 1     |       |       | 1     |       | 2     |       |       | 1     | 1     |       |       |       |       |       | Chinese     | 1     | 2     | 8     | 6     | 5     |
| 30    | 1     |       |       |       | 1     |       | 2     | 1     |       | 1     | 1     |       |       | 1     |       |       | Chinese     | 2     | 4     | 3     | 5     | 4     |
|       |       | 1     |       |       | 1     |       | 1     |       |       |       |       |       |       |       |       |       | Chinese     | 2     | 4     | 5     | 4     | 7     |
|       | 1     |       |       |       | 1     |       | 2     |       |       | 1     |       | 1     |       |       | 1     |       | Chinese     | 2     | 3     | 5     | 5     | 6     |
|       |       |       | 1     |       | 1     |       | 2     |       |       |       |       |       |       |       | 1     |       | Japanese    | 2     | 4     | 6     | 4     | 5     |
|       | 1     |       |       | 1     |       |       |       |       |       |       |       |       |       |       |       | 1     | Chinese     | 1     | 4     | 5     | 5     | 10    |
| 10    | 1     | 1     | 1     |       | 1     |       | 1     |       |       | 1     |       | 1     | 1     |       | 1     |       | Chinese     | 2     | 3     | 3     | 5     | 2     |
| 10    | 1     |       |       |       | 1     |       | 1     |       |       | 1     |       |       |       |       |       |       | Chinese     | 2     | 3     | 4     | 5     | 4     |
| 10    | 1     |       |       |       | 1     |       | 1     |       |       | 1     |       |       |       |       |       |       | Chinese     | 2     | 3     | 4     | 5     | 4     |
| 10    | 1     |       |       |       | 1     |       | 1     |       |       | 1     |       |       |       |       |       |       | Chinese     | 2     | 3     | 4     | 5     | 3     |
| 10    | 1     |       |       |       | 1     |       | 1     |       |       | 1     |       |       |       |       |       |       | Chinese     | 2     | 3     | 4     | 5     | 4     |
| 10    | 1     |       |       |       | 1     |       | 1     |       |       | 1     |       |       |       |       |       |       | Chinese     | 2     | 3     | 5     | 5     | 4     |
| 10    | 1     |       |       |       | 1     |       | 1     |       |       | 1     |       |       |       |       |       |       | Chinese     | 2     | 3     | 5     | 5     | 5     |
|       | 1     |       |       |       | 1     |       | 1     |       |       |       |       |       |       | 1     |       |       | Chinese     | 1     | 4     | 5     | 5     | 10    |
| 80    |       |       | 1     | 1     |       |       |       |       |       |       |       | 1     |       |       |       |       | Korean      | 2     | 3     | 3     | 5     | 3     |
|       |       | 1     |       | 1     |       |       | 2     |       |       |       |       |       | 1     |       |       |       | Chinese     | 1     | 3     | 4     | 5     | 11    |
| 100   |       |       | 1     |       | 1     |       | 2     | 1     |       | 1     | 1     |       | 1     |       |       |       | Chinese     | 2     | 3     | 3     | 3     | 3     |
| 80    | 1     |       |       |       | 1     |       | 2     |       | 1     | 1     |       |       | 1     | 1     |       |       | Chinese     | 2     | 4     | 3     | 5     | 4     |
| 100   |       |       | 1     |       | 1     |       | 2     | 1     |       | 1     | 1     |       | 1     |       |       |       | Chinese     | 1     | 4     | 4     | 5     | 8     |
| 1.4   | 1     |       |       | 1     |       |       | 1     |       | 1     |       |       |       | 1     | 1     |       |       | Chinese     | 1     | 3     | 5     | 6     | 12    |
|       | 1     |       |       |       | 1     |       |       |       |       |       | 1     | 1     |       |       |       |       | Japanese    | 1     | 1     | 4     | 6     | 5     |
| 12    | 1     |       |       | 1     |       |       | 2     | 1     |       | 1     |       | 1     |       |       |       |       | Chinese     | 2     | 2     | 6     | 5     | 11    |
| 80    | 1     |       |       |       | 1     |       | 2     | 1     |       | 1     |       |       |       |       |       |       | Chinese     | 1     | 3     | 4     | 5     | 8     |
| 111   | 1     |       | 1     | 1     | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     | 1     |       | American    | 1     | 4     | 4     | 5     | 2     |
| 48    | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     |       |       |       | 1     | 1     |       | Chinese     |       | 4     | 3     | 5     | 4     |
| 27    | 1     |       | 1     |       | 1     |       | 1     | 1     | 1     |       |       |       |       | 1     |       |       | Chinese     | 1     | 4     | 4     | 5     | 5     |
| 53    | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       | Chinese     | 1     | 4     | 3     | 4     | 5     |
| 168   | 1     |       |       | 1     |       |       | 2     | 1     |       | 1     |       | 1     |       |       |       |       | Chinese     | 2     | 2     | 6     | 5     | 11    |
| 105   | 1     |       |       |       | 1     |       | 1     | 1     | 1     | 1     |       |       |       | 1     | 1     |       | Chinese     | 2     | 4     | 3     | 5     | 4     |
| 125   | 1     |       |       |       | 1     |       | 1     | 1     | 1     | 1     | 1     |       |       | 1     | 1     |       | Chinese     | 1     | 4     | 4     | 4     | 7     |
| 350   |       |       | 1     |       | 1     |       | 1     | 1     |       |       |       |       |       | 1     | 1     | 1     | Chinese     | 2     | 3     | 3     | 5     | 5     |
| 28    | 1     |       |       |       | 1     |       | 1     | 1     | 1     | 1     |       |       |       | 1     |       |       | Chinese     | 1     | 4     | 5     | 5     | 3     |
|       |       | 1     |       |       | 1     |       | 1     | 1     |       |       |       |       |       |       |       |       | Chinese     | 1     | 1     | 5     | 6     | 19    |
| 30    | 1     |       |       |       | 1     |       | 1     | 1     |       | 1     | 1     |       |       | 1     |       |       | German      | 1     | 4     | 4     | 5     | 5     |
|       | 1     |       |       |       | 1     |       | 2     |       |       |       |       | 1     |       | 1     |       |       | Chinese     | 1     | 3     | 8     | 5     | 15    |
|       | 1     |       |       |       | 1     |       | 1     |       |       |       |       |       |       | 1     |       |       | Chinese     | 1     | 3     | 3     | 5     | 6     |
|       | 1     |       |       |       | 1     |       | 2     |       | 1     |       |       | 1     |       | 1     |       |       | Chinese     | 1     | 3     | 5     | 5     | 12    |
|       | 1     |       |       |       | 1     |       | 2     |       | 1     |       |       | 1     |       | 1     |       |       | Chinese     | 1     | 3     | 5     | 5     | 12    |
|       | 1     |       |       |       | 1     |       | 2     |       | 1     |       |       | 1     |       | 1     |       |       | Chinese     | 1     | 3     | 5     | 5     | 12    |
| 14    |       |       | 1     |       | 1     |       | 2     |       |       |       |       | 1     |       |       | 1     |       | HongKong    | 2     | 3     | 4     | 6     | 7     |
|       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Chinese     |       | 2     | 2     | 5     |       |
|       |       |       | 1     | 1     |       |       | 1     | 1     |       | 1     | 1     |       |       |       |       | 1     | Korean      | 1     | 3     | 5     | 5     | 16    |
|       | 1     |       |       |       | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     |       |       | Chinese     | 2     | 4     | 6     | 5     | 22    |
|       | 1     |       |       |       | 1     |       | 2     |       | 1     |       | 1     |       |       |       |       |       | Chinese     | 1     | 2     | 9     | 4     | 20    |
|       | 1     |       |       |       | 1     |       | 1     | 1     |       | 1     |       |       |       | 1     | 1     |       | Chinese     | 1     | 4     | 4     | 5     | 7     |
| 8     | 1     |       |       |       | 1     |       | 2     |       |       | 1     |       |       |       |       |       |       | Korean      | 1     | 2     | 7     | 5     | 24    |
| 131   | 1     |       |       |       | 1     |       | 2     |       | 1     | 1     |       |       |       | 1     |       |       | Taiwan      | 2     | 4     | 4     | 4     | 2     |
| 114   | 1     |       |       | 1     |       |       | 2     | 1     |       | 1     |       | 1     |       |       |       |       | Chinese     | 2     | 4     | 3     | 5     | 7     |
| 173   | 1     |       |       |       | 1     |       | 1     | 1     | 1     | 1     |       |       |       | 1     |       |       |             | 2     | 4     | 3     | 5     | 2     |
| 284   | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       | Chinese     | 2     | 4     | 3     | 5     | 5     |
|       | 1     |       |       | 1     |       |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       | Taiwan      | 1     | 4     | 2     | 4     | 3     |
| 169   | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       | 1     | 1     | 1     |       |       |             | 1     | 4     | 4     | 5     | 6     |
| 169   | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       | 1     | 1     | 1     |       |       |             | 1     | 4     | 4     | 5     | 6     |
| 168   | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     | 1     | 1     |       | 1     | 1     |       | HongKong    | 2     | 4     | 3     | 5     | 5     |
| 132   |       | 1     | 1     |       | 1     |       | 1     | 1     | 1     | 1     |       | 1     | 1     |       |       |       | Chinese     | 2     | 4     | 4     | 5     | 3     |
| 132   |       | 1     | 1     |       | 1     |       | 1     | 1     | 1     | 1     |       | 1     | 1     |       |       |       | Chinese     | 2     | 4     | 2     | 5     | 3     |
| 132   |       | 1     | 1     |       | 1     |       | 1     | 1     | 1     | 1     |       | 1     | 1     |       |       |       | Chinese     | 2     | 4     | 2     | 5     | 3     |
| 31    | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       | Singaporean | 2     | 4     | 3     | 5     | 4     |
| 284   | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       | Chinese     | 2     | 4     | 3     | 5     | 5     |
| 63    | 1     |       |       | 1     |       |       | 2     | 1     |       | 1     |       | 1     |       |       |       |       | Chinese     | 2     | 2     | 6     | 5     | 17    |
|       |       |       | 1     | 1     |       |       | 1     | 1     |       | 1     |       |       |       |       |       | 1     | HongKong    | 1     | 3     | 5     | 5     | 16    |
| 158   | 1     | 1     |       |       |       | 1     | 1     | 1     |       |       |       |       | 1     | 1     |       |       | Lao         | 2     | 4     | 6     | 5     | 5     |
| 76    | 1     |       |       |       | 1     |       | 1     | 1     | 1     | 1     |       | 1     |       | 1     |       |       | Chinese     | 1     | 4     | 4     | 5     | 5     |
| 38.9  | 1     | 1     | 1     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese     | 1     | 3     | 5     | 6     | 10    |
| 23.8  | 1     |       |       | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | HongKong    | 1     | 4     | 4     | 5     | 5     |
| 23.5  | 1     | 1     | 1     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |             | 1     | 4     | 4     | 4     | 3     |
| 45.5  | 1     | 1     | 1     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | Singaporean | 2     | 4     | 4     | 5     | 5     |
| 23.8  | 1     |       | 1     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | HongKong    | 1     | 4     | 4     | 5     | 5     |
| 0     | 1     |       |       | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |             | 1     | 4     | 4     | 5     | 4     |
| 23.8  | 1     |       | 1     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | HongKong    | 1     | 4     | 4     | 5     | 5     |



Appendix 2 Database: Company 1 – Company 80

| hi316 | hi317 | hi318 | hi319          | hi320 | hi321 | hi322          | hi323 | hi324 | hi325       | hi326 | hi327  | hi329 | hi330 | hi331 | hi332 | hi333 | hi334 | hi335 |
|-------|-------|-------|----------------|-------|-------|----------------|-------|-------|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 5     | 15    | 3     | Canada         | 1     | 3     | Canada         | 1     | 0     |             | 2     | fluent | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 4     | 4     |       |                | 2     |       |                | 2     |       |             | 2     | low    | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 3     | 7     | 3     | Thailand       | 1     |       |                | 2     |       |             | 2     | fluent | 2     | 1     | 1     | 2     | 2     | 1     | 2     |
| 3     | 7     | 3     | HongKong       | 1     |       |                | 2     |       |             | 2     | fluent | 2     | 1     | 1     | 2     | 2     | 1     | 2     |
| 5     | 20    |       |                | 2     |       |                | 2     |       |             | 2     | low    | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 14    | 4     | 4     | Canada         | 1     | 2     | Canada         | 1     |       |             | 2     |        | 1     | 1     | 2     | 2     | 1     | 2     | 1     |
| 5     | 5     |       |                | 2     |       |                | 2     |       |             | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 3     | 2     |       |                | 2     |       |                | 2     |       |             | 2     |        | 1     | 2     | 2     | 2     | 1     | 2     | 1     |
| 11    | 11    |       |                | 2     |       |                | 2     |       |             | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 3     | 1     |       |                | 2     |       |                | 2     |       |             | 2     |        | 1     | 1     | 2     | 2     | 1     | 2     | 1     |
| 4     | 3     | 4     | Algeria        | 1     | 4     | Algeria        | 1     |       |             | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 7     | 3     |       |                | 2     |       |                | 2     |       |             | 2     |        | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 5     | 5     |       |                | 2     |       |                | 2     |       |             | 2     | good   | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 3     |       |       |                | 2     |       |                | 2     |       |             | 2     |        | 1     | 1     | 2     | 2     | 2     | 1     | 1     |
| 2     | 1     |       |                | 2     |       |                | 2     |       |             | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 2     | 2     | New Zealand    | 1     | 7     | New Zealand    | 1     | 1     | New Zealand | 1     | good   | 1     | 1     | 1     | 2     |       |       | 1     |
| 4     | 4     |       |                | 2     |       |                | 2     |       |             | 2     | good   | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 3     | 2     |       |                | 2     |       |                | 2     |       |             | 2     | good   | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 2     | 2     |       |                | 2     |       |                | 2     |       |             | 2     | good   | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 2     | 2     |       |                | 2     |       |                | 2     |       |             | 2     | good   | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 4     | 4     |       |                | 2     |       |                | 2     |       |             | 2     | good   | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 2     | 2     |       |                | 2     |       |                | 2     |       |             | 2     | good   | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 10    | 2     |       |                | 2     |       |                | 2     |       |             | 2     |        | 1     | 1     | 1     | 2     | 1     | 1     | 2     |
| 3     | 3     |       |                | 2     |       |                | 2     |       |             | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 6     | 11    | 5     | Laos           | 1     | 5     | Laos           | 1     |       |             | 2     | basic  | 2     | 1     | 1     | 2     | 2     | 2     | 2     |
| 3     |       |       |                | 2     |       |                | 2     | 0     |             | 2     |        | 1     | 1     | 1     | 2     | 1     | 2     | 1     |
| 3     | 1     |       |                | 2     |       |                | 2     |       |             | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 8     | 5     |       |                | 2     |       |                | 2     |       |             | 2     |        | 1     | 1     | 1     | 2     | 1     | 2     | 1     |
| 6     | 3     |       |                | 2     |       |                | 2     | 1     | Canada      | 1     | fluent | 2     | 1     | 1     | 2     | 1     | 1     | 1     |
| 5     | 5     | 3     | Japan          | 1     | 5     | Japan          | 1     | 1     | Japan       | 1     | fluent | 2     | 1     | 1     | 2     | 1     | 1     | 1     |
| 11    | 4     |       |                | 2     |       |                | 2     |       |             | 2     | poor   | 1     | 1     | 2     | 2     | 1     | 1     | 2     |
| 5     | 8     |       |                | 2     |       |                | 2     |       |             | 2     | fluent | 2     | 1     | 1     | 2     | 1     | 1     | 1     |
| 2     | 2     | 1     | America        | 1     | 1     | America        | 1     |       |             | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 4     |       |       |                | 2     |       |                | 2     |       |             | 2     | basic  | 2     | 2     | 1     | 2     | 1     | 2     | 1     |
| 2     | 2     | 1     | Laos           | 1     | 1     | Laos           | 1     |       |             | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 1     | 1     |
| 2     | 2     |       |                | 2     |       |                | 2     |       |             | 2     | poor   | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 11    | 4     |       |                | 2     |       |                | 2     |       |             | 2     | poor   | 1     | 1     | 2     | 2     | 1     | 1     | 2     |
| 2     | 3     |       |                | 2     |       |                | 2     |       |             | 2     |        | 1     | 1     | 1     | 1     | 2     | 1     | 2     |
| 3     | 3     |       |                | 2     |       |                | 2     |       |             | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 3     | 2     |       |                | 2     |       |                | 2     |       |             | 2     |        | 1     | 1     | 1     | 1     | 1     | 2     | 1     |
| 1     | 1     |       |                | 2     |       |                | 2     |       |             | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 1     | 2     |
| 2     | 10    | 2     | UK             | 1     | 2     | UK             | 1     |       |             | 2     | good   | 2     | 1     | 1     | 2     | 2     | 1     | 1     |
| 2     | 2     | 1     | South Korea    | 1     |       |                | 2     |       |             | 2     | fluent | 1     | 1     | 1     | 2     | 1     | 1     | 2     |
| 10    | 15    | 0.5   | Kenya          | 1     | 1     | Kenya          | 1     | 0     |             | 2     |        | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 4     | 6     |       |                | 2     |       |                | 2     |       |             | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 9     | 5     |       |                | 2     |       |                | 2     | 0     |             | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 2     | 2     |
| 9     | 5     |       |                | 2     |       |                | 2     |       |             | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 2     | 2     |
| 9     | 5     |       |                | 2     |       |                | 2     |       |             | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 2     | 2     |
| 9     | 5     |       |                | 2     |       |                | 2     |       |             | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 2     | 2     |
| 5     | 7     |       |                | 2     |       |                | 2     |       |             | 2     | basic  | 2     | 1     | 1     | 2     | 2     | 2     | 2     |
|       |       |       |                | 2     |       |                | 2     |       |             | 2     |        | 1     | 1     | 1     | 2     | 1     | 1     | 2     |
| 2     | 2     |       |                | 2     |       |                | 2     | 0     |             | 2     | basic  | 2     | 2     | 1     | 2     | 2     | 1     | 2     |
| 20    | 10    |       |                | 2     |       |                | 2     | 0     |             | 2     |        | 2     | 1     | 2     | 2     | 1     | 1     | 2     |
| 20    | 32    |       |                | 2     | 0.5   |                | 2     | 0     |             | 2     | poor   | 1     | 1     | 2     | 2     | 1     | 1     | 1     |
| 7     | 7     |       |                | 2     |       |                | 2     |       |             | 2     | fluent | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 8     |       |       |                | 2     |       |                | 2     | 0     |             | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 1     |       |                | 2     |       |                | 2     |       |             | 2     | poor   | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 4     | 4     |       |                | 2     |       |                | 2     | 0     |             | 2     |        | 1     | 2     | 2     | 1     | 1     | 2     | 2     |
| 2     | 2     |       |                | 2     |       |                | 2     | 0     |             | 2     | poor   | 1     | 1     | 2     | 2     | 1     | 1     | 2     |
| 5     | 2     |       |                | 2     |       |                | 2     | 0     |             | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 3     | 2     |       |                | 2     |       |                | 2     | 0     |             | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 1     | 1     |
| 6     | 2     |       |                | 2     |       |                | 2     | 0     |             | 2     | poor   | 1     | 1     | 2     | 2     | 1     | 1     | 1     |
| 6     | 2     |       |                | 2     |       |                | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 2     | 1     | 1     | 1     |
| 3     | 2     |       |                | 2     |       |                | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 2     | 1     | 1     | 2     |
| 3     | 1     |       |                | 2     |       |                | 2     | 0     |             | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 3     | 1     |       |                | 2     |       |                | 2     | 0     |             | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 3     | 1     |       |                | 2     |       |                | 2     | 0     |             | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 2     | 4     |       |                | 2     |       |                | 2     | 0     |             | 2     | basic  | 2     | 1     | 1     | 1     | 1     | 2     | 1     |
| 5     | 3     |       |                | 2     |       |                | 2     | 0     |             | 2     | poor   | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 11    | 4     |       |                | 2     |       |                | 2     | 0     |             | 2     |        | 1     | 1     | 2     | 2     | 1     | 1     | 2     |
| 2     | 2     |       |                | 2     |       |                | 2     | 0     |             | 2     | poor   | 2     | 2     | 1     | 2     | 2     | 1     | 2     |
| 5     | 3     |       |                | 2     |       |                | 2     | 0     |             | 2     |        | 1     | 1     | 2     | 1     | 1     | 2     | 1     |
| 5     | 2     | 1     | Uganda         | 1     | 1     | Uganda         | 1     | 0     |             | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 5     | 5     | 2     | Singapore      | 1     | 2     | Singapore      | 1     | 0     |             | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 2     | 1     |
| 5     | 2     | 1     | Cambodia       | 1     | 1     | Cambodia       | 1     | 0     |             | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 3     | 3     |       |                | 2     |       |                | 2     | 0     |             | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 5     | 5     |       |                | 2     |       |                | 2     | 0     |             | 2     | basic  | 2     | 1     | 2     | 2     | 1     | 1     | 1     |
| 5     | 2     | 1     | Georgia        | 1     | 1     | Georgia        | 1     | 0     |             | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 4     | 2     |       |                | 2     |       |                | 2     | 0     |             | 2     |        | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 5     | 2     | 1     | Nth Mariana Is | 1     | 1     | Nth Mariana Is | 1     | 0     |             | 2     | baisc  | 2     | 1     | 1     | 2     | 1     | 1     | 2     |



Appendix 2 Database: Company 1 – Company 80

| hi361 | hi362 | hi363 | hi364 | hi365 | hi366 | hi367 | hi368 | si1 | si2 | si3 | si4 | si5 | si6 | si7 | si8 | si9 | si10 | si11 | si12 | si13 | si14 | si15 | si16 | si17 | si18 | si19 | si20 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|---|
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 3   | 4   | 3   | 5   | 4   | 4   | 5   | 4   | 4   | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 5    | 5    |   |
| 1     | 1     | 2     | 2     | 1     | 1     | 2     | 1     | 2   | 4   | 3   | 3   | 1   | 3   | 4   | 4   | 3   | 3    | 3    | 2    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 4   | 3   | 2   | 3   | 3   | 4   | 4   | 4   | 2   | 1    | 3    | 2    | 2    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 4   | 3   | 4   | 4   | 4   | 3   | 2   | 3   | 3   | 5    | 4    | 1    | 1    | 3    | 4    | 4    | 3    | 2    | 2    | 2    |   |
| 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 3   | 4   | 3   | 3   | 4   | 3   | 3   | 3   | 2   | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 4   | 4   | 3   | 4   | 4   | 4   | 2   | 3   | 3   | 4    | 2    | 2    | 1    | 4    | 3    | 3    | 3    | 3    | 3    | 3    |   |
| 1     | 1     | 2     | 2     | 1     | 1     | 2     | 1     | 5   | 3   | 3   | 4   | 4   | 4   | 4   | 4   | 4   | 3    | 4    | 5    | 2    | 4    | 5    | 5    | 4    | 4    | 4    | 5    |   |
| 2     | 2     | 2     | 2     | 2     | 1     | 1     | 1     | 4   | 1   | 2   | 2   | 4   | 4   | 3   | 2   | 2   | 1    | 2    | 2    | 5    | 4    | 3    | 3    | 3    | 3    | 4    | 3    |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5    | 5    | 5    | 5    | 5    | 3    | 3    | 3    | 3    | 3    | 3    |   |
| 1     | 1     | 2     | 2     | 2     | 2     | 2     | 2     | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5    | 5    | 5    | 5    | 5    | 2    | 4    | 3    | 2    | 4    | 3    |   |
| 1     | 2     | 2     | 2     | 2     | 1     | 1     | 2     | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5    | 5    | 5    | 5    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 4   | 4   | 4   | 4   | 4   | 3   | 1   | 3   | 4   | 3    | 1    | 2    | 2    | 3    | 4    | 4    | 2    | 2    | 2    | 4    | 4 |
| 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 3   | 2   | 2   | 3   | 3   | 2   | 3   | 3   | 3   | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 2     | 2     | 2     | 1     | 1     | 1     | 1     | 3   | 4   | 4   | 4   | 4   | 3   | 4   | 4   | 3   | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 3   | 3   | 3   | 4   | 4   | 3   | 3   | 3   | 4   | 4    | 3    | 2    | 2    | 3    | 4    | 4    | 3    | 4    | 4    | 4    |   |
| 1     | 2     | 2     | 2     | 1     | 1     | 2     | 1     | 4   | 4   | 4   | 4   | 4   | 3   | 3   | 4   | 5   | 5    | 2    | 1    | 2    | 2    | 5    | 5    | 4    | 5    | 5    | 4    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 2     | 1     | 4   | 3   | 3   | 4   | 4   | 4   | 4   | 3   | 4   | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 3    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 2     | 1     | 4   | 3   | 5   | 4   | 4   | 4   | 4   | 3   | 4   | 4    | 4    | 3    | 1    | 3    | 5    | 4    | 4    | 3    | 4    | 3    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 2     | 1     | 4   | 3   | 3   | 4   | 4   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 4    |   |
| 1     | 1     | 1     | 1     | 2     | 1     | 1     | 2     | 3   | 3   | 3   | 2   | 3   | 2   | 2   | 3   | 4   | 3    | 2    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 3   | 3   | 3   | 2   | 3   | 2   | 2   | 3   | 4   | 3    | 2    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 2     | 1     | 3   | 2   | 3   | 2   | 3   | 1   | 2   | 3   | 4   | 3    | 1    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 2    | 3    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 2    | 2    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 2     | 2     | 2     | 2     | 2     | 1     | 2     | 1     | 3   | 3   | 3   | 3   | 3   | 2   | 3   | 3   | 4   | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 2     | 1     | 1     | 1     | 1     | 2     | 2     | 1     | 4   | 3   | 4   | 4   | 3   | 4   | 4   | 4   | 4   | 3    | 2    | 4    | 3    | 3    | 5    | 5    | 3    | 4    | 4    | 3    |   |
| 2     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 4   | 3   | 4   | 4   | 4   | 3   | 4   | 4   | 4   | 4    | 3    | 1    | 1    | 3    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 2     | 2     | 2     | 1     | 2     | 1     | 1     | 3   | 3   | 4   | 4   | 3   | 3   | 2   | 3   | 3   | 2    | 2    | 2    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 2    |   |
| 1     | 1     | 2     | 1     | 1     | 1     | 1     | 2     | 3   | 4   | 2   | 3   | 2   | 3   | 4   | 2   | 2   | 2    | 4    | 4    | 4    | 2    | 4    | 4    | 3    | 3    | 3    | 3    |   |
| 1     | 1     | 1     | 2     | 1     | 2     | 1     | 1     | 3   | 4   | 4   | 3   | 1   | 4   | 2   | 3   | 2   | 2    | 3    | 4    | 5    | 3    | 4    | 3    | 4    | 2    | 5    | 3    |   |
| 1     | 1     | 1     | 2     | 1     | 2     | 1     | 1     | 3   | 3   | 2   | 2   | 2   | 4   | 3   | 3   | 2   | 3    | 4    | 4    | 2    | 3    | 4    | 4    | 3    | 3    | 3    | 3    |   |
| 2     | 2     | 1     | 2     | 1     | 1     | 1     | 1     | 4   | 5   | 5   | 5   | 5   | 5   | 1   | 5   | 3   | 4    | 1    | 3    | 2    | 4    | 5    | 3    | 2    | 2    | 3    | 2    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 2   | 3   | 2   | 2   | 3   | 2   | 2   | 3   | 3   | 2    | 2    | 2    | 2    | 4    | 5    | 5    | 5    | 3    | 4    | 4    |   |
| 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 5   | 3   | 4   | 5   | 3   | 3   | 3   | 3   | 4   | 4    | 4    | 4    | 4    | 5    | 3    | 4    | 4    | 4    | 4    | 3    |   |
| 2     | 1     | 2     | 2     | 1     | 2     | 1     | 1     | 2   | 3   | 3   | 4   | 3   | 4   | 4   | 3   | 2   | 1    | 4    | 3    | 3    | 2    | 2    | 4    | 3    | 3    | 3    | 2    |   |
| 2     | 1     | 2     | 2     | 1     | 2     | 1     | 1     | 3   | 2   | 4   | 5   | 2   | 2   | 3   | 3   | 4   | 2    | 4    | 4    | 4    | 5    | 3    | 4    | 4    | 4    | 4    | 3    |   |
| 2     | 2     | 2     | 2     | 1     | 2     | 1     | 2     | 3   | 3   | 4   | 4   | 4   | 3   | 3   | 4   | 4   | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    |   |
| 2     | 2     | 1     | 2     | 1     | 1     | 1     | 1     | 4   | 5   | 5   | 4   | 3   | 5   | 1   | 4   | 3   | 2    | 1    | 3    | 2    | 4    | 5    | 3    | 2    | 2    | 3    | 2    |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3    | 3    | 3    | 3    | 3    | 4    | 5    | 4    | 4    | 4    | 4    |   |
| 1     | 2     | 2     | 2     | 2     | 1     | 1     | 1     | 3   | 4   | 3   | 4   | 3   | 2   | 3   | 3   | 3   | 2    | 4    | 3    | 3    | 4    | 4    | 5    | 4    | 5    | 3    | 3    |   |
| 1     | 2     | 1     | 1     | 1     | 2     | 1     | 2     | 4   | 3   | 2   | 4   | 4   | 3   | 4   | 4   | 4   | 4    | 3    | 1    | 1    | 3    | 4    | 4    | 4    | 4    | 4    | 3    |   |
| 2     | 2     | 2     | 2     | 2     | 1     | 1     | 1     | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 4   | 3   | 2    | 3    | 3    | 2    | 4    | 4    | 4    | 4    | 4    | 3    | 3    |   |
| 2     | 2     | 2     | 2     | 2     | 1     | 1     | 1     | 4   | 3   | 5   | 4   | 4   | 4   | 3   | 4   | 5   | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    |   |
| 1     | 2     | 2     | 2     | 2     | 1     | 1     | 2     | 5   | 5   | 4   | 3   | 4   | 5   | 5   | 5   | 5   | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 4   | 3   | 4   | 4   | 3   | 2   | 3   | 4   | 4   | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4 |
| 1     | 1     | 1     | 2     | 1     | 1     | 2     | 1     | 3   | 3   | 4   | 3   | 3   | 2   | 3   | 3   | 4   | 3    | 4    | 3    | 3    | 2    | 3    | 4    | 3    | 2    | 3    | 3    |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 3   | 3   | 3   | 3   | 3   | 4   | 3   | 3   | 4   | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 3   | 3   | 3   | 3   | 3   | 3   | 4   | 3   | 3   | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 2     | 1     | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 3   | 3   | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 5   | 4   | 4   | 5   | 3   | 3   | 3   | 3   | 4   | 4    | 4    | 4    | 3    | 5    | 3    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 4   | 3   | 3   | 2   | 2   | 2   | 4   | 4   | 4   | 3    | 2    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 3    |   |
| 1     | 2     | 2     | 2     | 1     | 1     | 1     | 1     | 4   | 3   | 3   | 3   | 3   | 5   | 4   | 3   | 3   | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |   |
| 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 3   | 3   | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 3   | 3   | 3   | 3   | 3   | 3   | 4   | 3   | 3   | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 2     | 1     | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 3   | 3   | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 3   | 3   | 3   | 3   | 3   | 3   | 4   | 3   | 3   | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 3   | 3   | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 4   | 3   | 3   | 3   | 3   | 3   | 4   | 4   | 4   | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 3   | 3   | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 4   | 3   | 3   | 3   | 3   | 3   | 4   | 4   | 4   | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 3   | 3   | 3   | 3   | 3   | 3   | 4   | 3   | 3   | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 4   | 5   | 5   | 5   | 5   | 5   | 2   | 2   | 3   | 3    | 3    | 4    | 3    | 2    | 5    | 3    | 2    | 3    | 2    | 2    |   |
| 1     | 2     | 2     | 1     | 2     | 1     | 1     | 1     | 4   | 3   | 3   | 3   | 2   | 3   | 3   | 3   | 2   | 1    | 4    | 4    | 5    | 3    | 3    | 3    | 3    | 2    | 3    | 3    |   |
| 1     | 2     | 2     | 1     | 2     | 1     | 1     | 1     | 3   | 3   | 2   | 3   | 4   | 3   | 4   | 3   | 2   | 3    | 3    | 3    | 3    | 3    | 2    | 3    | 4    | 3    | 3    | 3    |   |
| 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 4   | 5   | 3   | 2   | 5   | 3   | 5   | 3   | 4   | 3    | 4    | 4    | 5    | 5    | 5    | 3    | 4    | 4    | 5    | 5    |   |
| 1     | 1     | 1     | 2     | 2     | 2     | 1     | 1     | 3   | 4   | 2   | 3   | 3   | 4   | 2   | 3   | 2   | 2    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 2    | 5    | 3 |
| 2     | 2     | 1     | 2     | 2     | 2     | 1     | 1     | 2   | 2   | 3   | 3   | 3   | 4   | 4   | 3   | 3   | 4    | 5    | 3    | 4    | 3    | 3    | 5    | 4    | 3    | 3    | 3    |   |
| 2     | 2     | 1     | 2     | 2     | 2     | 1     | 1     | 3   | 2   | 3   | 3   | 3   | 4   | 3   | 3   | 3   | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 3    |   |
| 2     | 2     | 1     | 2     | 1     | 1     | 1     | 1     | 4   | 5   | 5   | 5   | 5   | 5   | 2   | 2   | 3   | 3    | 3    | 4    | 3    | 2    | 5    | 3    | 2    | 3    | 2    | 2    |   |
| 1     | 2     | 2     | 1     | 2     | 1     | 1     | 1     | 4   | 3   | 3   | 3   | 2   | 3   | 3   | 3   | 2   | 1    | 4    | 4    | 5    | 3    | 3    | 3    | 3    | 2    | 3    | 3    |   |
| 1     | 2     | 2     | 1     | 2     | 1     | 1     | 1     | 3   | 3   | 2   | 3   | 4   | 3   | 4   | 3   | 2   |      |      |      |      |      |      |      |      |      |      |      |   |

Appendix 2 Database: Company 1 – Company 80

| si21 | si22 | si23 | si24 | si25 | si26 | si27 | si28 | si29 | si30 | si31 | si32 | si33 | si34 | si35 | si36 | si37 | si38 | si39 | si40 | si41 | si42 | si43 | si44 | si45 | si46 | si47 | si48 | si49 | si50 |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
| 5    | 5    | 5    | 5    | 4    | 4    | 4    | 5    | 5    | 2    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 5 |
| 5    | 4    | 4    | 4    | 4    | 5    | 4    | 5    | 5    | 2    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4 |
| 4    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 1    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 5    | 5    | 5    | 5    | 5    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4 |
| 2    | 2    | 4    | 5    | 5    | 5    | 5    | 4    | 4    | 4    | 5    | 5    | 3    | 5    | 3    | 3    | 5    | 2    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    |   |
| 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 3    | 4 |
| 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 2    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 2    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3 |
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| 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3 |
| 1    | 1    | 2    | 2    | 3    | 3    | 2    | 2    | 2    | 5    | 3    | 2    | 4    | 2    | 2    | 2    | 2    | 3    | 3    | 3    | 3    | 3    | 2    | 2    | 2    | 4    | 5    | 5    | 4    | 3    |   |
| 2    | 2    | 2    | 2    | 1    | 3    | 2    | 3    | 2    | 3    | 2    | 3    | 2    | 1    | 3    | 2    | 3    | 2    | 2    | 3    | 2    | 2    | 2    | 1    | 2    | 1    | 2    | 2    | 4    | 3    |   |
| 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 2    | 2    | 2    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 3    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 2    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3 |
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| 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 2    | 3    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3 |
| 4    | 5    | 4    | 3    | 4    | 3    | 5    | 4    | 5    | 2    | 3    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 3    | 3    | 4    | 3    | 4    | 5    | 3    | 4    | 3    | 5    | 4    | 3    |   |
| 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 2    | 3    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3 |
| 4    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 4    | 3    | 2    | 2    | 2    | 3    | 3    | 3    | 2    | 3    | 2    | 4    | 3    |   |
| 4    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 2    | 3    | 3    | 4    | 3    | 3    | 2    | 2    | 2    | 3    | 3    | 3    | 2    | 3    | 2    | 4    | 3    |   |
| 4    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 2    | 3    | 3    | 4    | 3    | 3    | 2    | 2    | 2    | 3    | 3    | 3    | 2    | 3    | 2    | 4    | 3    |   |
| 2    | 3    | 2    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 4    | 3    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 3    | 2    | 3    | 3 |
| 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3 |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 4    | 4    | 3    | 3    | 3    | 2    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 2    | 3    | 2    | 3    | 4 |
| 4    | 2    | 4    | 5    | 4    | 3    | 4    | 5    | 3    | 3    | 3    | 2    | 4    | 3    | 2    | 4    | 3    | 2    | 4    | 3    | 1    | 2    | 4    | 5    | 4    | 3    | 4    | 4    | 4    | 3    | 3 |
| 3    | 3    | 2    | 3    | 3    | 3    | 3    | 5    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 2    | 2    | 4    | 4    | 3    | 5    | 5    | 2    | 2    | 2    | 3    | 3    | 3    | 3    | 3 |
| 4    | 5    | 5    | 4    | 5    | 2    | 3    | 4    | 1    | 5    | 2    | 5    | 3    | 3    | 3    | 3    | 3    | 5    | 2    | 2    | 3    | 3    | 3    | 4    | 2    | 1    | 2    | 4    | 3    | 4    |   |
| 4    | 4    | 3    | 4    | 4    | 5    | 5    | 5    | 3    | 3    | 3    | 3    | 4    | 5    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 3    | 4    |   |
| 3    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 2    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4 |
| 4    | 2    | 2    | 5    | 3    | 4    | 3    | 4    | 3    | 3    | 5    | 4    | 2    | 4    | 1    | 3    | 2    | 5    | 4    | 4    | 3    | 5    | 4    | 3    | 3    | 5    | 3    | 5    | 4    | 3    |   |
| 3    | 4    | 3    | 3    | 5    | 3    | 4    | 3    | 3    | 3    | 2    | 4    | 3    | 2    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 1    | 3    | 3    | 3    | 1    | 3    | 4    | 2    |      |   |
| 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 2    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 2    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 4    | 4    | 3    | 4    | 3    | 2    | 3    | 4    | 4    | 2    | 5    | 5    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 2    | 3    | 2    | 3    | 2    | 3    | 3    | 4 |
| 5    | 4    | 3    | 4    | 5    | 4    | 3    | 5    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 2    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 3 |
| 4    | 4    | 4    | 4    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 4    | 4    | 2    | 2    | 2    | 4    | 3    | 2    | 3    | 4    | 3    | 4    | 3    | 2    | 1    | 3    | 2    | 3    | 2    | 3    | 2    | 2    | 3    | 2    | 3    | 2    | 3    | 2    | 2    | 4    | 3 |
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| 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 2    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3 |
| 4    | 5    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3 |
| 4    | 5    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3 |
| 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 2    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 4    | 4    | 3    | 4    | 3    | 2    | 3    | 4    | 4    | 2    | 5    | 5    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 2    | 3    | 2    | 3    | 2    | 3    | 3    | 4 |
| 5    | 4    | 3    | 4    | 5    | 4    | 3    | 5    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 2    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
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| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3 |
| 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 2    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3 |
| 4    | 5    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3 |
| 4    | 5    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3 |
| 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 2    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 4    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 2    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3 |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 2    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 2    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4 |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 2    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3 |
| 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 2    | 3    | 3    | 3    | 4    | 4</  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |

Appendix 2 Database: Company 1 – Company 80

| si51 | si52 | si53 | si54 | si55 | si56 | si57 | si58 | si59 | si60 | si61 | si62 | si63 | si64 | si65 | si66 | si67 | si68 | si69 | si70 | si71 | si72 | si73 | si74 | si75 | si76 | si77 | si78 | si79 | si80 |   |   |   |   |   |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|---|---|---|---|---|
| 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 3    | 3    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 4 |   |   |   |   |   |
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| 2    | 5    | 1    | 5    | 5    | 1    | 5    | 5    | 5    | 5    | 3    | 5    | 4    | 3    | 2    | 5    | 2    | 3    | 3    | 2    | 2    | 2    | 5    | 5    | 4    | 5    | 5    | 5    | 5    | 5    | 5 |   |   |   |   |   |
| 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 5    | 2    | 3    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |   |   |   |   |   |
| 3    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 2    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 2    | 3 |   |   |   |   |   |
| 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 1    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 3    | 5    | 5 |   |   |   |   |   |
| 2    | 5    | 4    | 5    | 5    | 3    | 5    | 5    | 5    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 2    | 2    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 3 |   |   |   |   |   |
| 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3 |   |   |   |   |   |
| 3    | 3    | 3    | 4    | 4    | 3    | 3    | 5    | 3    | 2    | 2    | 3    | 2    | 4    | 4    | 3    | 5    | 4    | 3    | 3    | 1    | 4    | 2    | 4    | 4    | 3    | 2    | 1    | 1    | 1    | 4 |   |   |   |   |   |
| 4    | 3    | 4    | 1    | 2    | 1    | 2    | 1    | 2    | 1    | 2    | 3    | 2    | 3    | 2    | 3    | 2    | 2    | 3    | 2    | 2    | 3    | 2    | 3    | 1    | 2    | 1    | 1    | 2    | 2    | 1 | 1 |   |   |   |   |
| 4    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 2    | 4    | 4 | 4 |   |   |   |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 2    | 2    | 2    | 3    | 4 |   |   |   |   |   |
| 4    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 3 |   |   |   |   |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3 | 3 |   |   |   |   |
| 4    | 5    | 5    | 4    | 5    | 5    | 3    | 2    | 5    | 5    | 5    | 5    | 3    | 3    | 4    | 5    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 5    | 5    | 4    | 4 | 4 |   |   |   |   |
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| 4    | 3    | 5    | 4    | 3    | 4    | 3    | 5    | 3    | 4    | 5    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 3    | 4 | 4 |   |   |   |   |
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| 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 4 | 4 |   |   |   |   |
| 4    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 3 | 3 |   |   |   |   |
| 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 3 | 3 |   |   |   |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 | 4 | 4 |   |   |   |
| 3    | 5    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 2    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 | 4 | 4 |   |   |   |
| 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 2    | 2    | 2    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4 | 4 | 4 |   |   |   |
| 3    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 2    | 2    | 3    | 2 | 2 |   |   |   |   |
| 3    | 3    | 2    | 3    | 2    | 3    | 4    | 3    | 4    | 4    | 2    | 3    | 3    | 3    | 4    | 3    | 2    | 4    | 3    | 2    | 4    | 3    | 2    | 4    | 3    | 4    | 3    | 2    | 2    | 2    | 2 | 3 | 3 |   |   |   |
| 5    | 5    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 2    | 3    | 4    | 2    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 2    | 4    | 2    | 3    | 2 | 2 |   |   |   |   |
| 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 2    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4 | 4 | 4 |   |   |   |
| 2    | 1    | 4    | 4    | 3    | 5    | 3    | 2    | 3    | 3    | 3    | 1    | 2    | 4    | 2    | 5    | 4    | 1    | 5    | 3    | 5    | 3    | 5    | 3    | 5    | 3    | 5    | 2    | 1    | 3    | 4 | 2 | 2 |   |   |   |
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| 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 | 4 | 4 |   |   |   |
| 5    | 3    | 2    | 3    | 2    | 4    | 3    | 2    | 4    | 3    | 4    | 2    | 4    | 5    | 3    | 3    | 2    | 4    | 2    | 4    | 3    | 2    | 2    | 5    | 4    | 3    | 2    | 4    | 3    | 2    | 4 | 3 | 2 |   |   |   |
| 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 5    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 1    | 3    | 5    | 4    | 3    | 2    | 2    | 2    | 3    | 4 | 4 | 4 |   |   |   |
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| 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 3 | 3 | 3 |   |   |   |
| 3    | 4    | 3    | 3    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 3    | 4    | 2    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 2    | 3    | 4 | 4 | 4 |   |   |   |
| 3    | 4    | 4    | 4    | 4    | 3    | 5    | 3    | 3    | 4    | 2    | 2    | 2    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 2    | 4    | 4    | 4 | 4 | 2 |   |   |   |
| 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4 | 4 | 3 | 3 |   |   |
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| 5    | 4    | 4    | 4    | 4    | 5    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 2    | 4 | 4 | 4 |   |   |   |
| 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4 | 3 | 4 | 4 |   |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 | 4 | 4 | 4 |   |   |
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| 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3 | 4 | 4 | 4 |   |   |
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| 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 | 4 | 4 | 4 | 4 |   |
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| 4    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3 | 3 | 3 | 3 | 3 |   |
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| 4    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 5    | 5    | 5    | 4    | 2    | 4 | 5 | 5 | 5 |   |   |
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| 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 | 4 | 4 | 4 | 4 | 4 |
| 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 2    | 3    | 4    | 4    | 3    | 2    | 3    | 4    | 3    | 2    | 3    | 3    | 2    | 2    | 2    | 2 | 2 | 2 | 2 | 2 |   |
| 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 | 4 | 4 | 4 | 4 | 4 |
| 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 | 4 | 4 | 4 | 4 | 4 |
| 4    | 5    | 5    | 3    | 4    | 4    | 5    | 5    | 5    | 3    | 4    | 5    | 5    | 5    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3 | 3 | 3 | 3 | 3 |   |
| 5    | 5    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 2    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |   |   |   |   |   |

Appendix 2 Database: Company 1 – Company 80

| si81 | si82 | si83 | si84 | si85 | si86 | si87 | si88 | si89 | si90 | si91 | si92 | si93 | si94 | si95 | si96 | si97 | si98 | si99 | si100 | si101 | si102 | si103 | si104 | si105 | si106 | si107 | si108 | si109 | si110 |   |   |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|
| 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3 |   |   |
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| 5    | 5    | 5    | 5    | 4    | 4    | 5    | 3    | 5    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 2     | 1     | 2     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 4     | 4 |   |   |
| 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 2    | 3    | 3    | 3    | 2    | 2    | 4    | 4    | 3    | 4    | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4 |   |   |
| 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 2    | 2    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 2 |   |   |
| 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 3    | 5    | 4    | 4    | 3    | 4    | 4    | 5    | 5    | 4    | 5    | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 1 |   |   |
| 5    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4     | 3     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 3     | 3 |   |   |
| 3    | 3    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 |   |   |
| 4    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 2    | 2    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 |   |   |
| 1    | 2    | 2    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 3    | 2    | 3    | 1    | 2    | 2    | 1    | 3     | 2     | 2     | 3     | 2     | 1     | 3     | 2     | 1     | 3     | 2     | 2 |   |   |
| 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 2    | 3    | 2    | 3    | 2    | 3    | 2    | 3    | 4    | 4    | 4    | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3 |   |   |
| 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2 |   |   |
| 4    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3 |   |   |
| 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 |   |   |
| 5    | 5    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4 |   |   |
| 4    | 3    | 5    | 4    | 4    | 3    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 3     | 4     | 5     | 5 | 4 |   |
| 4    | 3    | 5    | 4    | 4    | 3    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 3     | 4     | 4     | 4     | 5     | 4     | 5     | 3     | 4     | 5     | 4     | 4 |   |   |
| 4    | 3    | 5    | 4    | 4    | 3    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 3     | 4     | 5     | 4 |   |   |
| 3    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 2    | 2    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4 | 3 |   |
| 3    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 2    | 2    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4 | 2 |   |
| 4    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 2    | 2    | 2    | 4    | 4    | 3    | 3    | 2    | 3    | 2    | 3    | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4 | 3 |   |
| 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |   |
| 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4 | 2 |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 2    | 2    | 4    | 3    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 | 3 |   |
| 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 2    | 2    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 4     | 4     | 4     | 4     | 3     | 4     | 2     | 4     | 4     | 3     | 4     | 3 | 3 |   |
| 4    | 4    | 4    | 2    | 3    | 3    | 3    | 2    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3 |   |   |
| 3    | 4    | 2    | 4    | 3    | 2    | 2    | 3    | 2    | 4    | 3    | 2    | 3    | 3    | 4    | 3    | 2    | 3    | 3    | 5     | 5     | 4     | 4     | 4     | 2     | 3     | 3     | 2     | 5     | 3     | 2 |   |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 2    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 2 |   |   |
| 5    | 5    | 5    | 4    | 1    | 5    | 4    | 5    | 5    | 3    | 1    | 4    | 5    | 5    | 3    | 5    | 3    | 2    | 5    | 3     | 5     | 3     | 5     | 4     | 3     | 2     | 4     | 5     | 4     | 5     | 4 |   |   |
| 5    | 5    | 5    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 5    | 5    | 4    | 5    | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5 |   |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |   |
| 4    | 2    | 3    | 3    | 2    | 2    | 3    | 5    | 4    | 1    | 4    | 2    | 4    | 3    | 2    | 3    | 5    | 4    | 3    | 4     | 3     | 4     | 5     | 4     | 3     | 3     | 5     | 3     | 3     | 2     | 2 |   |   |
| 4    | 3    | 4    | 2    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 2     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3 |   |   |
| 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4 | 5 |   |
| 3    | 3    | 4    | 4    | 1    | 5    | 3    | 5    | 5    | 3    | 1    | 4    | 5    | 5    | 3    | 5    | 3    | 2    | 5    | 4     | 5     | 3     | 5     | 4     | 3     | 2     | 4     | 5     | 4     | 4     | 5 |   |   |
| 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3 | 3 |   |
| 4    | 3    | 2    | 3    | 3    | 2    | 3    | 4    | 3    | 4    | 3    | 2    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 5     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4 | 3 |   |
| 2    | 2    | 4    | 4    | 2    | 4    | 4    | 4    | 4    | 4    | 4    | 2    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 3     | 2     | 2     | 3     | 2     | 2     | 3     | 3 | 3 |   |
| 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4 | 4 |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |   |
| 3    | 3    | 3    | 5    | 5    | 5    | 5    | 5    | 4    | 5    | 5    | 5    | 3    | 2    | 3    | 3    | 2    | 2    | 4    | 3     | 2     | 2     | 3     | 2     | 2     | 3     | 2     | 4     | 3     | 2     | 2 | 2 |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 5    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 3 | 2 |   |
| 2    | 3    | 4    | 3    | 3    | 4    | 2    | 3    | 3    | 4    | 2    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3 | 3 |   |
| 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4 | 4 |   |
| 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 | 2 |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 | 4 |
| 4    | 4    | 4    | 3    | 3    | 3    | 2    | 2    | 2    | 3    | 3    | 2    | 3    | 2    | 2    | 4    | 4    | 4    | 3    | 3     | 3     | 3     | 2     | 2     | 4     | 3     | 3     | 4     | 4     | 4     | 4 | 4 |   |
| 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 2 | 2 |   |
| 5    | 5    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 3    | 3    | 4    | 5    | 5    | 5    | 5    | 5    | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4 | 4 |   |
| 5    | 5    | 5    | 4    | 1    | 4    | 3    | 5    | 4    | 4    | 1    | 2    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |   |
| 5    | 5    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 2 | 2 |   |
| 2    | 3    | 2    | 4    | 3    | 2    | 2    | 3    | 2    | 4    | 3    | 2    | 3    | 3    | 4    | 3    | 3    | 2    | 3    | 3     | 3     | 3     | 5     | 4     | 4     | 2     | 3     | 3     | 2     | 5     | 3 | 3 |   |
| 4    | 3    | 2    | 3    | 3    | 2    | 3    | 4    | 3    | 4    | 3    | 2    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 5     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3 | 3 |   |
| 5    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 2    | 3    | 4    | 4    | 3    | 3    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4 | 3 |   |
| 4    | 4    | 4    | 3    | 2    | 3    | 2    | 5    | 5    | 3    | 2    | 4    | 5    | 5    | 3    | 4    | 3    | 2    | 5    | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 5     | 4     | 5     | 4     | 5 | 4 |   |
| 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 2    | 3    | 3    | 3    | 3    | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3 | 3 |   |
| 2    | 3    | 4    | 2    | 3    | 4    | 3    | 4    | 3    | 3    | 2    | 3    | 4    | 3    | 3    | 2    | 4    | 3    | 4    | 3     | 2     | 2     | 2     | 2     | 3     | 4     | 3     | 4     | 2     | 3     | 4 | 4 |   |
| 3    | 3    | 3    | 3    | 3    | 4    | 3    | 2    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 2    | 3    | 3    | 3    | 3     | 3     | 3     | 2     | 3     | 3     | 2     |       |       |       |       |   |   |   |







Appendix 2 Database: Company 1 – Company 80

| si171 | si172 | si173 | si174 | si175 | si176 | si177 | si178 | si179 | si180 | si181 | si182 | si183 | si184 | si185 | si186 | si187 | si188 | si189 | si190 | si191 | si192 | si193 | si194 | si195 | si196 | si197 | si198 | si199 | si200 |   |   |   |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|---|
| 5     | 4     | 3     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 4     | 4     |   |   |   |   |
| 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 2     | 4     | 4     | 3     |   |   |   |   |
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| 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 5     | 5     | 3     | 1     | 2     | 3     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 4     | 4     | 4     |   |   |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 2     | 3     | 2     | 4     |   |   |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 2     |   |   |   |   |
| 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 1     | 5     | 5     |   |   |   |   |
| 5     | 4     | 3     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 5     | 3     | 1     | 4     | 5     | 4     | 4     | 3     | 3     | 3     | 3     | 5     | 2     | 3     | 4     |   |   |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |   |   |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |   |   |   |
| 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 2     | 2     | 2     | 2     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 3     | 2     | 3     | 2     | 2     | 2     | 2     | 2     | 3     | 2     | 4     | 1 |   |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4 |   |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3 |   |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3 |   |   |   |
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| 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5 |   |   |   |
| 5     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 2     | 3     | 4     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 5     | 3     | 4     | 5     | 4     | 3 | 4 |   |   |
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| 4     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 2     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 5     | 3     | 4     | 5     | 4     | 3     | 4     | 4 |   |   |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3 |   |   |   |
| 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3 |   |   |   |
| 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3 |   |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |   |   |   |
| 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 5     | 3 |   |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |   |   |   |
| 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 2     | 2     | 3     | 3     | 2     | 2     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 4 |   |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |   |   |   |
| 3     | 2     | 4     | 3     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 3     | 2     | 3     | 2     | 4     | 4     | 3 |   |   |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 4 | 4 |   |   |
| 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 2     | 2     | 3     | 4     | 3     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 4     | 3     | 3 |   |   |   |
| 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 5     | 4     | 5     | 5     | 5     |   |   |   |   |
| 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 3     | 4     | 3     | 2     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4 |   |   |   |
| 4     | 3     | 1     | 1     | 2     | 5     | 3     | 2     | 2     | 2     | 1     | 3     | 3     | 3     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 4     | 1     | 4     | 5     | 5     | 3     | 2     | 5     | 1     |   |   |   |   |
| 5     | 5     | 5     | 5     | 3     | 3     | 5     | 5     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 2     | 3     | 4     | 3     | 2     | 4     | 4     | 4     | 3     | 3     | 4     | 2     | 2 |   |   |   |
| 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 2     | 2     | 3     | 3     | 3     | 2     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3 |   |   |   |
| 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 2     | 2     | 4     | 4     | 3     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 4     | 4     | 3 |   |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 |   |   |   |
| 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 3     | 2     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 2     | 4     | 4     | 3     | 3 |   |   |   |
| 4     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 2     | 2     | 3     | 3     | 4     | 4     | 5     | 4 |   |   |   |
| 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4 |   |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 3     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 4     | 4     | 2     | 4     | 2     | 3     | 5     | 3     | 3 |   |   |   |
| 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 2     | 4     | 4 | 4 |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |   |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 | 4 |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 2     | 4     | 4     | 4 | 4 |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 4     | 4 | 4 |   |   |
| 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 4     | 4 | 4 |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |   |   |
| 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 3     | 2     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 4     | 5     | 4     | 4 |   |   |   |
| 4     | 5     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 2     | 3     | 4     | 5     | 4     | 4     | 4 | 4 |   |   |
| 5     | 5     | 3     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 3     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 5     | 5 | 5 |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 | 4 |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 | 4 |   |
| 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 | 4 |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 | 4 |   |
| 5     | 5     | 3     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 3     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4 | 4 | 4 |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 | 4 |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 | 4 |   |
| 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 | 4 |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 | 4 | 4 |
| 5     | 5     | 3     | 4     | 5     | 4     | 5     | 5     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |   |   |   |

Appendix 2 Database: Company 1 – Company 80

| si201 | si202 | si203 | si204 | si205 | si206 | si207 | si208 | si209 | si210 | si211 | si212 | si213 | si214 | si215 | si216 | si217 | si218 | si219 | si220 | si221 | si222 | si223 | si224 | si225 | si226 | si227 | si228 | si229 | si230 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 1     | 2     | 2     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 4     | 2     | 2     | 4     | 2     | 4     | 2     | 5     | 2     | 2     | 2     | 2     | 4     | 4     | 2     | 2     | 2     | 4     | 4     | 2     |   |
| 2     | 3     | 3     | 4     | 4     | 4     | 2     | 4     | 4     | 3     | 3     | 3     | 2     | 4     | 2     | 4     | 2     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 2     | 2     | 2     | 3     | 4     | 2     |   |
| 2     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 2     | 4     | 2     | 4     | 3     | 3     | 3     | 4     | 2     | 2     | 2     | 4     | 3     | 3     |   |
| 2     | 4     | 3     | 4     | 3     | 5     | 3     | 5     | 3     | 5     | 3     | 2     | 2     | 4     | 1     | 5     | 2     | 4     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 3     | 2     | 4     | 3     | 3     |   |
| 2     | 2     | 2     | 2     | 4     | 4     | 2     | 4     | 3     | 2     | 4     | 2     | 3     | 2     | 3     | 2     | 2     | 3     | 2     | 2     | 4     | 2     | 2     | 4     | 2     | 2     | 4     | 2     | 4     | 2     |   |
| 2     | 2     | 2     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 2     | 2     | 2     | 4     | 4     | 4     | 2     | 4     | 2     | 4     | 4     | 2     | 3     | 4     | 2     | 2     | 2     | 2     | 2     | 2     |   |
| 1     | 5     | 1     | 5     | 5     | 5     | 1     | 4     | 4     | 4     | 3     | 2     | 2     | 3     | 1     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 3     | 2     | 1     | 1     | 3     | 2     | 4     | 2     |   |
| 1     | 2     | 2     | 5     | 4     | 4     | 1     | 3     | 4     | 3     | 3     | 2     | 2     | 4     | 2     | 3     | 1     | 3     | 2     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 1     | 2     | 2     | 1     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 1     | 3     | 2     | 3     | 3     | 5     | 5     | 5     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 5     | 2     | 4     | 3     | 2     | 2     | 3     | 3     | 5     | 2     | 3     | 3     | 3     | 3     | 3     |   |
| 2     | 2     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 2     | 2     | 4     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 4     | 2     |   |
| 2     | 3     | 3     | 4     | 4     | 4     | 2     | 3     | 4     | 4     | 2     | 2     | 3     | 4     | 3     | 3     | 3     | 4     | 2     | 2     | 3     | 3     | 2     | 4     | 2     | 2     | 2     | 3     | 2     | 2     |   |
| 2     | 3     | 2     | 3     | 4     | 4     | 3     | 3     | 4     | 2     | 4     | 4     | 4     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 2     | 3     | 2     | 2     | 3     | 2     | 4     | 3     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 2     | 2     | 2     | 4     | 4     | 4     | 2     | 4     | 3     | 3     | 3     | 2     | 2     | 4     | 2     | 5     | 2     | 4     | 2     | 3     | 2     | 3     | 4     | 2     | 2     | 3     | 4     | 2     | 2     | 2     |   |
| 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 5     | 5     |   |
| 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     |   |
| 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     |   |
| 3     | 2     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 2     | 2     | 4     | 4     | 3     | 4     | 2     | 4     | 2     | 2     | 2     | 2     | 3     | 2     | 2     | 3     | 2     | 3     | 3     | 2     |   |
| 3     | 2     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 2     | 2     | 4     | 4     | 3     | 4     | 2     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 3     | 2     | 3     | 3     | 2     |   |
| 3     | 2     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 2     | 2     | 4     | 4     | 3     | 4     | 2     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 3     | 2     | 3     | 3     | 2     |   |
| 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 4     | 4     | 3     | 4     | 2     | 4     | 3     | 2     | 2     | 2     | 3     | 2     | 2     | 3     | 2     | 3     | 3     | 2     |   |
| 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 4     | 4     | 3     | 4     | 2     | 4     | 3     | 2     | 2     | 2     | 3     | 2     | 2     | 3     | 2     | 3     | 3     | 2     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 2     | 4     | 2     | 3     | 3     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 2     | 4     | 2     | 3     | 3     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 1     | 3     | 3     | 3     | 2     | 2     | 2     | 3     | 3     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 3     | 3     | 4     | 2     | 3     | 3     | 2     | 2     |   |
| 2     | 3     | 3     | 3     | 2     | 3     | 2     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 2     | 4     | 2     | 3     | 3     | 3     | 4     | 2     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     |   |
| 2     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 3     | 2     | 2     | 3     | 3     | 4     | 2     | 4     | 2     | 2     | 3     | 4     | 4     | 5     | 2     | 2     | 2     | 2     | 4     | 2     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 1     | 1     | 3     | 4     | 1     | 4     | 1     | 4     | 1     | 2     | 4     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 4     |   |
| 2     | 3     | 2     | 4     | 4     | 4     | 2     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 2     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 2     | 3     | 3     | 3     | 2     | 4     | 3     | 5     | 2     | 3     | 4     | 4     | 5     | 2     | 4     | 3     | 3     | 4     | 5     | 2     | 3     | 4     |   |
| 2     | 4     | 3     | 3     | 4     | 5     | 2     | 3     | 3     | 3     | 3     | 2     | 4     | 2     | 5     | 1     | 4     | 1     | 1     | 1     | 3     | 3     | 1     | 2     | 2     | 1     | 3     | 4     | 2     |       |   |
| 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 5     | 1     | 2     | 3     | 3     | 4     | 4     | 2     | 2     | 2     | 2     | 3     | 4     | 2     |       |   |
| 4     | 2     | 4     | 4     | 5     | 1     | 3     | 5     | 4     | 1     | 4     | 3     | 3     | 2     | 2     | 4     | 3     | 3     | 2     | 2     | 5     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 5     | 3     |   |
| 2     | 2     | 3     | 2     | 3     | 5     | 3     | 3     | 2     | 3     | 1     | 2     | 3     | 3     | 2     | 5     | 1     | 5     | 1     | 2     | 5     | 2     | 4     | 4     | 2     | 3     | 2     | 3     | 4     | 2     |   |
| 2     | 2     | 3     | 2     | 2     | 4     | 4     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 4     | 2     | 3     | 3     | 3     | 4     | 4     | 1     | 3     | 4     |   |
| 2     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 2     | 2     | 4     | 3     | 2     | 4     | 3     | 5     | 2     | 3     | 4     | 2     | 5     | 2     | 4     | 3     | 3     | 4     | 4     | 5     | 2     | 4     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 2     | 2     | 2     | 4     | 3     | 4     | 2     | 3     | 3     | 2     | 2     | 3     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 2     | 4     | 2     | 4     | 3     | 2     | 3     | 2     | 2     | 3     | 2     |   |
| 2     | 4     | 3     | 3     | 4     | 4     | 1     | 3     | 3     | 2     | 2     | 2     | 3     | 3     | 3     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 3     | 4     | 2     | 4     | 4     | 3     | 2     | 2     |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 2     | 4     | 2     | 4     | 4     | 4     | 2     | 2     | 3     | 2     | 2     | 3     | 2     | 4     | 2     | 3     | 2     | 4     | 2     | 3     | 4     | 3     | 3     | 3     | 4     | 2     | 2     | 3     | 4     | 3     |   |
| 1     | 3     | 2     | 3     | 3     | 5     | 5     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 5     | 2     | 4     | 3     | 2     | 2     | 3     | 3     | 5     | 2     | 3     | 3     | 3     | 4     | 4     |   |
| 2     | 2     | 2     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 2     | 4     | 2     | 3     | 2     | 2     | 2     | 3     | 4     | 4     | 2     | 2     | 2     | 2     | 4     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 5     | 1     | 3     | 2     | 1     | 5     | 3     | 4     | 5     | 2     | 3     | 3     | 1     | 4     | 3     |   |
| 2     | 3     | 3     | 4     | 4     | 4     | 2     | 3     | 4     | 4     | 2     | 2     | 2     | 4     | 2     | 3     | 2     | 4     | 2     | 3     | 3     | 3     | 4     | 4     | 2     | 2     | 2     | 3     | 2     | 2     |   |
| 2     | 3     | 3     | 4     | 4     | 4     | 2     | 3     | 4     | 4     | 2     | 2     | 2     | 4     | 2     | 3     | 2     | 4     | 2     | 3     | 3     | 3     | 4     | 4     | 2     | 2     | 2     | 3     | 2     | 2     |   |
| 2     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 2     | 2     | 2     | 4     | 2     | 3     | 2     | 4     | 2     | 3     | 3     | 3     | 4     | 4     | 2     | 2     | 2     | 2     | 2     | 2     |   |
| 2     | 2     | 2     | 4     | 4     | 4     | 2     | 4     | 3     | 3     | 2     | 2     | 2     | 2     | 2     | 4     | 2     | 4     | 2     | 2     | 4     | 2     | 2     | 4     | 2     | 2     | 2     | 3     | 3     | 2     |   |
| 2     | 2     | 3     | 4     | 4     | 4     | 2     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 5     | 2     | 5     | 1     | 2     | 3     | 3     | 4     | 4     | 2     | 2     | 2     | 3     | 4     | 2     |   |
| 2     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 2     | 2     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 3     |   |
| 2     | 2     | 3     | 3     | 3     | 3     | 1     | 2     | 3     | 3     | 2     | 2     | 3     | 2     | 3     | 2     | 3     | 2     | 2     | 2     | 2     | 2     | 3     | 2     | 2     | 2     | 2     | 3     | 3     | 2     |   |
| 4     | 1     | 4     | 1     | 1     | 4     | 1     | 1     | 1     | 1     | 1     | 4     | 1     | 4     | 1     | 4     | 4     | 4     | 4     | 1     | 4     | 4     | 4     | 4     | 2     | 2     | 2     | 4     | 4     | 2     |   |
| 2     | 2     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 2     | 4     | 2     | 4     | 2     | 2     | 2     | 3     | 2     | 4     | 2     | 2     | 2     | 4     | 2     | 2     |   |
| 2     | 2     | 2     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 2     | 2     | 2     | 4     | 2     | 2     | 2     | 2     | 4     | 2     | 2     | 2     | 2     | 4     | 2     | 2     |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 2     | 3     | 3     | 5     | 4     | 4     | 2     | 3     | 2     | 2     | 5     | 5     | 5     | 3     | 5     | 2     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 2     | 2     | 2     | 2     | 2     |   |
| 2     | 3     | 3     | 5     | 4     | 4     | 2     | 2     | 3     | 2     | 2     | 5     | 5     | 5     | 3     | 5     | 2     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 2     | 2     | 2     | 2     | 2     |   |
| 5     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 3     | 4     | 5     | 5     | 5     | 4     | 4     | 5     |   |
| 2     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 2     | 4     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 4 |
| 3     | 2     | 4     | 5     | 4     | 5     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 2     | 4     | 2     | 4     | 3     | 2     | 3     | 2     | 2     | 3     | 2     |   |
| 2     | 3     | 3     | 5     | 4     | 4     | 2     | 2     | 3     | 2     | 2     | 5     | 5     | 5     | 3     | 5     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 2     | 2     | 2     | 2     |   |
| 2     | 2     | 4     | 5     | 5     | 5     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 2     | 5     | 2     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 2     | 2     | 2     | 2     | 2     |   |
| 2     | 2     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 2     | 2     | 3     | 3     | 3     | 2     | 4     | 2     | 3     | 2     | 3     | 4     | 4     | 2     | 2     | 2     | 4     | 3     |       |   |

Appendix 2 Database: Company 1 – Company 80

| si231 | si232 | si233 | si234 | si235 | si236 | si237 | si238 | si239 | si240 | si241 | si242 | si243 | si244 | si245 | si246 | si247 | si248 | si249 | si250 | si251 | si252 | si253 | si254 | si255 | si256 | si257 | si258 | si259 | si260 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 4     | 3     | 4     | 4     | 4     | 2     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 1     | 100   | 2     | 3     | 3     | 3     | 4     | 3     | 3     |       |   |
| 4     | 3     | 3     | 2     | 3     | 2     | 3     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 1     | 30    | 2     | 4     | 2     | 4     | 3     | 4     | 3     |       |   |
| 4     | 2     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 5     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 2     |       | 3     | 3     | 3     | 3     | 3     | 3     | 3     |       |   |
| 3     | 3     | 1     | 4     | 2     | 2     | 2     | 3     | 3     | 4     | 4     | 5     | 3     | 4     | 3     | 3     | 3     | 4     | 5     | 5     | 2     |       | 1     | 2     | 1     | 1     | 1     | 1     | 3     | 4     |   |
| 4     | 4     | 4     | 2     | 2     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 4     | 2     | 3     | 3     | 3     | 4     | 2     | 4     | 2     |       | 1     | 1     | 1     | 1     | 1     | 2     | 3     | 3     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 2     |       | 4     | 1     | 4     | 4     | 2     | 3     | 3     |   |
| 3     | 2     | 2     | 4     | 4     | 2     | 2     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 1     | 40    | 4     | 4     | 4     | 5     | 4     | 5     | 5     |       |   |
| 4     | 3     | 3     | 3     | 3     | 5     | 4     | 4     | 2     | 4     | 4     | 3     | 3     | 4     | 4     | 2     | 3     | 4     | 3     | 4     | 3     |       | 3     | 2     | 3     | 3     | 2     | 3     | 3     |       |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     |       | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 1     | 47    | 3     | 3     | 3     | 3     | 3     | 3     | 3     |       |   |
| 5     | 3     | 3     | 3     | 3     | 5     | 5     | 3     | 5     | 5     | 5     | 2     | 5     | 1     | 2     | 2     | 2     | 4     | 1     | 5     | 1     | 50    | 2     | 4     | 4     | 2     | 2     | 2     | 2     |       |   |
| 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 2     | 4     | 2     |       | 2     | 2     | 3     | 2     | 2     | 3     | 3     |       |   |
| 4     | 3     | 2     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |       |       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 2     | 2     | 2     | 4     | 3     | 3     | 2     | 4     | 4     | 4     | 3     | 3     | 2     | 2     | 2     |       | 2     | 2     | 3     | 1     | 1     | 3     | 3     |       |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 3     | 3     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 1     | 1     | 70    | 4     | 3     | 4     | 4     | 3     | 3     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 5     | 3     | 4     | 5     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 5     |       |       | 4     | 5     | 4     | 3     | 4     | 3     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 5     | 3     | 4     | 5     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 5     |       |       | 4     | 5     | 4     | 3     | 4     | 3     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 5     | 3     | 4     | 5     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 5     |       |       | 4     | 5     | 4     | 3     | 4     | 3     | 4     |   |
| 4     | 3     | 2     | 4     | 3     | 4     | 3     | 5     | 4     | 4     | 2     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 4     | 2     | 4     | 2     |       | 4     | 3     | 2     | 2     | 3     | 3     | 3     |   |
| 4     | 3     | 2     | 4     | 3     | 4     | 3     | 5     | 4     | 4     | 2     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 2     | 4     | 1     | 10    | 4     | 3     | 2     | 2     | 3     | 3     | 3     |   |
| 4     | 3     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 2     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 2     | 4     | 1     | 10    | 4     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 2     | 2     | 3     | 3     | 3     | 2     | 2     | 2     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 2     |       |       | 1     | 2     | 2     | 3     | 3     | 4     | 4     |   |
| 4     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     |       |       | 4     | 3     | 3     | 3     | 4     | 4     | 4     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     |       |       | 2     | 2     | 2     | 2     | 2     | 3     | 3     |   |
| 3     | 3     | 3     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |       |       | 4     | 4     | 4     | 4     | 4     | 4     | 3     |   |
| 4     | 3     | 3     | 3     | 2     | 3     | 2     | 2     | 2     | 4     | 3     | 3     | 2     | 3     | 2     | 3     | 2     | 2     | 3     | 1     | 2     |       |       | 2     | 3     | 1     | 2     | 2     | 3     | 3     |   |
| 4     | 2     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     |   |
| 2     | 3     | 4     | 3     | 2     | 4     | 1     | 4     | 3     | 3     | 2     | 4     | 3     | 4     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 1     | 20    | 3     | 4     | 3     | 4     | 4     | 3     | 4     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 2     |       | 3     | 3     | 3     | 3     | 2     | 3     | 3     |   |
| 5     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 2     | 2     | 2     |       | 3     | 3     | 3     | 3     | 3     | 4     | 3     |   |
| 5     | 2     | 4     | 5     | 5     | 5     | 3     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 2     |       |       | 3     | 3     | 3     | 3     | 2     | 2     |       |   |
| 5     | 3     | 3     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 4     | 5     | 3     | 3     | 5     | 3     | 3     | 1     | 60    | 4     | 4     | 3     | 4     | 3     | 3     | 3     |   |
| 2     | 4     | 3     | 4     | 1     | 2     | 5     | 1     | 5     | 3     | 2     | 4     | 4     | 3     | 5     | 4     | 4     | 2     | 1     | 3     | 5     |       |       | 3     | 2     | 5     | 2     | 1     | 2     | 5     |   |
| 5     | 3     | 3     | 5     | 5     | 3     | 3     | 3     | 2     | 4     | 4     | 4     | 3     | 5     | 2     | 2     | 2     | 3     | 2     | 5     | 3     | 1     | 60    | 2     | 2     | 3     | 4     | 3     | 3     | 3     |   |
| 4     | 4     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 2     | 2     | 3     | 2     | 2     |       |       | 4     | 3     | 2     | 2     | 3     | 3     | 3     |   |
| 5     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 3     | 3     | 4     | 2     | 2     | 2     |       | 3     | 2     | 2     | 3     | 3     | 3     | 3     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     |       |       | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 3     | 3     | 3     | 2     | 4     | 2     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     |       |       |       | 3     | 4     | 2     | 3     | 3     | 3     | 4     |   |
| 3     | 3     | 3     | 3     | 2     | 4     | 2     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     |       |       | 3     | 4     | 4     | 4     | 4     | 4     | 3     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     |       |       | 4     | 3     | 3     | 3     | 3     | 4     | 4     |   |
| 4     | 2     | 4     | 4     | 2     | 2     | 2     | 4     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 4     | 4     | 4     | 2     |       |       | 4     | 4     | 1     | 3     | 2     | 3     | 4     |   |
| 5     | 3     | 3     | 3     | 4     | 3     | 5     | 5     | 3     | 5     | 5     | 4     | 5     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 5     | 1     | 50    | 2     | 4     | 4     | 2     | 2     | 2     | 3     | 3 |
| 4     | 3     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 1     | 10    | 3     | 2     | 2     | 2     | 2     | 4     | 4 |
| 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     |       |       | 3     | 4     | 3     | 4     | 3     | 3     | 4     |   |
| 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 2     |       |       | 3     | 3     | 3     | 3     | 3     | 3     | 4     |   |
| 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 2     |       | 3     | 3     | 3     | 3     | 3     | 3     | 4     |   |
| 4     | 3     | 4     | 4     | 3     | 3     | 2     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 2     | 4     | 2     |       | 2     | 2     | 2     | 2     | 2     | 3     | 3     |   |
| 5     | 3     | 3     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 3     | 5     | 3     | 3     | 5     | 3     | 3     | 1     | 60    | 4     | 3     | 2     | 2     | 4     | 3     | 3     |   |
| 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 2     |       |       | 4     | 3     | 3     | 3     | 3     | 4     | 2     |   |
| 3     | 3     | 3     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 2     | 3     | 2     |       |       | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 1     | 1     | 4     | 4     | 4     | 1     | 4     | 4     | 4     | 1     | 4     | 3     | 4     | 1     | 2     | 1     | 4     | 1     | 1     | 2     | 2     |       |       | 1     | 1     | 1     | 1     | 1     | 5     | 5     |   |
| 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     |       |       | 4     | 4     | 4     | 4     | 4     | 4     | 3     |   |
| 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 2     | 1     | 75    | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     |       |       |       | 4     | 3     | 3     | 3     | 3     | 4     | 4     |   |
| 5     | 2     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 5     | 3     | 4     | 4     | 4     | 4     | 5     | 5     |       |       | 4     | 4     | 2     | 4     | 3     | 3     | 3     |   |
| 5     | 2     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 5     | 3     | 4     | 4     | 4     | 5     | 5     | 5     |       |       | 4     | 4     | 2     | 4     | 3     | 3     | 3     |   |
| 5     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 3     | 5     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 2     |       | 3     | 4     | 4     | 5     | 5     | 3     | 4     |   |
| 2     | 3     | 4     | 3     | 2     | 4     | 1     | 4     | 3     | 3     | 2     | 4     | 3     | 4     | 2     | 3     | 3     | 4     | 4     | 2     | 3     | 1     | 11    | 3     | 4     | 4     | 4     | 4     | 3     | 4     |   |
| 4     | 3     | 3     | 3     | 2     | 4     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     |       |       | 3     | 4     | 2     | 3     | 3     | 3     | 4     |   |
| 5     | 2     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 5     | 3     | 4     | 4     | 4     | 5     | 5     | 5     |       |       |       | 4     | 4     | 2     | 4     | 3     | 3     | 3     |   |
| 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     |       |       | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     |       |       |       | 4     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     |       |       | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 3     | 2     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     |       |       |       | 3     | 3     | 4     | 4     | 4     | 4     | 4     |   |
| 5     | 4     | 4     | 5     | 3     | 4     | 3     | 3     | 2     | 3     | 5     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 4     | 4     | 5     | 2     |       | 3     | 4     | 4     | 4     | 4     | 3     | 4     |   |

Appendix 2 Database: Company 1 – Company 80

| si261 | si262 | si263 | si264 | si265 | si266 | si267 | si268 | si269 | si270 | si271 | si272 | si273 | si274 | si275 | si276 | si277 | si278 | si279 | si280 | si281 | si282 | si283 | si284 | si285 | si286 | si287 | si288 | si289 | si290 |    |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 2006  | 7     | 14    |    |
| 3     | 4     | 4     | 4     | 4     | 2     | 3     | 2     | 4     | 4     | 4     | 4     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 162   | 2010  | 7     | 1     |    |
| 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 49    | 51    | 0     | 100   | 0     | 5     | 1998  | 7     | 16 |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 5     | 3     | 5     | 3     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 80    | 1984  | 2     | 16    |    |
| 3     | 2     | 2     | 4     | 4     | 3     | 4     | 2     | 2     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 2     | 2     | 3     | 4     | 3     | 100   | 0     | 0     | 0     | 0     | 5     | 2006  | 7     | 17    |    |
| 3     | 3     | 3     | 3     | 3     | 2     | 2     | 2     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 3     | 2008  | 7     | 17    |    |
| 5     | 5     | 5     | 5     | 5     | 5     | 4     | 3     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 100   | 0     | 0     | 0     | 0     | 7     | 2010  | 7     | 17    |    |
| 3     | 3     | 3     | 4     | 4     | 2     | 2     | 2     | 3     | 3     | 3     | 5     | 4     | 3     | 3     | 5     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 450   | 2009  | 7     | 5     |    |
| 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 100   | 2006  | 7     | 14    |    |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     | 100   | 1998  | 5     | 2     |    |
| 2     | 2     | 1     | 3     | 1     | 4     | 4     | 3     | 2     | 1     | 1     | 5     | 3     | 2     | 1     | 4     | 3     | 2     | 4     | 4     | 4     | 80    | 19    | 1     | 2     | 98    | 300   | 2006  | 7     | 16    |    |
| 3     | 3     | 4     | 4     | 4     | 2     | 2     | 2     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 50    | 50    | 0     | 100   | 0     | 253   | 2009  | 7     | 17    |    |
| 5     | 5     | 5     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 10    | 2007  | 7     | 17    |    |
| 4     | 2     | 2     | 4     | 4     | 3     | 3     | 2     | 2     | 3     | 3     | 4     | 4     | 2     | 2     | 4     | 2     | 4     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     | 5     | 2007  | 7     | 17    |    |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     |       | 2003  | 6     | 17    |    |
| 4     | 5     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 7     | 2010  | 7     | 14    |    |
| 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 37    | 2008  | 7     | 17    |    |
| 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 50    | 2006  | 7     | 17    |    |
| 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 58    | 2008  | 7     | 17    |    |
| 3     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 2     | 2     | 3     | 2     | 2     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     | 42    | 2008  | 7     | 17    |    |
| 3     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 2     | 2     | 3     | 2     | 2     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     | 42    | 2008  | 7     | 17    |    |
| 3     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 2     | 2     | 3     | 2     | 2     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     | 43    | 2006  | 7     | 17    |    |
| 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     | 120   | 2007  | 7     | 17    |    |
| 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 10    | 2000  | 5     | 14    |    |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     |       | 2006  | 7     | 5     |    |
| 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 17000 | 1998  | 5     | 5     |    |
| 3     | 2     | 3     | 3     | 3     | 2     | 2     | 2     | 3     | 3     | 4     | 3     | 2     | 1     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 23    | 2008  | 7     | 16    |    |
| 3     | 3     | 4     | 4     | 3     | 3     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 14000 | 1958  | 1     | 14    |    |
| 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 80    | 20    | 0     | 100   | 0     | 45    | 2004  | 6     | 14    |    |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 51    | 49    | 0     | 100   | 0     | 15    | 2011  | 8     | 17    |    |
| 4     | 2     | 3     | 3     | 3     | 2     | 2     | 2     | 2     | 3     | 3     | 5     | 4     | 3     | 3     | 5     | 4     | 3     | 5     | 5     | 4     | 75    | 25    | 0     | 100   | 0     | 22    | 2005  | 6     | 11    |    |
| 4     | 3     | 5     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 60    | 40    | 0     | 100   | 0     | 24    | 2010  | 7     | 14    |    |
| 3     | 2     | 3     | 3     | 3     | 2     | 2     | 2     | 2     | 3     | 3     | 5     | 4     | 3     | 2     | 5     | 4     | 4     | 4     | 4     | 4     | 60    | 40    | 0     | 100   | 0     | 200   | 2001  | 6     | 17    |    |
| 3     | 1     | 5     | 2     | 5     | 2     | 4     | 3     | 3     | 3     | 3     | 1     | 5     | 3     | 2     | 4     | 1     | 5     | 4     | 2     | 4     | 100   | 0     | 0     | 0     | 0     | 93    | 2009  | 7     | 16    |    |
| 3     | 2     | 2     | 3     | 4     | 3     | 2     | 2     | 2     | 3     | 3     | 5     | 4     | 3     | 2     | 5     | 4     | 5     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 46    | 2010  | 7     | 1     |    |
| 3     | 1     | 2     | 3     | 3     | 2     | 4     | 3     | 2     | 3     | 3     | 5     | 4     | 2     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 86    | 2010  | 7     | 14    |    |
| 4     | 2     | 3     | 3     | 3     | 2     | 2     | 2     | 2     | 3     | 3     | 5     | 4     | 3     | 2     | 5     | 4     | 3     | 5     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 183   | 2002  | 6     | 17    |    |
| 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     | 108   | 2008  | 7     | 17    |    |
| 4     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 3     | 4     | 3     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 54    | 2010  | 7     | 12    |    |
| 4     | 3     | 4     | 2     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 3     | 2     | 5     | 4     | 3     | 4     | 3     | 4     | 56    | 39    | 5     | 95    | 5     | 368   | 2005  | 6     | 14    |    |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 16    | 2010  | 7     | 17    |    |
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 2     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 9     | 2005  | 6     | 6     |    |
| 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 5     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 80    | 20    | 0     | 100   | 0     | 50    | 2006  | 7     | 11    |    |
| 4     | 4     | 4     | 3     | 4     | 2     | 3     | 2     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     | 450   | 1990  | 3     | 16    |    |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 100   | 0     | 0     | 0     | 0     | 12    | 2008  | 7     | 16    |    |
| 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 35    | 2008  | 7     | 14    |    |
| 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 32    | 2007  | 7     | 14    |    |
| 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 28    | 2007  | 7     | 14    |    |
| 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 30    | 2003  | 6     | 14    |    |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 4     | 2009  | 7     | 17    |    |
| 3     | 3     | 3     | 4     | 4     | 4     | 2     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 60    | 40    | 0     | 100   | 0     | 200   | 2001  | 6     | 17    |    |
| 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 75    | 25    | 0     | 100   | 0     | 182   | 2002  | 6     | 15    |    |
| 3     | 3     | 3     | 3     | 3     | 2     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 50    | 50    | 0     | 100   | 0     | 73    | 2002  | 6     | 17    |    |
| 4     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 2     | 1     | 1     | 1     | 4     | 1     | 1     | 4     | 1     | 1     | 4     | 3     | 100   | 0     | 0     | 0     | 0     | 11    | 2009  | 7     | 14    |       |    |
| 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 85    | 15    | 0     | 100   | 0     | 50    | 2007  | 7     | 14    |    |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 25    | 75    | 0     | 100   | 0     | 21    | 2008  | 7     | 14    |    |
| 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 104   | 2010  | 7     | 17    |    |
| 4     | 3     | 3     | 4     | 3     | 4     | 2     | 2     | 3     | 3     | 4     | 5     | 2     | 2     | 2     | 5     | 3     | 4     | 4     | 3     | 2     | 100   | 0     | 0     | 0     | 0     | 168   | 2003  | 6     | 14    |    |
| 4     | 3     | 3     | 4     | 4     | 4     | 2     | 2     | 3     | 3     | 4     | 5     | 2     | 2     | 2     | 5     | 3     | 4     | 4     | 3     | 2     | 100   | 0     | 0     | 0     | 0     | 100   | 2011  | 8     | 16    |    |
| 4     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 5     | 5     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 100   | 0     | 0     | 0     | 0     | 89    | 2006  | 7     | 2     |    |
| 3     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 2     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 86    | 14    | 0     | 100   | 0     | 46    | 2009  | 7     | 2     |    |
| 4     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 423   | 2010  | 7     | 16    |    |
| 4     | 3     | 3     | 4     | 4     | 4     | 2     | 2     | 3     | 3     | 4     | 5     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |

Appendix 2 Database: Company 1 – Company 80

| si291 | si292          | si293      | si294 | si295 | si296 | si297 | si298 | si299 | si300 | si301 | si302 | si303 | si304 | si305 | si306 | si307 | si308 | si309 | si310        |
|-------|----------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|
| 16    | Indonesia      | 10000000   | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     | 1     |       |       | 1     |       |       |       | Canadian     |
| 2     | Vietnam        | 50000000   | 1     | 0     | 0     |       | 1     |       | 1     | 1     |       | 1     |       |       |       | 1     |       |       | Chinese      |
| 5     | Thailand       |            | 1     | 0     | 0     |       |       | 1     | 2     |       |       |       |       |       |       |       |       |       | Chinese      |
| 5     | HongKong       | 200000     | 1     | 0     | 0     |       | 1     |       | 1     | 1     |       |       |       |       | 1     | 1     |       |       | Chinese      |
| 20    | Singapore      | 100000     | 0     | 0     | 1     |       | 1     |       | 2     |       |       |       | 1     |       |       |       |       |       | Chinese      |
| 20    | Canada         | 100000     | 1     | 0     | 0     |       | 1     |       | 2     | 1     |       | 1     |       |       | 1     |       |       |       | Chinese      |
| 20    | Vietnam        | 600000     | 0     | 0     | 1     |       | 1     |       | 1     |       |       | 1     |       | 1     |       |       | 1     | 1     | Chinese      |
| 20    | HongKong       | 67950000   | 1     | 0     | 0     |       | 1     |       | 2     |       |       | 1     |       |       |       |       | 1     |       | Chinese      |
| 20    | America        | 4000000    | 0     | 0     | 1     |       | 1     |       | 2     |       | 1     |       |       | 1     |       |       |       |       | Chinese      |
| 1     | Burma          |            | 0     | 1     | 0     |       | 1     |       | 2     |       |       |       | 1     | 1     |       |       |       |       | Chinese      |
| 5     | Algeria        | 5000000    | 1     | 0     | 0     |       |       | 1     | 2     | 1     |       |       | 1     | 1     | 1     | 1     |       |       | Chinese      |
| 20    | Zimbabwe       |            | 1     | 0     | 0     |       |       | 1     | 1     |       |       | 1     |       |       |       |       |       |       | Chinese      |
| 20    | UAE            |            | 1     | 0     | 0     |       | 1     |       | 2     |       |       | 1     |       | 1     |       |       | 1     |       | Chinese      |
| 20    | Japan          |            | 0     | 0     | 1     |       | 1     |       | 1     |       |       |       |       |       |       |       | 1     |       | Japanese     |
| 20    | America        |            | 1     | 0     | 0     | 1     |       |       | 1     |       |       |       |       |       |       |       |       | 1     | Chinese      |
| 14    | Canada         | 135000     | 1     | 1     | 1     |       | 1     |       | 1     |       |       | 1     |       | 1     | 1     |       | 1     |       | Chinese      |
| 20    | Laos           | 450000     | 1     | 0     | 0     |       | 1     |       | 1     |       |       | 1     |       |       |       |       |       |       | Chinese      |
| 20    | Laos           | 620000     | 1     | 0     | 0     |       | 1     |       | 1     |       |       | 1     |       |       |       |       |       |       | Chinese      |
| 20    | Laos           | 760000     | 1     | 0     | 0     |       | 1     |       | 1     |       |       | 1     |       |       |       |       |       |       | Chinese      |
| 20    | Laos           | 460000     | 1     | 0     | 0     |       | 1     |       | 1     |       |       | 1     |       |       |       |       |       |       | Chinese      |
| 20    | Laos           | 460000     | 1     | 0     | 0     |       | 1     |       | 1     |       |       | 1     |       |       |       |       |       |       | Chinese      |
| 20    | Laos           | 760000     | 1     | 0     | 0     |       | 1     |       | 1     |       |       | 1     |       |       |       |       |       |       | Chinese      |
| 20    | Vietnam        | 29800000   | 1     | 0     | 0     |       | 1     |       | 1     |       |       | 1     |       |       | 1     | 1     |       |       | Chinese      |
| 16    | South Korea    | 26000000   | 0     | 0     | 1     | 1     |       |       | 1     |       |       |       |       | 1     |       |       |       |       | South Korean |
| 19    | Laos           | 8422800    | 0     | 1     | 0     | 1     |       |       | 2     |       |       |       |       |       | 1     |       |       |       | Chinese      |
| 19    | Laos           | 890000000  | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese      |
| 20    | Kyrgyzstan     | 6000000    | 1     | 1     | 0     |       | 1     |       | 1     | 1     | 1     |       |       |       | 1     | 1     |       |       | Chinese      |
| 16    | HongKong       | 2800000000 | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | Chinese      |
| 14    | Vietnam        | 7000000    | 1     | 0     | 0     | 1     |       |       | 1     |       | 1     |       |       |       | 1     | 1     |       |       | Chinese      |
| 20    | Japan          | 130000     | 1     | 0     | 0     |       |       | 1     | 1     |       | 1     |       |       | 1     |       |       |       |       | Japanese     |
| 9     | HongKong       | 500000     | 1     | 0     | 0     | 1     |       |       | 2     |       |       | 1     | 1     | 1     |       |       |       |       | Chinese      |
| 14    | Pakistan       | 2000000    | 1     | 0     | 0     |       |       | 1     | 1     |       |       | 1     |       |       |       |       |       |       | Chinese      |
| 20    | America        | 50000000   | 1     | 0     | 1     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | American     |
| 5     | Angola         | 4980000    | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     | 1     |       |       | 1     | 1     |       |       | Chinese      |
| 2     | Laos           | 2000000    | 1     | 0     | 1     |       | 1     |       | 1     | 1     | 1     |       |       |       |       | 1     |       |       | Chinese      |
| 14    | Burma          | 2040000    | 1     | 1     | 0     |       | 1     |       | 1     | 1     | 1     | 1     |       |       | 1     | 1     |       |       | Chinese      |
| 20    | Laos           | 8128       | 1     | 0     | 0     | 1     |       |       | 1     |       | 1     | 1     | 1     |       |       | 1     |       |       | Chinese      |
| 20    | Laos           | 3000000    | 1     | 0     | 0     |       | 1     |       | 2     | 1     | 1     |       |       | 1     |       | 1     |       |       | Chinese      |
| 20    | Laos           | 9980000    | 1     | 1     | 0     |       | 1     |       | 1     |       | 1     | 1     |       |       | 1     | 1     |       |       | Chinese      |
| 14    | India          | 46170000   | 1     | 0     | 0     |       |       | 1     | 1     | 1     | 1     | 1     |       |       | 1     | 1     |       |       | Chinese      |
| 20    | New Zealand    | 2500000    | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     | 1     |       |       | 1     | 1     |       |       | Chinese      |
| 11    | UK             | 4810000    | 1     | 0     | 0     |       | 1     |       | 1     |       |       | 1     |       | 1     |       |       |       |       | Chinese      |
| 9     | Germany        | 1000000    | 1     | 0     | 0     |       |       | 1     | 1     | 1     |       | 1     | 1     | 1     | 1     | 1     |       |       | German       |
| 5     | Kenya          |            | 1     | 0     | 0     |       | 1     |       | 2     |       |       |       |       | 1     |       | 1     |       |       | Chinese      |
| 5     | Kyrgyzstan     | 2000000    | 1     | 0     | 0     |       | 1     |       | 1     |       |       |       |       |       | 1     |       |       |       | Chinese      |
| 15    | Iran           |            | 1     | 0     | 1     |       | 1     |       | 2     |       | 1     |       |       | 1     |       | 1     | 1     |       | Chinese      |
| 15    | South Africa   |            | 1     | 0     | 1     |       | 1     |       | 2     |       | 1     |       |       |       |       | 1     | 1     |       | Chinese      |
| 15    | Morocco        |            | 1     | 0     | 0     |       | 1     |       | 1     |       | 1     |       |       | 1     |       | 1     |       |       | Chinese      |
| 15    | Egypt          |            | 1     | 0     | 0     |       | 1     |       | 1     |       | 1     |       |       | 1     |       | 1     |       |       | Chinese      |
| 20    | HongKong       | 100000     | 0     | 0     | 1     |       | 1     |       | 2     |       |       |       |       | 1     |       |       |       | 1     | HongKong     |
| 20    | America        | 50000000   | 1     | 0     | 0     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | American     |
| 16    | South Korea    | 99900000   | 0     | 0     | 1     | 1     |       |       | 2     | 1     |       | 1     | 1     |       |       |       |       |       | South Korean |
| 19    | Vietnam        |            | 1     | 0     | 0     |       |       | 1     | 1     |       |       |       |       |       |       |       |       |       | Chinese      |
| 14    | Pakistan       | 200000     | 1     | 0     | 0     |       | 1     |       | 2     |       |       | 1     |       | 1     |       | 1     |       |       | Chinese      |
| 14    | America        | 3000000    | 1     | 0     | 0     |       |       | 1     | 1     | 1     |       | 1     |       |       |       |       |       |       | Chinese      |
| 14    | South Korea    | 585000     | 1     | 0     | 0     |       |       | 1     | 1     |       |       | 1     |       |       |       |       |       |       | South Korean |
| 20    | Taiwan         | 440000     | 1     | 0     | 0     |       | 1     |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       | Taiwan       |
| 14    | Vietnam        | 840000     | 1     | 0     | 0     | 1     |       |       | 2     |       |       | 1     | 1     | 1     |       |       |       |       | Chinese      |
| 5     | Kenya          | 10000000   | 1     | 0     | 0     | 1     |       |       | 2     |       | 1     | 1     | 1     | 1     |       | 1     |       |       | Chinese      |
| 1     | Burma          | 3000000    | 1     | 0     | 0     |       | 1     |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       | Chinese      |
| 1     | Vietnam        | 130000     | 1     | 0     | 0     | 1     |       |       | 1     |       | 1     |       |       |       | 1     | 1     |       |       | Chinese      |
| 5     | Vietnam        | 2000000    | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     |       |       | 1     |       | 1     |       |       | Chinese      |
| 5     | Saudi Arabia   | 5000000    | 1     | 0     | 0     | 1     |       |       | 2     |       |       | 1     | 1     | 1     |       |       |       |       | Chinese      |
| 5     | HongKong       | 67950000   | 1     | 0     | 0     |       | 1     |       | 2     |       |       | 1     | 1     | 1     |       |       |       |       | HongKong     |
| 20    | Burma          | 2000000    | 0     | 1     | 0     |       | 1     |       | 1     |       | 1     |       |       |       | 1     | 1     |       |       | Chinese      |
| 20    | Burma          | 2420000    | 0     | 1     | 0     |       |       | 1     | 1     |       | 1     | 1     |       |       | 1     | 1     |       |       | Chinese      |
| 20    | Burma          | 5000000    | 0     | 1     | 0     | 1     |       |       | 1     |       |       |       |       |       | 1     | 1     |       |       | Chinese      |
| 20    | Singapore      | 160000     | 1     | 0     | 0     |       |       | 1     | 1     |       | 1     | 1     | 1     |       |       | 1     |       |       | Singaporean  |
| 1     | India          | 50000      | 1     | 0     | 0     |       | 1     |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       | Chinese      |
| 5     | Kenya          | 770000     | 1     | 0     | 0     | 1     |       |       | 2     |       |       | 1     | 1     | 1     |       |       |       |       | Chinese      |
| 20    | HongKong       | 2500000    | 1     | 0     | 1     |       | 1     |       | 1     | 1     |       | 1     |       | 1     |       | 1     |       |       | HongKong     |
| 1     | Laos           | 600000     | 0     | 1     | 0     |       |       | 1     | 1     | 1     |       |       |       |       | 1     | 1     |       |       | Lao          |
| 17    | Uganda         | 9980000    | 1     | 0     | 1     |       | 1     |       | 1     | 1     | 1     |       |       | 1     |       | 1     |       |       | Ugandan      |
| 16    | Singapore      | 1000000    | 1     | 1     | 1     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | Singaporean  |
| 16    | Cambodia       | 540000     | 1     | 0     | 1     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | Chinese      |
| 20    | Zambia         | 1800000    | 1     | 1     | 1     | 1     |       |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | Chinese      |
| 20    | HongKong       | 800000     | 1     | 1     | 1     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | Singaporean  |
| 16    | Georgia        | 2300000    | 1     | 0     | 1     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | Chinese      |
| 20    | America        | 2500000    | 1     | 0     | 1     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | American     |
| 7     | Nth Mariana Is | 590000     | 1     | 0     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | Chinese      |

Appendix 2 Database: Company 1 – Company 80

| si312 | si313 | si314 | si315 | si316 | si317 | si318 | si319          | si320 | si321          | si322 | si323       | si324 | si325   | si326 | si327 | si328 | si329 | si330 |
|-------|-------|-------|-------|-------|-------|-------|----------------|-------|----------------|-------|-------------|-------|---------|-------|-------|-------|-------|-------|
| 2     | 7     | 5     | 5     | 5     | 5     | 15    | Canada         | 15    | Canada         | 0     |             | 2     | fluent  | 4     | 1     | 1     | 1     | 1     |
| 4     | 6     | 5     | 2     | 2     | 2     | 2     | Vietnam        | 2     | Vietnam        |       |             | 2     | basic   | 2     | 2     | 1     | 1     | 2     |
| 3     | 4     | 6     | 7     | 2     | 7     | 7     | Thailand       | 7     | Thailand       | 0     |             | 2     | good    | 3     | 1     | 1     | 1     | 1     |
| 2     | 5     | 5     | 16    | 1     | 16    | 12    | HongKong       | 12    | HongKong       | 0     |             | 2     | good    | 3     | 2     | 1     | 1     | 2     |
| 4     | 4     | 5     | 5     | 5     | 8     | 1     | Singapore      | 1     | Singapore      |       |             | 2     | low     | 1     | 1     | 1     | 1     | 2     |
| 2     | 9     | 5     | 4     | 4     | 4     | 4     | Canada         | 4     | Canada         |       |             | 2     | good    | 3     | 1     | 1     | 2     | 2     |
| 3     | 5     | 6     | 5     | 2     | 5     | 2     | Vietnam        | 1     | Vietnam        |       |             | 2     |         |       | 1     | 1     | 1     | 2     |
| 3     | 6     | 6     | 16    | 5     | 8     | 2     | HongKong       | 2     | HongKong       |       |             | 2     |         |       | 1     | 2     | 2     | 2     |
| 3     | 4     | 6     | 5     | 3     | 5     | 2     | America        | 2     | America        | 1     | America     | 1     | fluent  | 4     | 1     | 1     | 1     | 1     |
| 4     | 8     | 6     | 5     | 3     | 1     | 1     | Burma          | 1     | Burma          |       |             | 2     |         |       | 1     | 1     | 2     | 2     |
| 4     | 5     | 5     | 4     | 4     | 3     | 4     | Algeria        | 4     | Algeria        |       |             | 2     | basic   | 2     | 1     | 1     | 1     | 2     |
| 4     | 5     | 4     | 3     | 3     | 3     | 1     | Zimbabwe       | 1     | Zimbabwe       | 0     |             | 2     | basic   | 2     | 2     | 1     | 1     | 2     |
| 3     | 5     | 5     | 7     | 5     | 5     | 5     | UAE            | 5     | UAE            | 0     |             | 2     | good    | 3     | 1     | 1     | 1     | 1     |
| 4     | 4     | 5     | 2     | 1     | 1     | 1     | Japan          | 1     | Japan          | 0     |             | 2     |         |       | 2     | 2     | 2     | 1     |
| 4     | 5     | 5     | 10    | 2     | 1     | 1     | America        | 1     | America        |       |             | 2     |         |       | 1     | 1     | 1     | 1     |
| 3     | 4     | 6     | 6     | 3     | 6     | 2     | Canada         | 2     | Canada         | 0     |             | 2     | good    | 3     | 1     | 1     | 1     | 2     |
| 2     | 5     | 5     | 14    | 9     | 14    | 5     | Laos           | 5     | Laos           |       |             | 2     |         |       | 2     | 2     | 1     | 1     |
| 2     | 5     | 4     | 14    | 9     | 14    | 5     | Laos           | 5     | Laos           |       |             | 2     |         |       | 2     | 2     | 1     | 1     |
| 2     | 5     | 5     | 14    | 9     | 14    | 5     | Laos           | 5     | Laos           |       |             | 2     |         |       | 2     | 2     | 1     | 1     |
| 2     | 5     | 5     | 15    | 8     | 15    | 5     | Laos           | 5     | Laos           |       |             | 2     |         |       | 2     | 2     | 1     | 1     |
| 2     | 5     | 4     | 19    | 9     | 19    | 5     | Laos           | 5     | Laos           |       |             | 2     |         |       | 2     | 2     | 1     | 1     |
| 2     | 5     | 5     | 10    | 9     | 10    | 5     | Laos           | 5     | Laos           |       |             | 2     |         |       | 2     | 2     | 1     | 1     |
| 3     | 4     | 5     | 4     | 4     | 4     | 4     | Vietnam        | 4     | Vietnam        | 0     |             | 2     | basic   | 2     | 1     | 1     | 1     | 1     |
| 3     | 5     | 5     | 5     | 5     | 5     | 3     | South Korea    | 3     | South Korea    | 1     | South Korea | 1     | fluent  | 4     | 1     | 1     | 1     | 1     |
| 3     | 4     | 5     | 11    | 6     | 11    | 6     | Laos           | 5     | Laos           |       |             | 2     | basic   | 2     | 2     | 1     | 1     | 2     |
| 3     | 3     | 5     | 3     | 3     | 3     | 2     | Laos           | 2     | Laos           |       |             | 2     |         |       | 1     | 2     | 2     | 1     |
| 4     | 4     | 5     | 2     | 2     | 2     | 2     | Kyrgyzstan     | 2     | Kyrgyzstan     |       |             | 2     | basic   | 2     | 2     | 2     | 2     | 2     |
| 4     | 4     | 5     | 5     | 5     | 2     | 1     | HongKong       | 1     | HongKong       |       |             | 2     |         |       | 2     | 1     | 1     | 2     |
| 3     | 4     | 6     | 4     | 2     | 4     | 2     | Vietnam        | 2     | Vietnam        |       |             | 2     |         |       | 2     | 1     | 1     | 2     |
| 2     | 5     | 6     | 5     | 1     | 5     | 10    | Japan          | 10    | Japan          |       |             | 2     | fluent  | 4     | 2     | 1     | 1     | 2     |
| 2     | 5     | 6     | 4     | 2     | 4     | 1     | HongKong       | 1     | HongKong       |       |             | 2     | basic   | 2     | 1     | 1     | 1     | 1     |
| 2     | 6     | 6     | 1     | 1     | 5     | 1     | Pakistan       | 1     | Pakistan       |       |             | 2     | average | 2     | 2     | 2     | 1     | 2     |
| 1     | 7     | 7     | 1     | 1     | 1     | 16    | America        | 20    | America        | 1     | America     | 1     | fluent  | 4     | 1     | 1     | 1     | 1     |
| 4     | 4     | 4     | 5     | 3     | 5     | 1     | Angola         | 1     | Angola         |       |             | 2     | poor    | 1     | 1     | 2     | 1     | 2     |
| 3     | 7     | 5     | 1     | 1     | 1     | 0.5   | Laos           | 0.5   | Laos           |       |             | 2     | basic   | 2     | 1     | 1     | 2     | 1     |
| 4     | 4     | 4     | 6     | 3     | 6     | 1     | Burma          | 1     | Burma          |       |             | 2     | poor    | 1     | 1     | 2     | 2     | 2     |
| 4     | 5     | 6     | 6     | 2     | 2     | 2     | Laos           | 2     | Laos           |       |             | 2     | basic   | 2     | 1     | 1     | 2     | 2     |
| 4     | 3     | 5     | 4     | 2     | 3     | 1     | Laos           | 1     | Laos           |       |             | 2     |         |       | 1     | 1     | 1     | 1     |
| 4     | 4     | 4     | 1     | 1     | 1     | 1     | Laos           | 1     | Laos           |       |             | 2     | poor    | 1     | 1     | 1     | 1     | 1     |
| 3     | 4     | 5     | 3     | 0.5   | 2     | 0.5   | India          | 0.5   | India          |       |             | 2     | basic   | 2     | 1     | 2     | 2     | 1     |
| 4     | 5     | 4     | 5     | 1     | 5     | 1     | New Zealand    | 1     | New Zealand    |       |             | 2     | basic   | 2     | 1     | 1     | 1     | 2     |
| 3     | 5     | 7     | 5     | 5     | 10    | 5     | UK             | 5     | UK             | 1     | America     | 1     | fluent  | 4     | 2     | 1     | 1     | 2     |
| 4     | 4     | 5     | 5     | 2     | 5     | 1     | Germany        | 1     | Germany        | 0     |             | 2     | fluent  | 4     | 1     | 1     | 1     | 2     |
| 2     | 5     | 5     | 14    | 11    | 14    | 1     | Kenya          | 1     | Kenya          | 0     |             | 2     |         |       | 2     | 1     | 1     | 2     |
| 3     | 4     | 5     | 6     | 2     | 6     | 2     | Kyrgyzstan     | 2     | Kyrgyzstan     | 0     |             | 2     | basic   | 2     | 2     | 1     | 2     | 2     |
| 3     | 5     | 5     | 12    | 8     | 8     | 2     | Iran           | 2     | Iran           | 0     |             | 2     |         |       | 2     | 2     | 2     | 2     |
| 3     | 5     | 5     | 10    | 8     | 8     | 2     | South Africa   | 2     | South Africa   | 0     |             | 2     |         |       | 2     | 1     | 1     | 2     |
| 3     | 4     | 5     | 12    | 9     | 5     | 2     | Morocco        | 2     | Morocco        | 0     |             | 2     |         |       | 1     | 1     | 1     | 2     |
| 3     | 3     | 5     | 12    | 9     | 5     | 2     | Egypt          | 2     | Egypt          | 0     |             | 2     |         |       | 1     | 1     | 1     | 2     |
| 4     | 4     | 5     | 3     | 3     | 3     | 1     | HongKong       | 1     | HongKong       |       |             | 2     | fluent  | 4     | 1     | 1     | 1     | 1     |
| 1     | 3     | 5     |       |       |       |       |                |       |                |       |             | 2     |         |       | 1     | 1     | 1     | 2     |
| 4     | 5     | 5     | 16    | 1     | 14    | 1     | South Korea    | 1     | South Korea    | 0     |             | 2     |         |       | 2     | 1     | 1     | 2     |
| 4     | 3     | 5     | 1     | 1     | 1     | 1     | Vietnam        | 1     | Vietnam        |       |             | 2     |         |       | 2     | 1     | 1     | 2     |
| 1     | 4     | 5     | 3     | 3     | 3     | 3     | Pakistan       | 3     | Pakistan       | 0     |             | 2     |         |       | 1     | 1     | 1     | 2     |
| 3     | 5     | 5     | 9     | 5     | 9     | 7     | America        | 7     | America        | 0     |             | 2     | fluent  | 1     | 1     | 1     | 1     | 1     |
| 2     | 7     | 5     | 5     | 5     | 5     | 1     | South Korea    | 1     | South Korea    | 0     |             | 2     | basic   | 2     | 1     | 1     | 1     | 1     |
| 4     | 2     | 4     | 2     | 2     | 1     | 1     | Taiwan         | 1     | Taiwan         | 0     |             | 2     |         |       | 1     | 1     | 1     | 1     |
| 4     | 5     | 6     | 4     | 2     | 4     | 1     | Vietnam        | 1     | Vietnam        |       |             | 2     | fluent  | 4     | 1     | 1     | 1     | 1     |
| 4     | 2     | 5     | 2     | 2     | 2     | 1     | Kenya          | 1     | Kenya          | 0     |             | 2     |         |       | 1     | 1     | 1     | 1     |
| 4     | 3     | 5     | 4     | 2     | 4     | 1     | Burma          | 1     | Burma          | 0     |             | 2     | poor    | 1     | 1     | 2     | 1     | 1     |
| 4     | 4     | 5     | 2     | 2     | 2     | 1     | Vietnam        | 1     | Vietnam        | 0     |             | 2     | basic   | 2     | 1     | 1     | 1     | 1     |
| 4     | 3     | 5     | 2     | 2     | 2     | 0.5   | Vietnam        | 0.5   | Vietnam        | 0     |             | 2     | poor    | 1     | 1     | 1     | 1     | 1     |
| 2     | 5     | 6     | 2     | 2     | 2     | 1     | Saudi Arabia   | 1     | Saudi Arabia   | 0     |             | 2     | fluent  | 4     | 1     | 1     | 1     | 1     |
| 3     | 5     | 5     | 7     | 4     | 7     | 1     | HongKong       | 1     | HongKong       | 0     |             | 2     | basic   | 2     | 1     | 1     | 1     | 1     |
| 4     | 4     | 5     | 2     | 2     | 2     | 1     | Burma          | 1     | Burma          | 0     |             | 2     | poor    | 1     | 1     | 1     | 2     | 1     |
| 4     | 2     | 5     | 2     | 2     | 2     | 1     | Burma          | 1     | Burma          | 0     |             | 2     |         |       | 1     | 1     | 2     | 2     |
| 4     | 4     | 5     | 2     | 2     | 2     | 1     | Burma          | 1     | Burma          | 0     |             | 2     | poor    | 1     | 1     | 1     | 2     | 1     |
| 4     | 3     | 5     | 3     | 3     | 3     | 1     | Singapore      | 1     | Singapore      | 0     |             | 2     | basic   | 2     | 2     | 1     | 2     | 1     |
| 4     | 5     | 4     | 3     | 2     | 3     | 1     | India          | 1     | India          | 0     |             | 2     | poor    | 1     | 1     | 2     | 1     | 1     |
| 4     | 5     | 4     | 4     | 2     | 4     | 1     | Kenya          | 1     | Kenya          | 0     |             | 2     |         |       | 1     | 1     | 1     | 1     |
| 4     | 3     | 5     | 2     | 2     | 2     | 1     | HongKong       | 1     | HongKong       | 0     |             | 2     | basic   | 2     | 1     | 2     | 1     | 2     |
| 4     | 5     | 5     | 4     | 4     | 4     | 2     | Laos           | 2     | Laos           | 0     |             | 2     | poor    | 1     | 1     | 1     | 2     | 2     |
| 4     | 3     | 3     | 4     | 4     | 4     | 2     | Uganda         | 2     | Uganda         | 0     |             | 2     | poor    | 1     | 1     | 1     | 1     | 1     |
| 4     | 4     | 5     | 12    | 8     | 8     | 1     | Singapore      | 1     | Singapore      | 0     |             | 2     |         |       | 2     | 1     | 1     | 1     |
| 4     | 4     | 5     | 6     | 6     | 2     | 1     | Cambodia       | 1     | Cambodia       | 0     |             | 2     |         |       | 1     | 1     | 1     | 1     |
| 2     | 4     | 5     | 5     | 5     | 5     | 2     | Zambia         | 2     | Zambia         | 0     |             | 2     |         |       | 1     | 1     | 1     | 1     |
| 4     | 3     | 5     | 3     | 3     | 3     | 1     | HongKong       | 1     | HongKong       | 0     |             | 2     |         |       | 2     | 1     | 2     | 1     |
| 1     | 7     | 7     | 6     | 6     | 6     | 6     | Georgia        | 6     | Georgia        | 0     |             | 2     |         |       | 1     | 1     | 1     | 1     |
| 4     | 4     | 5     | 3     | 3     | 1     | 1     | America        | 1     | America        | 0     |             | 2     |         |       | 1     | 1     | 1     | 1     |
| 4     | 4     | 5     | 5     | 5     | 1     | 1     | Nth Mariana Is | 1     | Nth Mariana Is | 0     |             | 2     |         |       | 1     | 1     | 1     | 1     |







Appendix 2 Database: Company 81 – Company 160

| ID  | hi1 | hi2 | hi3 | hi4 | hi5 | hi6 | hi7 | hi8 | hi9 | hi10 | hi11 | hi12 | hi13 | hi14 | hi15 | hi16 | hi17 | hi18 | hi19 | hi20 | hi21 | hi22 | hi23 | hi24 | hi25 | hi26 | hi27 | hi28 | hi29 | hi30 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 81  | 4   | 5   | 5   | 4   | 4   | 3   | 2   | 4   | 4   | 4    | 2    | 2    | 4    | 4    | 4    | 4    | 3    | 2    | 3    | 2    | 3    | 4    | 4    | 3    | 2    | 4    | 4    | 5    | 4    | 2    |
| 82  | 4   | 5   | 5   | 4   | 4   | 3   | 2   | 4   | 4   | 4    | 2    | 2    | 4    | 4    | 4    | 4    | 3    | 2    | 3    | 2    | 3    | 4    | 4    | 3    | 2    | 4    | 4    | 5    | 4    | 2    |
| 83  | 4   | 3   | 4   | 3   | 4   | 3   | 2   | 3   | 3   | 4    | 2    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    |
| 84  | 4   | 3   | 4   | 4   | 3   | 3   | 4   | 4   | 4   | 3    | 2    | 4    | 3    | 3    | 5    | 5    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 5    | 3    |
| 85  | 3   | 3   | 4   | 3   | 4   | 2   | 3   | 2   | 4   | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 5    | 4    | 3    | 3    | 4    | 4    | 5    | 5    | 2    |
| 86  | 3   | 3   | 4   | 3   | 4   | 2   | 3   | 2   | 4   | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 5    | 5    | 4    | 3    | 4    | 4    | 5    | 5    | 2    |
| 87  | 4   | 4   | 3   | 5   | 2   | 5   | 3   | 5   | 3   | 4    | 3    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 3    | 5    | 3    | 5    | 3    |
| 88  | 4   | 4   | 2   | 2   | 3   | 4   | 2   | 4   | 2   | 5    | 3    | 5    | 3    | 4    | 4    | 4    | 5    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 2    |
| 89  | 4   | 4   | 4   | 3   | 4   | 4   | 3   | 4   | 3   | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 2    |
| 90  | 4   | 4   | 4   | 4   | 4   | 5   | 2   | 4   | 4   | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 2    |
| 91  | 3   | 2   | 3   | 3   | 4   | 2   | 3   | 3   | 3   | 2    | 4    | 3    | 2    | 4    | 3    | 2    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    |
| 92  | 4   | 4   | 3   | 3   | 3   | 4   | 2   | 3   | 3   | 3    | 2    | 4    | 3    | 2    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    |
| 93  | 4   | 2   | 4   | 4   | 4   | 4   | 4   | 5   | 4   | 3    | 1    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 2    |
| 94  | 4   | 3   | 3   | 2   | 3   | 3   | 4   | 4   | 4   | 2    | 3    | 3    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 5    |
| 95  | 4   | 3   | 3   | 4   | 4   | 3   | 3   | 3   | 2   | 3    | 2    | 2    | 3    | 2    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 2    |
| 96  | 4   | 4   | 3   | 5   | 3   | 5   | 4   | 5   | 5   | 4    | 4    | 3    | 5    | 4    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 3    | 4    | 5    | 4    | 3    |
| 97  | 4   | 3   | 4   | 3   | 3   | 4   | 3   | 4   | 5   | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 4    | 5    |
| 98  | 4   | 4   | 4   | 3   | 3   | 3   | 5   | 5   | 4   | 4    | 2    | 3    | 3    | 5    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 5    | 2    |
| 99  | 4   | 4   | 4   | 4   | 4   | 5   | 3   | 4   | 3   | 3    | 4    | 4    | 3    | 5    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 5    | 4    | 4    | 5    | 4    | 5    | 5    | 1    |
| 100 | 3   | 3   | 3   | 4   | 4   | 3   | 4   | 4   | 3   | 3    | 3    | 3    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 5    | 5    | 5    | 2    |
| 101 | 4   | 2   | 2   | 1   | 2   | 2   | 3   | 2   | 1   | 1    | 2    | 1    | 1    | 2    | 4    | 4    | 4    | 5    | 5    | 4    | 3    | 5    | 5    | 4    | 5    | 4    | 5    | 5    | 5    | 3    |
| 102 | 3   | 3   | 2   | 2   | 3   | 4   | 4   | 4   | 4   | 2    | 4    | 3    | 4    | 2    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    |
| 103 | 2   | 3   | 3   | 4   | 3   | 2   | 2   | 3   | 3   | 4    | 3    | 4    | 2    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    |
| 104 | 2   | 4   | 4   | 5   | 5   | 3   | 2   | 3   | 2   | 4    | 3    | 2    | 3    | 4    | 4    | 4    | 3    | 5    | 4    | 3    | 3    | 4    | 3    | 2    | 3    | 3    | 4    | 3    | 4    | 3    |
| 105 | 4   | 3   | 4   | 4   | 4   | 4   | 3   | 3   | 2   | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 5    | 2    | 2    | 3    | 4    | 4    | 4    | 5    |
| 106 | 1   | 1   | 2   | 2   | 4   | 2   | 3   | 2   | 2   | 2    | 1    | 3    | 3    | 1    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    |
| 107 | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 2   | 3   | 2    | 2    | 2    | 2    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 5    | 3    |
| 108 | 3   | 3   | 2   | 3   | 3   | 3   | 3   | 4   | 4   | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 5    | 4    | 5    | 4    |
| 109 | 5   | 4   | 4   | 4   | 5   | 4   | 2   | 4   | 5   | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 3    | 4    | 2    |
| 110 | 4   | 3   | 3   | 4   | 3   | 4   | 4   | 4   | 3   | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 2    |
| 111 | 4   | 3   | 4   | 4   | 3   | 2   | 3   | 3   | 4   | 4    | 3    | 2    | 2    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 2    |
| 112 | 4   | 3   | 4   | 4   | 3   | 4   | 2   | 3   | 3   | 2    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 2    |
| 113 | 4   | 4   | 3   | 3   | 4   | 4   | 2   | 4   | 2   | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 2    | 2    | 3    | 2    | 2    | 3    | 2    | 4    | 3    | 2    |
| 114 | 4   | 4   | 3   | 4   | 4   | 4   | 4   | 4   | 4   | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    |
| 115 | 4   | 4   | 3   | 4   | 4   | 3   | 4   | 4   | 3   | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 2    |
| 116 | 2   | 3   | 2   | 2   | 3   | 2   | 3   | 2   | 3   | 3    | 3    | 2    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 5    | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 3    |
| 117 | 3   | 3   | 4   | 3   | 4   | 4   | 4   | 4   | 4   | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 2    |
| 118 | 3   | 4   | 4   | 3   | 2   | 3   | 3   | 4   | 5   | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    |
| 119 | 3   | 2   | 3   | 2   | 2   | 3   | 4   | 4   | 4   | 3    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 2    |
| 120 | 4   | 5   | 4   | 4   | 3   | 4   | 4   | 4   | 5   | 4    | 3    | 4    | 5    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 3    | 4    | 2    |
| 121 | 4   | 3   | 5   | 5   | 5   | 4   | 5   | 5   | 5   | 4    | 5    | 4    | 3    | 3    | 5    | 5    | 5    | 4    | 5    | 5    | 5    | 4    | 4    | 5    | 5    | 4    | 5    | 4    | 1    | 2    |
| 122 | 3   | 4   | 4   | 5   | 4   | 3   | 3   | 3   | 3   | 4    | 4    | 5    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 5    | 4    | 4    | 3    | 3    |
| 123 | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 4   | 4   | 5    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3    |
| 124 | 4   | 5   | 4   | 4   | 4   | 5   | 4   | 4   | 5   | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 1    | 2    |
| 125 | 3   | 3   | 4   | 5   | 4   | 3   | 3   | 3   | 3   | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    |
| 126 | 4   | 3   | 4   | 5   | 5   | 4   | 3   | 4   | 5   | 5    | 4    | 3    | 2    | 3    | 5    | 4    | 5    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 5    | 2    | 2    |
| 127 | 5   | 4   | 4   | 4   | 5   | 5   | 4   | 4   | 4   | 4    | 5    | 4    | 5    | 5    | 5    | 4    | 3    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 1    |
| 128 | 5   | 4   | 3   | 4   | 3   | 4   | 4   | 4   | 5   | 4    | 3    | 4    | 3    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 3    | 3    |
| 129 | 5   | 4   | 4   | 4   | 5   | 4   | 4   | 4   | 5   | 5    | 5    | 4    | 5    | 5    | 4    | 4    | 5    | 5    | 5    | 5    | 4    | 4    | 5    | 5    | 5    | 5    | 4    | 4    | 2    | 2    |
| 130 | 5   | 4   | 4   | 5   | 4   | 3   | 4   | 5   | 4   | 4    | 5    | 3    | 5    | 3    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 5    | 2    | 2    |
| 131 | 5   | 4   | 5   | 5   | 5   | 4   | 5   | 5   | 5   | 5    | 4    | 5    | 5    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 2    | 1    |
| 132 | 5   | 4   | 5   | 4   | 5   | 4   | 5   | 4   | 3   | 4    | 5    | 5    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 3    | 4    | 1    | 2    |
| 133 | 5   | 5   | 4   | 4   | 5   | 4   | 5   | 5   | 5   | 5    | 5    | 5    | 5    | 5    | 5    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 1    | 2    |
| 134 | 4   | 5   | 4   | 5   | 4   | 5   | 5   | 4   | 4   | 5    | 5    | 5    | 4    | 5    | 5    | 4    | 3    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 4    | 5    |
| 135 | 3   | 4   | 5   | 3   | 3   | 4   | 4   | 3   | 3   | 4    | 4    | 5    | 4    | 3    | 3    | 3    | 3    | 4    | 5    | 4    | 3    | 3    | 3    | 3    | 4    | 5    | 4    | 4    | 3    | 3    |
| 136 | 4   | 3   | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 3    |
| 137 | 4   | 4   | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 2    | 3    |
| 138 | 3   | 3   | 4   | 5   | 4   | 3   | 3   | 4   | 3   | 4    | 5    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 3    |
| 139 | 4   | 3   | 2   | 3   | 3   | 2   | 2   | 3   | 2   | 2    | 2    | 3    | 2    | 3    | 3    | 3    | 3    | 3    | 2    | 1    | 2    | 2    | 3    | 2    | 2    | 2    | 3    | 2    | 2    | 2    |
| 140 | 3   | 5   | 4   | 3   | 3   | 4   | 4   | 5   | 4   | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 5    | 3    | 3    | 4    | 3    | 4    | 5    | 4    | 4    | 3    | 2    | 2    |
| 141 | 3   | 3   | 4   | 3   | 3   | 4   | 3   | 4   | 3   | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3    |
| 142 | 3   | 4   | 3   | 3   | 3   | 3   | 4   | 3   | 4   | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 2    |
| 143 | 4   | 4   | 4   | 5   | 5   | 5   | 5   | 4   | 4   | 5    | 5    | 4    | 5    | 4    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |

Appendix 2 Database: Company 81 – Company 160

| hi31 | hi32 | hi33 | hi34 | hi35 | hi36 | hi37 | hi38 | hi39 | hi40 | hi41 | hi42 | hi43 | hi44 | hi45 | hi46 | hi47 | hi48 | hi49 | hi50 | hi51 | hi52 | hi53 | hi54 | hi55 | hi56 | hi57 | hi58 | hi59 | hi60 |   |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|---|
| 3    | 2    | 2    | 4    | 3    | 2    | 2    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 2    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 3    |   |   |
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| 5    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 3    | 5    | 5    | 4    | 5    | 5    | 5    | 5    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5 |   |
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| 4    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 2    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 1    | 4 |   |
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| 4    | 3    | 4    | 4    | 3    | 3    | 2    | 2    | 3    | 2    | 3    | 2    | 3    | 4    | 4    | 3    | 4    | 2    | 3    | 5    | 4    | 3    | 4    | 5    | 3    | 4    | 5    | 4    | 4    | 4    | 3 | 4 |
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| 4    | 5    | 5    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4 |   |
| 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 2    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 3 |   |
| 4    | 5    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 3    | 5    | 4    | 4    | 4    | 5    | 5    | 3    | 4    | 4    | 5    | 5    | 4    | 5    | 4    | 5 |   |
| 3    | 3    | 4    | 4    | 3    | 4    | 2    | 4    | 3    | 3    | 2    | 2    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |   |
| 3    | 3    | 5    | 4    | 4    | 4    | 2    | 5    | 4    | 3    | 2    | 1    | 4    | 3    | 3    | 3    | 3    | 3    | 5    | 4    | 3    | 5    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 3    | 4 |   |
| 3    | 3    | 5    | 3    | 4    | 4    | 2    | 4    | 3    | 2    | 3    | 1    | 5    | 3    | 2    | 3    | 3    | 4    | 5    | 5    | 3    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |   |
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| 4    | 5    | 5    | 4    | 4    | 4    | 5    | 5    | 3    | 2    | 2    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |   |
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| 4    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 2    | 2    | 4    | 3    | 3    | 2    | 3    | 2    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |   |
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| 3    | 2    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 5    | 5    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 5    | 5    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4 |   |
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| 3    | 3    | 2    | 4    | 3    | 3    | 2    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 2    | 3    | 2    | 3    | 2    | 3    | 2    | 3    | 4    | 3    | 2    | 2    | 3    | 3    | 4    | 3 |   |
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| 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4 |   |
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Appendix 2 Database: Company 81 – Company 160

| hi61 | hi62 | hi63 | hi64 | hi65 | hi66 | hi67 | hi68 | hi69 | hi70 | hi71 | hi72 | hi73 | hi74 | hi75 | hi76 | hi77 | hi78 | hi79 | hi80 | hi81 | hi82 | hi83 | hi84 | hi85 | hi86 | hi87 | hi88 | hi89 | hi90 |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
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| 3    | 3    | 3    | 4    | 5    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    |   |
| 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    |   |
| 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    |   |
| 3    | 3    | 4    | 5    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 5    | 4 |
| 4    | 4    | 4    | 3    | 3    | 4    | 3    | 2    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 2    | 2    | 4    | 3    | 4    | 3    | 3    | 3    | 2    | 3    | 3    | 4    | 4    | 3    |   |
| 3    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 5    | 5    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 5    | 4    | 3    | 3    |   |
| 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 3    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 5    | 3    | 4    | 3    | 3    | 4    | 2    | 4 |
| 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 4    | 4    | 5    | 5    | 5    | 5    | 5    |   |
| 4    | 5    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 5    | 4    | 5    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    |   |
| 4    | 3    | 3    | 4    | 5    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 3    | 3    | 4    | 4    | 5    | 4    | 4    | 3    |      |      |      |      |   |

Appendix 2 Database: Company 81 – Company 160

| hi91 | hi92 | hi93 | hi94 | hi95 | hi96 | hi97 | hi98 | hi99 | hi100 | hi101 | hi102 | hi103 | hi104 | hi105 | hi106 | hi107 | hi108 | hi109 | hi110 | hi111 | hi112 | hi113 | hi114 | hi115 | hi116 | hi117 | hi118 | hi119 | hi120 |
|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3     | 3     | 3     | 3     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 4     |       |
| 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3     | 3     | 3     | 3     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 4     |       |
| 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     |       |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 3     | 2     | 4     | 4     | 3     | 3     | 3     | 3     | 3     |       |       |
| 2    | 4    | 4    | 3    | 5    | 4    | 5    | 4    | 5    | 4     | 5     | 3     | 3     | 5     | 3     | 5     | 5     | 4     | 4     | 2     | 4     | 3     | 5     | 5     | 5     | 4     | 4     | 3     | 3     |       |
| 2    | 4    | 4    | 3    | 5    | 4    | 5    | 4    | 5    | 4     | 5     | 3     | 3     | 5     | 3     | 5     | 5     | 4     | 4     | 2     | 4     | 3     | 5     | 5     | 5     | 4     | 4     | 3     | 3     |       |
| 4    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 5    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     |       |
| 3    | 4    | 4    | 3    | 4    | 5    | 3    | 5    | 4    | 5     | 4     | 3     | 4     | 5     | 5     | 5     | 5     | 5     | 3     | 2     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     |       |
| 5    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |       |
| 3    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 5     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 5     |       |
| 4    | 4    | 3    | 4    | 3    | 3    | 4    | 5    | 3    | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     |       |
| 4    | 4    | 3    | 4    | 4    | 3    | 4    | 5    | 3    | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     |       |
| 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |       |
| 3    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 2     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     |       |
| 3    | 3    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 4     | 4     | 1     | 1     | 2     | 4     | 4     | 4     | 4     |       |       |
| 3    | 4    | 5    | 4    | 5    | 5    | 4    | 3    | 4    | 3     | 4     | 4     | 5     | 3     | 4     | 5     | 3     | 5     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 5     |       |
| 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     |       |
| 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     |       |
| 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |       |
| 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     |       |
| 2    | 2    | 1    | 4    | 5    | 4    | 4    | 3    | 5    | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     |       |
| 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     |       |
| 4    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 4     | 5     | 5     | 5     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 4     |       |
| 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 5     | 4     | 4     | 3     | 4     | 3     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     |       |
| 4    | 3    | 4    | 3    | 5    | 4    | 4    | 3    | 4    | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 2     | 4     | 3     | 4     | 5     | 5     | 5     | 4     | 5     |       |
| 2    | 2    | 2    | 3    | 5    | 4    | 4    | 3    | 3    | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |       |
| 3    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     |       |
| 4    | 3    | 3    | 2    | 3    | 3    | 4    | 3    | 3    | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     |       |
| 2    | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     |       |
| 3    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     |       |
| 3    | 3    | 3    | 5    | 5    | 4    | 4    | 4    | 5    | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 3     | 4     | 5     | 4     | 5     | 5     | 4     |       |
| 4    | 3    | 3    | 3    | 4    | 4    | 4    | 5    | 4    | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     |       |
| 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 4     |       |
| 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     |       |
| 3    | 4    | 3    | 4    | 4    | 5    | 4    | 3    | 4    | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |       |
| 2    | 3    | 3    | 2    | 3    | 3    | 2    | 2    | 3    | 4     | 3     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 4     | 2     | 2     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     |       |
| 3    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     |       |
| 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 5     | 3     | 4     | 3     | 5     | 4     | 4     | 4     | 5     | 4     | 3     |       |
| 3    | 4    | 3    | 2    | 3    | 3    | 2    | 4    | 3    | 4     | 3     | 3     | 3     | 4     | 3     | 2     | 2     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     |       |
| 4    | 3    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     |       |
| 4    | 3    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     |       |
| 3    | 3    | 4    | 5    | 5    | 4    | 4    | 4    | 5    | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     |       |
| 4    | 4    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 3     | 3     | 4     | 4     | 3     | 3     | 4     |       |
| 4    | 4    | 4    | 5    | 4    | 3    | 3    | 3    | 4    | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 3     |       |
| 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 4     |       |
| 4    | 4    | 4    | 4    | 5    | 4    | 5    | 5    | 5    | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |       |
| 5    | 4    | 3    | 3    | 3    | 4    | 5    | 4    | 3    | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 5     | 4     |
| 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     |
| 4    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     |
| 3    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 5    | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     |
| 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 5    | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 5     | 4     |
| 3    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     |
| 5    | 3    | 5    | 5    | 3    | 5    | 4    | 5    | 3    | 5     | 4     | 5     | 5     | 3     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     |
| 4    | 5    | 4    | 4    | 5    | 4    | 5    | 5    | 4    | 3     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 3     |
| 5    | 4    | 5    | 5    | 5    | 4    | 5    | 4    | 3    | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 4     |
| 4    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 5     |
| 2    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     |
| 5    | 4    | 3    | 4    | 3    | 4    | 4    | 5    | 4    | 3     | 5     | 4     | 5     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 5     |
| 2    | 2    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     |
| 5    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     |
| 2    | 2    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     |
| 5    | 3    | 4    | 4    | 3    | 5    | 5    | 4    | 5    | 3     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 5     |
| 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 3     |
| 5    | 4    | 3    | 4    | 3    | 5    | 4    | 3    | 4    | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     |
| 4    | 4    | 5    | 4    | 5    | 3    | 4    | 5    | 4    | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     |
| 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     |
| 2    | 2    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3     | 4     | 5     | 4     | 4     | 3     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |

Appendix 2 Database: Company 81 – Company 160

| hi121 | hi122 | hi123 | hi124 | hi125 | hi126 | hi127 | hi128 | hi129 | hi130 | hi131 | hi132 | hi133 | hi134 | hi135 | hi136 | hi137 | hi138 | hi139 | hi140 | hi141 | hi142 | hi143 | hi144 | hi145 | hi146 | hi147 | hi148 | hi149 | hi150 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 2     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     |
| 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 2     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |
| 4     | 4     | 5     | 4     | 4     | 4     | 3     | 5     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 2     | 3     | 4     | 2     | 3     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 4     |
| 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 2     | 4     | 2     | 4     | 4     | 4     | 2     | 4     | 2     | 2     | 2     | 2     |
| 4     | 4     | 5     | 4     | 4     | 4     | 3     | 5     | 3     | 3     | 3     | 4     | 4     | 3     | 2     | 2     | 4     | 4     | 2     | 3     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     |
| 4     | 4     | 4     | 3     | 4     | 4     | 4     | 2     | 4     | 2     | 4     | 4     | 2     | 3     | 3     | 4     | 4     | 4     | 2     | 3     | 2     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     |
| 5     | 5     | 5     | 4     | 5     | 4     | 4     | 1     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 4     | 4     | 4     |
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 2     | 4     | 3     | 4     | 2     | 4     | 3     | 4     | 3     | 4     | 4     |
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 2     | 4     | 3     | 4     | 2     | 4     | 3     | 4     | 3     | 4     | 4     |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 2     | 2     | 4     | 3     | 3     | 2     | 4     | 2     | 2     | 2     | 2     |
| 4     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     |
| 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 2     | 2     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     |
| 4     | 3     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 2     | 4     | 2     | 2     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 2     | 4     | 3     |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 3     | 4     | 4     | 2     | 2     | 2     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 3     |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 2     | 3     | 2     | 4     | 3     | 3     | 2     | 4     | 3     | 4     | 3     | 3     |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 2     | 3     | 2     | 4     | 3     | 3     | 2     | 4     | 3     | 4     | 3     | 3     |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 3     | 2     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 3     | 3     |
| 4     | 5     | 5     | 5     | 4     | 4     | 4     | 2     | 4     | 2     | 4     | 4     | 3     | 3     | 2     | 2     | 4     | 4     | 4     | 5     | 2     | 5     | 4     | 4     | 4     | 2     | 4     | 5     | 4     | 4     |
| 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     |
| 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 2     | 2     | 2     | 2     |
| 4     | 4     | 5     | 4     | 4     | 5     | 2     | 4     | 3     | 4     | 3     | 2     | 5     | 2     | 3     | 4     | 5     | 3     | 4     | 2     | 4     | 5     | 4     | 2     | 4     | 5     | 4     | 3     | 4     | 3     |
| 5     | 5     | 3     | 4     | 4     | 3     | 4     | 2     | 5     | 2     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 2     | 3     | 4     | 4     | 3     | 2     | 3     | 4     | 4     | 5     |
| 5     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 2     | 3     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 2     | 4     | 2     | 4     | 2     | 5     | 4     | 4     | 3     | 3     |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 5     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     |
| 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 2     | 5     | 2     | 4     | 4     | 4     | 3     | 5     | 3     | 3     | 3     | 3     |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 2     | 1     | 2     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     |
| 5     | 4     | 4     | 4     | 5     | 4     | 4     | 2     | 5     | 2     | 4     | 4     | 2     | 4     | 2     | 1     | 4     | 4     | 4     | 2     | 4     | 5     | 4     | 4     | 1     | 4     | 4     | 4     | 4     | 4     |
| 4     | 5     | 4     | 4     | 4     | 5     | 4     | 1     | 4     | 1     | 4     | 5     | 2     | 4     | 3     | 2     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 3     | 4     | 4     | 4     | 4     | 4     |
| 4     | 5     | 5     | 4     | 5     | 4     | 4     | 1     | 4     | 1     | 3     | 4     | 2     | 5     | 2     | 3     | 4     | 4     | 5     | 4     | 2     | 5     | 4     | 4     | 5     | 2     | 4     | 5     | 4     | 4     |
| 4     | 3     | 4     | 4     | 4     | 3     | 4     | 2     | 5     | 2     | 3     | 4     | 1     | 4     | 2     | 2     | 4     | 5     | 4     | 4     | 2     | 3     | 4     | 4     | 5     | 2     | 4     | 3     | 4     | 4     |
| 4     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 2     | 3     | 2     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 2     | 3     |
| 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 2     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 2     | 3     | 4     | 2     | 4     | 2     | 2     | 3     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 4     | 2     | 4     | 4     | 3     | 4     |
| 4     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 2     | 2     | 3     | 2     | 2     | 3     | 3     | 4     | 3     | 4     |
| 4     | 3     | 3     | 4     | 3     | 3     | 4     | 2     | 4     | 4     | 2     | 4     | 2     | 4     | 2     | 2     | 4     | 4     | 3     | 3     | 2     | 4     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 3     |
| 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 2     | 4     | 4     | 3     | 5     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 4     | 3     | 4     |
| 3     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 2     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 2     |
| 4     | 5     | 4     | 4     | 3     | 4     | 5     | 2     | 4     | 2     | 3     | 4     | 2     | 5     | 2     | 2     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 2     | 4     | 4     | 5     | 4     |
| 4     | 5     | 4     | 5     | 4     | 4     | 5     | 2     | 4     | 3     | 3     | 4     | 2     | 4     | 3     | 2     | 5     | 5     | 4     | 5     | 2     | 4     | 5     | 5     | 4     | 1     | 4     | 3     | 4     | 4     |
| 5     | 4     | 4     | 4     | 3     | 3     | 4     | 2     | 5     | 2     | 3     | 4     | 1     | 4     | 2     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 2     | 3     | 3     | 4     | 4     |
| 3     | 4     | 4     | 3     | 4     | 4     | 5     | 2     | 3     | 3     | 3     | 3     | 2     | 4     | 1     | 2     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 2     | 3     | 3     | 5     | 4     |
| 5     | 4     | 4     | 3     | 4     | 4     | 2     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 3     | 4     | 4     | 4     | 3     | 2     | 4     | 4     | 5     | 4     | 4     | 2     | 3     | 4     | 4     |
| 3     | 3     | 3     | 4     | 3     | 3     | 4     | 2     | 3     | 3     | 3     | 4     | 1     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 2     | 3     | 3     | 4     | 5     |
| 5     | 5     | 4     | 4     | 5     | 4     | 5     | 2     | 4     | 1     | 4     | 4     | 2     | 5     | 2     | 2     | 3     | 4     | 5     | 4     | 1     | 4     | 4     | 5     | 4     | 2     | 4     | 4     | 3     | 4     |
| 5     | 4     | 4     | 4     | 4     | 5     | 2     | 4     | 1     | 4     | 4     | 2     | 5     | 2     | 2     | 3     | 4     | 5     | 4     | 1     | 4     | 4     | 5     | 4     | 2     | 3     | 3     | 4     | 4     | 4     |
| 5     | 4     | 4     | 4     | 5     | 4     | 5     | 1     | 5     | 1     | 5     | 5     | 3     | 4     | 2     | 1     | 5     | 5     | 5     | 5     | 1     | 4     | 5     | 4     | 4     | 2     | 5     | 4     | 5     | 5     |
| 4     | 4     | 5     | 4     | 4     | 4     | 5     | 1     | 3     | 2     | 4     | 5     | 2     | 5     | 2     | 2     | 4     | 5     | 5     | 5     | 1     | 5     | 5     | 3     | 4     | 2     | 5     | 5     | 4     | 4     |
| 4     | 4     | 5     | 4     | 4     | 4     | 5     | 1     | 5     | 1     | 4     | 4     | 2     | 5     | 2     | 1     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 5     |
| 4     | 4     | 5     | 5     | 4     | 4     | 5     | 3     | 4     | 1     | 4     | 5     | 2     | 4     | 1     | 2     | 4     | 5     | 3     | 4     | 2     | 4     | 5     | 5     | 5     | 2     | 3     | 4     | 5     | 4     |
| 4     | 4     | 5     | 4     | 4     | 5     | 5     | 1     | 5     | 1     | 5     | 5     | 3     | 4     | 2     | 1     | 5     | 5     | 5     | 5     | 1     | 4     | 5     | 4     | 4     | 2     | 5     | 4     | 5     | 5     |
| 5     | 4     | 4     | 4     | 5     | 4     | 4     | 2     | 5     | 1     | 4     | 4     | 2     | 5     | 1     | 1     | 5     | 4     | 4     | 4     | 2     | 4     | 4     | 5     | 5     | 1     | 4     | 4     | 4     | 5     |
| 3     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 5     | 2     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     |
| 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 4     | 3     | 2     | 3     | 4     | 4     | 4     | 2     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     |
| 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 4     | 2     | 3     | 4     | 4     |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 4     |
| 4     | 4     | 4     | 3     | 3     | 4     | 4     | 2     | 3     | 3     | 4     | 4     | 2     | 3     | 2     | 2     | 4     | 3     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     |
| 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 4     |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 1     | 4     | 2     | 3     | 4     | 1     | 4     | 2     | 1     | 3     | 4     | 5     | 4     | 2     | 3     | 3     | 4     | 5     | 2     | 3     | 3     | 4     | 4     |
| 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |
| 5     | 3     | 4     | 4     | 3     | 4     | 3     | 2     | 4     | 1     | 4     | 5     | 1     | 4     | 1     | 2     | 4     | 3     | 4     | 5     | 1     | 4     | 4     | 5     | 3     | 2     | 5     | 5     | 4     | 4     |
| 3     | 3     | 4     | 3     | 3     | 4     | 4     | 1     | 3     | 3     | 4     | 3     | 2     | 4     | 1     | 2     | 3     | 3     | 4     | 4     | 2     | 3     | 3     | 4     | 3     | 1     | 4     | 3     | 3     | 4     |
| 3     | 3     | 4     | 3     | 3     | 4     | 4     | 1     | 4     | 3     | 3     | 4     | 1     | 5     | 2     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 5     | 5     | 2     | 3     | 3     | 4     | 4     |
| 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 2     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 2     | 4     | 4     |       |       |

Appendix 2 Database: Company 81 – Company 160

| hi151 | hi152 | hi153 | hi154 | hi155 | hi156 | hi157 | hi158 | hi159 | hi160 | hi161 | hi162 | hi163 | hi164 | hi165 | hi166 | hi167 | hi168 | hi169 | hi170 | hi171 | hi172 | hi173 | hi174 | hi175 | hi176 | hi177 | hi178 | hi179 | hi180 |   |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|
| 2     | 2     | 3     | 4     | 4     | 4     | 4     | 3     | 2     | 3     | 3     | 2     | 2     | 2     | 4     | 4     | 3     | 4     | 4     | 3     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4 |   |
| 2     | 2     | 3     | 4     | 4     | 4     | 4     | 3     | 2     | 3     | 3     | 2     | 2     | 2     | 4     | 4     | 3     | 4     | 4     | 3     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4 |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 3     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4 |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 |   |
| 5     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 5 |   |
| 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 2     | 3     | 3     | 4     | 3     | 3     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 5 |   |
| 2     | 2     | 3     | 3     | 4     | 4     | 2     | 4     | 4     | 2     | 2     | 3     | 3     | 4     | 3     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4 |   |
| 5     | 4     | 5     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 2     | 3     | 4     | 3     | 3     | 5     | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 5 |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4 |   |
| 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 1     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |   |
| 3     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 3     | 4 |   |
| 3     | 3     | 2     | 4     | 4     | 5     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 3     | 4 |   |
| 2     | 2     | 2     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |   |
| 4     | 4     | 4     | 5     | 4     | 5     | 5     | 3     | 4     | 2     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4 |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4 |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4 |   |
| 5     | 5     | 4     | 4     | 4     | 5     | 5     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 2     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 5     | 4     | 3     | 3     | 5     | 4     | 3     | 4 |   |
| 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 2     | 3     | 1     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4 | 4 |
| 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 1     | 2     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4 | 4 |
| 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4 | 4 |
| 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 1     | 3     | 3     | 4     | 3     | 3     | 5     | 3     | 3     | 3     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4 |   |
| 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 2     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3 | 3 |
| 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 2     | 3     | 3     | 2     | 3     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 3 | 3 |
| 3     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 3     | 3     | 4     | 3     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 3 |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 2     | 3     | 2     | 2     | 2     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 5     | 3     | 3     | 3     | 4     | 2     | 2     | 2 | 2 |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 3     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4 | 4 |
| 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 2     | 2     | 2     | 2     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4 | 4 |
| 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 5 | 5 |
| 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4 | 4 |
| 4     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 4 | 5 |
| 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4 | 3 |
| 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3 | 4 |
| 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 | 4 |
| 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 2     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 2     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 3 | 3 |
| 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 | 3 |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4 | 5 |
| 2     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3 | 3 |
| 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4 | 4 |
| 4     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 5 | 5 |
| 5     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4 | 3 |
| 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4 | 3 |
| 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4 | 3 |
| 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3 | 3 |
| 5     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4 | 4 |
| 5     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 4     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4 | 5 |
| 5     | 5     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 5     | 5 | 4 |
| 3     | 5     | 4     | 5     | 5     | 5     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 3 | 5 |
| 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5 | 5 |
| 4     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 3     | 4     | 3     | 5     | 5     | 5     | 4     | 5     | 5     | 3     | 4     | 5     | 5     | 4     | 3     | 5     | 4 | 5 |
| 5     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 4     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 |
| 3     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 | 3 |
| 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4 | 3 |
| 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3 | 4 |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 3     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3 | 4 |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3 | 4 |
| 5     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     |       |       |       |       |       |       |       |       |       |       |       |       |   |   |

Appendix 2 Database: Company 81 – Company 160

| hi181 | hi182 | hi183 | hi184 | hi185 | hi186 | hi187 | hi188 | hi189 | hi190 | hi191 | hi192 | hi193 | hi194 | hi195 | hi196 | hi197 | hi198 | hi199 | hi200 | hi201 | hi202 | hi203 | hi204 | hi205 | hi206 | hi207 | hi208 | hi209 | hi210 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 4     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 2     | 3     |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 4     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 2     | 3     |   |
| 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 2     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 5     | 3     | 3     | 3     | 3     | 4     | 3     | 5     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 2     | 4     | 2     | 4     | 4     | 3     | 1     | 3     | 3     | 1     | 1     |   |
| 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 2     | 4     | 2     | 4     | 4     | 3     | 1     | 3     | 3     | 3     | 3     |   |
| 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 3     | 4     | 2     | 4     | 3     | 4     | 2     | 4     | 3     | 2     | 2     |   |
| 4     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 2     | 4     | 3     | 5     | 2     | 5     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 1     | 1     |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     |   |
| 5     | 3     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 5     | 4     | 1     | 4     | 4     | 4     | 2     |   |
| 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 3     | 4     | 3     | 2     | 4     | 4     | 4     | 1     | 5     | 2     | 5     | 4     | 5     | 3     | 4     | 4     | 3     | 2     |   |
| 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 3     | 4     | 3     | 2     | 4     | 4     | 4     | 4     | 1     | 5     | 2     | 5     | 4     | 5     | 3     | 4     | 4     | 4     | 3     |   |
| 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 3     | 3     | 2     | 4     | 3     | 4     | 2     | 4     | 4     | 3     | 3     |   |
| 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 2     |   |
| 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 2     | 3     | 3     | 4     | 4     | 2     | 3     | 2     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 3     |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     |   |
| 2     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 3     | 3     | 2     | 2     | 4     | 3     | 4     | 2     | 3     | 4     | 2     | 2     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 3     | 2     | 4     |   |
| 3     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 4     | 3     | 2     | 2     | 4     | 3     | 3     | 3     | 3     | 4     | 2     | 2     | 4     | 2     | 4     | 3     | 4     | 2     | 3     | 3     | 3     | 4     |   |
| 2     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 3     | 2     | 2     | 4     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 4     | 2     | 2     | 4     | 4     | 4     | 2     | 4     | 4     | 3     | 3     |   |
| 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 3     | 2     | 2     | 4     | 2     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 4     | 4     | 2     | 4     | 2     | 4     | 4     | 4     | 2     | 3     | 2     | 3     | 2     |   |
| 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4 |
| 2     | 2     | 2     | 2     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 2     | 3     | 2     | 2     | 3     | 2     | 2     | 3     | 2     | 3     | 2     | 2 |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 3     |   |
| 2     | 4     | 4     | 5     | 4     | 4     | 2     | 4     | 4     | 4     | 2     | 3     | 3     | 4     | 3     | 2     | 4     | 4     | 4     | 1     | 1     | 2     | 4     | 4     | 4     | 2     | 4     | 3     | 2     | 3     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 2     | 2     | 2     | 2     | 4     | 4     | 2     | 2     | 4     | 4     | 3     |   |
| 5     | 4     | 4     | 4     | 4     | 5     | 3     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 2     |   |
| 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 2     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 2     | 1     | 3     | 2     | 4     | 3     | 4     | 2     | 3     | 3     | 2     | 3     |   |
| 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     |   |
| 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     |   |
| 4     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 3     | 3     |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     |   |
| 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     |   |
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     |   |
| 4     | 3     | 4     | 3     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 2     | 3     | 2     | 2     | 3     | 2     | 4     | 4     | 3     | 2     | 3     | 2     | 4 |
| 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     |   |
| 3     | 4     | 5     | 4     | 4     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 5     | 4     | 5     | 3     | 3     | 4     | 2     | 3     | 2     | 3     | 4     | 4     | 5     | 5     | 3     | 3     | 3     | 3     |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 4 |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4 |
| 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 2     | 4     | 4     | 5 |
| 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     |   |
| 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4 |
| 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4 |
| 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     |   |
| 5     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 4 |
| 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     | 4     | 4     | 5 |
| 5     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 4     | 5 |
| 4     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5 |
| 5     | 5     | 5     | 5     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5 |
| 5     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 5 |
| 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 5     | 3     | 3     | 3     | 4     | 5     |   |
| 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     |   |
| 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     |   |
| 3     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 3     | 3     | 4     | 5     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5 |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3 |
| 4     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 3 |
| 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4 |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4 |
| 5     | 4     | 3     | 5     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 3     | 5     | 4     | 5     | 5     | 2     | 4     | 5     | 1     | 3     | 3     |   |
| 4     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 5     |   |
| 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     |   |
| 4     | 4     | 5     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |





Appendix 2 Database: Company 81 – Company 160

| hi241 | hi242 | hi243 | hi244 | hi245 | hi246 | hi247 | hi248 | hi249 | hi250 | hi251 | hi252 | hi253 | hi254 | hi255 | hi256 | hi257 | hi258 | hi259 | hi260 | hi261 | hi262 | hi263 | hi264 | hi265 | hi266 | hi267 | hi269 | hi270 |     |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     |       |       | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 0     | 0     | 100   |     |
| 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     |       |       | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 0     | 0     | 100   |     |
| 3     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 2     | 4     | 2     |       | 3     | 3     | 3     | 2     | 2     | 4     | 4     | 4     | 3     | 4     | 3     | 2     | 2     | 2     | 0     | 0     | 100   |     |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     |       | 1     | 1     | 1     | 1     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 0     | 0     | 100   |     |
| 3     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 1     | 21    | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 5     | 3     | 3     | 5     | 0     | 0     | 100   |     |
| 3     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 1     | 68    | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 5     | 5     | 3     | 5     | 0     | 0     | 100   |     |
| 4     | 5     | 5     | 3     | 5     | 2     | 5     | 5     | 5     | 5     |       |       | 4     | 4     | 4     | 4     | 5     | 3     | 3     | 3     | 4     | 3     | 5     | 5     | 4     | 5     | 0     | 0     | 100   |     |
| 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 2     | 3     |       |       | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 3     | 5     | 0     | 0     | 100   |     |
| 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |       |       | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 50    | 20    | 10    |     |
| 4     | 4     | 4     | 4     | 4     | 1     | 4     | 4     | 5     | 5     |       |       | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 3     | 5     | 5     | 0     | 0     | 100   |     |
| 5     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 3     | 5     | 2     |       | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 0     | 0     | 100   |     |
| 5     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 3     | 5     | 2     |       | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 32    | 68    |     |
| 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 2     | 4     | 1     | 90    | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 0     | 38    | 62  |
| 5     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 1     | 20    | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 5     | 4     | 0     | 0     | 100   |     |
| 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 3     | 2     |       | 2     | 2     | 1     | 1     | 1     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 0     | 0     | 100   |     |
| 4     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 1     | 27    | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 0     | 0     | 100   |       |     |
| 4     | 2     | 4     | 3     | 3     | 3     | 4     | 4     | 2     | 4     | 2     |       | 4     | 1     | 1     | 3     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 100   | 0     | 0     |     |
| 4     | 2     | 4     | 3     | 3     | 4     | 4     | 4     | 2     | 4     | 2     |       | 4     | 1     | 2     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 100   | 0     | 0     |     |
| 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 2     | 4     | 2     |       | 4     | 2     | 2     | 4     | 1     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     |     |
| 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 2     |       | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 0     | 0     | 100   |     |
| 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 2     |       | 2     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 0     | 0     | 100   |     |
| 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 1     | 20    | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 0     | 0     | 100   |     |
| 3     | 2     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 2     | 2     |       | 3     | 2     | 2     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 0     | 0     | 100   |     |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     |       |       | 3     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 3     | 3     | 4     | 3     | 0     | 0     | 100   |     |
| 4     | 1     | 2     | 3     | 3     | 3     | 2     | 4     | 2     | 4     | 2     |       | 2     | 1     | 2     | 3     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 2     | 1     | 0     | 0     | 100   |     |
| 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 1     | 50    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 0     | 0     | 100 |
| 5     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 3     | 4     | 2     |       | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 98.58 | 0     | 0     |     |
| 4     | 2     | 4     | 3     | 3     | 3     | 4     | 4     | 2     | 4     | 2     |       | 2     | 1     | 1     | 3     | 2     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 100   | 0     | 0     |     |
| 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 1     | 35    | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 55    | 30    | 15    |     |
| 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 1     | 30    | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 36.05 | 21.25 | 42.7  |     |
| 5     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 1     | 35    | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 50    | 25    | 25    |     |
| 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 1     | 30    | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 50    | 30    | 20    |     |
| 3     | 2     | 2     | 2     | 4     | 3     | 3     | 4     | 3     | 1     | 35    | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 38.56 | 29.02 | 32.42 |     |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 1     | 10    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 100   | 0     | 0   |
| 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     |       |       | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     |     |
| 3     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 4     | 1     | 30    | 3     | 4     | 2     | 3     | 3     | 2     | 4     | 4     | 2     | 3     | 3     | 4     | 3     | 3     | 100   | 0     | 0     |     |
| 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 2     |       |       | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 100   | 0     | 0     |     |
| 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 1     | 15    | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 100   | 0     | 0     |     |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 1     | 28    | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 40    | 34    | 26    |     |
| 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     |       |       | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 75    | 0     | 25    |     |
| 5     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 1     | 30    | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 30    | 40    | 30    |     |
| 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 2     |       | 5     | 4     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 40    | 40    | 20    |     |
| 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 2     |       | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 3     | 4     | 50    | 30    | 20    |     |
| 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 2     |       | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 50    | 20    | 30    |     |
| 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 3     |       |       | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 50    | 20    | 30    |     |
| 4     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 1     | 20    | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 40    | 30    | 30    |     |
| 5     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 2     |       | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 10    | 0     | 90    |     |
| 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 1     | 25    | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 30    | 70    | 0     |     |
| 4     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 5     | 2     |       | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 100   | 0     | 0     |     |
| 4     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 1     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 10    | 0     | 90  |
| 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 1     | 10    | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 0     | 0     | 100 |
| 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 1     | 12    | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 100   | 0     | 0     |     |
| 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 5     | 1     | 10    | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 100   | 0     | 0     |     |
| 5     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 1     | 2     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 0     | 0     | 100   |     |
| 3     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 1     | 25    | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 5     | 5     | 4     | 3     | 100   | 0     | 0     |     |
| 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 2     |       | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 10    | 65    | 25    |     |
| 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 2     |       | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 10    | 46    | 44    |     |
| 3     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 2     |       |       | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 5     | 5     | 3     | 3     | 4     | 4     | 100   | 0     | 0     |     |
| 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 2     |       | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 50    | 45    |     |
| 5     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 1     | 25    | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 56    | 1     | 43    |     |
| 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     |       | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 10    | 50    | 40    |     |
| 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 2     |       | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 10    | 74    | 16  |
| 5     | 4     | 5     | 5     | 4     | 3     | 5     | 4     | 4     | 4     | 1     | 20    | 5     | 4     | 3     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 0     | 0     | 100   |     |
| 4     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 1     | 10    | 4     | 4     | 3     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 70    | 20    | 10  |
| 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 2     |       |       | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 60.12 | 0     | 39.88 |     |
| 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     |       | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 30.28 | 0     | 69.72 |     |
| 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |     |

Appendix 2 Database: Company 81 – Company 160

| hi271 | hi272   | hi273 | hi274 | hi275 | hi276 | hi277       | hi278 | hi279       | hi280  | hi281 | hi282 | hi283 | hi284 | hi285            | hi286       | hi287  | hi288 | hi289 | hi290 |
|-------|---------|-------|-------|-------|-------|-------------|-------|-------------|--------|-------|-------|-------|-------|------------------|-------------|--------|-------|-------|-------|
| 0     | 3280    | 6     | 2001  | 16    | 5     |             | 1     |             |        |       |       | 2008  | 7     | Vietnam          | 7000000     | 1000   |       |       |       |
| 0     | 3280    | 6     | 2001  | 16    | 5     |             | 1     |             |        |       |       | 2008  | 7     | Saudi Arabia     | 7000000     | 1000   |       |       |       |
| 0     | 2000    | 6     | 1996  | 16    | 5     | 57100000    | 1     | 49200000    | 22.36  | 8.1   | 2.3   | 2011  | 8     | Kenya            | 25000000    | 16     | 90    | 90    | 10    |
| 0     | 20      | 1     | 1997  | 5     | 20    |             | 1     |             |        |       |       | 2006  | 7     | Laos             | 8422800     |        |       |       |       |
| 0     | 48      | 1     | 2007  | 16    | 5     | 700000      | 1     | 1000000     | 108    | 37    | 5.9   | 2010  | 7     | Laos             | 150000      | 5      | 92    | 85    | 15    |
| 0     | 283     | 4     | 2000  | 17    | 20    | 23800000    | 1     | 47620000    | 150    | 23    | 9     | 2004  | 7     | Zambia           | 1000000     | 20     | 82    | 68    | 32    |
| 0     | 1041    | 6     | 1998  | 2     | 1     | 300000000   | 1     | 500000000   | 231    | 12    | 24    | 2006  | 7     | India            | 50000       | 6      | 85    | 85    | 15    |
| 0     | 260     | 4     | 1996  | 14    | 14    | 5000000     | 1     | 1600000     | 35     | 14    | 8     | 2008  | 7     | Zambia           | 450000      | 8      | 85    | 75    | 25    |
| 20    | 1350    | 6     | 1992  | 14    | 16    | 300000      | 1     | 180000      | 5.5    | 12    | 13    | 1995  | 4     | Russia           | 100000      | 685    | 70    | 20    | 30    |
| 0     | 2000    | 6     |       | 5     | 20    | 317000000   | 1     | 793650000   | 250    | 20    | 18    | 2008  | 7     | Laos             | 30000000    | 20     | 60    | 50    | 50    |
| 0     | 200     | 3     | 1994  | 1     | 6     | 20000000    | 1     | 10000000    | 50     | 15    | 11    | 2004  | 6     | America          | 300000      | 7      | 65    | 60    | 40    |
| 0     | 102     | 3     | 2010  | 17    | 20    | 1000000     | 1     |             |        |       |       | 2010  | 7     | Kazakhstan       | 380000      | 9      | 88    | 90    | 10    |
| 0     | 1750    | 6     | 1994  | 14    | 16    | 70000000    | 1     | 80000000    | 10     | 15    | 0.8   | 2005  | 6     | Japan            | 38000       | 80     | 76    | 68    | 32    |
| 0     | 78      | 2     | 2002  | 14    | 16    | 2370000     | 1     | 160000      | 80     | 15    | 5     | 2002  | 6     | America          | 200000      | 10     | 15    | 15    | 85    |
| 0     | 32      | 2     | 2005  | 14    | 16    | 5940000     | 1     | 510000      | 90     | 10    | 5     | 2009  | 7     | HongKong         |             |        | 90    | 90    | 10    |
| 0     | 50      | 2     | 2001  | 17    | 19    | 19040000    | 1     | 250000000   | 30.3   | 23    | 27    | 2007  | 7     | India            | 30000000    | 41     | 80    | 12    | 8     |
| 0     | 190000  | 9     | 1998  | 16    | 5     | 3190000     | 1     | 2600000     |        |       |       | 2002  | 6     | Papua New Guinea |             |        |       |       |       |
| 0     | 1000    | 6     | 1999  | 5     | 20    |             | 1     |             |        |       |       | 2002  | 6     | Zambia           |             |        |       |       |       |
| 0     | 1000    | 6     | 1998  | 5     | 20    |             | 1     |             |        |       |       | 2000  | 5     | South Africa     |             |        |       |       |       |
| 0     | 210     | 3     | 2002  | 14    | 14    | 5070000     | 1     |             | 20     |       |       | 2002  | 6     | Iran             |             | 10     | 1     |       |       |
| 0     | 6325    | 7     | 1999  | 11    | 9     | 10000000    | 1     |             | 8      |       |       | 2000  | 5     | HongKong         |             |        | 90    | 10    | 90    |
| 0     | 54      | 2     | 2008  | 17    | 19    | 1600000     | 1     | 750000      | 20     | 15    | 10    | 2010  | 7     | Congo            |             | 52     | 80    | 90    | 10    |
| 0     | 68      | 2     | 2003  | 16    | 5     | 10000000    | 1     |             | 5      | 20    | 10    | 2003  | 6     | Angola           |             | 50     |       |       |       |
| 0     | 5000    | 7     |       | 5     | 20    |             | 1     |             |        |       |       | 2006  | 7     | Australia        | 80000000    |        |       |       |       |
| 0     | 43      | 1     | 1999  | 17    | 20    | 15000000    | 1     | 8500000     | 12     | 5     | 2     | 2007  | 7     | Nigeria          | 1500000     | 5      | 50    | 40    | 60    |
| 0     | 2000    | 6     | 2004  | 17    | 20    | 317000000   | 1     | 920000000   | 70     | 47    | 10    | 2008  | 7     | Laos             |             | 400    | 10    | 90    | 10    |
| 1.42  | 8200    | 7     | 1948  | 16    | 5     | 2000000000  | 3     | 2000000000  |        | 23    | 14    | 2007  | 7     | Turkey           | 12000000    | 124    | 8     |       |       |
| 0     | 140000  | 9     | 1983  | 17    | 20    | 12600000000 | 11    | 4700000000  | 10     |       | 40    | 2002  | 6     | Pakistan         |             | 120    |       | 60    | 40    |
| 0     | 80000   | 9     | 1988  | 17    | 20    | 4.207E+11   | 11    | 3.42E+11    | 0.31   | 13.4  | 13.4  | 1995  | 4     | Australia        | 2.5E+11     | 1100   | 75    | 75    | 25    |
| 0     | 38925   | 9     | 1958  | 17    | 20    | 3.629E+11   | 11    | 2.05E+11    | 0.45   | 12.58 | 12.58 | 2003  | 6     | Singapore        | 2E+11       | 850    | 70    | 70    | 30    |
| 0     | 24000   | 8     | 1997  | 17    | 20    | 32190000000 | 11    | 2.103E+11   | 0.521  | 11.46 | 11.46 | 2004  | 6     | New Zealand      | 2.3E+11     | 920    | 75    | 75    | 25    |
| 0     | 28000   | 9     | 1988  | 5     | 20    | 2.78E+11    | 11    | 2.005E+11   | 0.45   | 11    | 52    | 1992  | 4     | Germany          | 2E+11       | 1700   | 75    | 75    | 25    |
| 0     | 240000  | 9     | 2001  | 5     | 20    | 64060000000 | 11    | 32300000000 | -28.75 | 20.56 | 50    | 2003  | 6     | Australia        | 15000000000 | 10000  | 60    | 60    | 40    |
| 0     | 65800   | 9     | 1982  | 17    | 20    | 4E+11       | 11    | 63000000000 |        |       |       | 2001  | 6     | Australia        | 18000000000 | 1000   | 20    | 80    | 20    |
| 0     | 250000  | 9     | 1972  | 16    | 5     | 35000000    | 1     | 21000000    |        |       |       | 2008  | 7     | America          | 10700000000 | 6000   | 70    | 70    | 30    |
| 0     | 20000   | 8     | 1983  | 17    | 20    | 17000000    | 1     | 31660000    | 11     | 7     | 7     | 2008  | 7     | South Korea      |             | 500    | 70    | 80    | 20    |
| 0     | 40000   | 9     | 1950  | 4     | 6     | 1.4E+11     | 11    | 7000000000  |        |       |       | 2001  | 6     | America          | 150000000   | 4000   | 60    | 70    | 30    |
| 0     | 100000  | 9     | 1979  | 17    | 20    | 4E+11       | 11    |             | 10     | 5     | 5     | 2002  | 6     | HongKong         |             | 400    | 70    | 70    | 30    |
| 0     | 65800   | 9     | 2002  | 17    | 20    | 26100000000 | 11    | 15000000000 | 19.2   | 15.25 | 35    | 2002  | 6     | America          | 21000000000 | 10000  | 80    | 70    | 30    |
| 0     | 175336  | 9     | 2000  | 17    | 20    | 69000000000 | 11    |             |        |       |       | 2000  | 5     | Germany          |             |        |       |       |       |
| 0     | 45000   | 9     | 1993  | 5     | 20    | 1.2072E+11  | 11    | 21600000000 | 30     | 18    | 18    | 2006  | 7     | Australia        | 85000000    | 15000  | 40    | 40    | 60    |
| 0     | 10000   | 9     | 1878  | 5     | 20    |             | 1     | 39682000000 |        |       |       | 1990  | 3     | Canada           |             | 6800   | 30    | 50    | 50    |
| 0     | 11800   | 9     | 1989  | 17    | 20    | 5020000000  | 6     | 2520000000  | 4.81   |       |       | 1992  | 4     | America          | 83890000    | 11000  | 50    | 30    | 20    |
| 0     | 73000   | 9     | 2001  | 17    | 20    | 6000000000  | 7     | 2700000000  | 17.3   | 9.58  |       | 2004  | 6     | Japan            |             | 63000  | 30    |       |       |
| 0     | 100     | 9     | 1984  | 12    | 20    | 23142000000 | 3     | 21300000000 | 66.7   | 56.1  |       | 2000  | 5     | Tanzania         |             | 500000 | 30    | 50    | 20    |
| 0     | 58000   | 9     | 1982  | 17    | 20    | 1.217E+11   | 11    | 10000000000 | 16.25  | 10.58 | 10.58 | 2008  | 7     | Kenya            | 4500000000  | 4200   | 40    | 30    | 30    |
| 0     | 130000  | 9     | 1988  | 17    | 20    | 3E+11       | 11    | 27000000000 |        |       |       | 2005  | 6     | America          | 5000000000  | 30000  | 90    | 90    | 10    |
| 0     | 5300    | 7     | 1997  | 17    | 20    | 3430000000  | 4     | 1584000000  |        |       |       | 2000  | 5     | HongKong         |             |        | 95    | 95    | 5     |
| 0     | 1000000 | 9     | 1996  | 17    | 20    | 3500000000  | 4     | 2800000000  |        |       |       | 2000  | 5     | Australia        | 1200000000  | 3000   | 80    | 80    | 20    |
| 0     | 20000   | 8     | 1996  | 16    | 5     | 17900000000 | 11    | 7000000000  |        |       |       | 2007  | 7     | America          | 1000000000  | 2000   | 90    | 90    | 10    |
| 0     | 130000  | 9     | 1990  | 17    | 20    | 50000000000 | 11    | 43000000000 |        |       |       | 2000  | 5     | Canada           | 4000000000  | 30000  | 60    | 60    | 40    |
| 0     | 150000  | 9     | 1968  | 14    | 16    | 1.5E+11     | 11    | 70000000000 |        |       |       | 1990  | 3     | America          | 6200000000  | 50000  | 65    | 70    | 30    |
| 0     | 200000  | 9     | 1995  | 10    | 9     | 7000000000  | 8     | 3000000000  |        |       |       | 2009  | 7     | America          | 1000000000  | 20000  | 90    | 90    | 10    |
| 0     | 20000   | 8     | 1987  | 4     | 7     | 8800000000  | 9     | 6000000000  |        |       |       | 1995  | 4     | America          | 2000000000  | 5000   | 80    | 80    | 20    |
| 0     | 100000  | 9     | 1995  | 5     | 20    |             | 1     |             |        |       |       | 2000  | 5     | UEA              | 1000000     | 10000  |       |       |       |
| 0     | 93000   | 9     | 1976  | 5     | 20    | 1854000000  | 2     | 500000000   |        |       |       | 1999  | 5     | Australia        | 800000000   | 270    | 93    | 73    | 27    |
| 0     | 18000   | 8     | 1986  | 14    | 17    | 1600000000  | 2     | 800000000   |        |       |       | 2000  | 5     | Portugal         | 500000000   | 8000   |       |       |       |
| 0     | 200000  | 9     | 1949  | 16    | 5     |             | 1     |             |        |       |       | 2000  | 5     |                  |             |        | 90    | 90    | 10    |
| 0     | 100000  | 9     | 1989  | 14    | 16    | 23300000000 | 3     | 2800000000  |        |       |       | 1989  | 3     | America          | 1500000000  | 40000  | 90    | 65    | 35    |
| 0     | 90000   | 9     | 2007  | 17    | 20    | 15631000000 | 11    | 3048000000  |        |       |       | 2000  | 5     | HongKong         |             |        |       |       |       |
| 0     | 1200    | 6     | 2002  | 17    | 20    | 15400000000 | 11    | 5000000000  |        |       |       | 2002  | 6     | Brazil           | 3000000000  | 20000  | 92    | 75    | 25    |
| 0     | 70000   | 9     | 1999  | 17    | 20    | 700000000   | 1     | 200000000   |        |       |       | 1999  | 5     | Germany          | 300000000   | 20000  | 90    | 76    | 24    |
| 0     | 200000  | 9     | 1985  | 17    | 20    | 50000000000 | 11    | 9000000000  |        |       |       | 1992  | 4     | Australia        | 1500000000  | 30000  | 75    | 75    | 25    |
| 0     | 48000   | 9     | 2010  | 14    | 17    |             | 1     |             |        |       |       | 2010  | 7     | America          |             | 100    | 40    | 50    | 10    |
| 0     | 50000   | 9     | 1998  | 17    | 20    |             | 1     |             | 4.33   | 16.28 |       | 2000  | 5     | America          |             | 20000  | 30    | 30    | 40    |
| 0     | 25000   | 9     | 1990  | 10    | 9     |             | 1     |             | 10.1   | 47.41 |       | 2000  | 5     |                  |             |        |       |       |       |
| 0     | 80000   | 9     | 1984  | 14    | 16    | 28000000000 | 11    | 6000000000  |        |       |       | 1991  | 4     | Germany          | 2000000000  | 20000  | 89    | 65    | 35    |
| 0     | 15000   | 8     | 1995  | 17    | 20    | 30000000000 | 11    | 8000000000  |        |       |       | 1998  | 5     | America          | 3000000000  | 5000   | 70    | 70    | 30    |
| 0     | 2500    | 6     | 2006  | 17    | 20    |             | 1     |             | 20.17  | 29    |       | 2000  | 5     | HongKong         |             |        | 50    | 50    | 50    |
| 0     | 3000    | 6     | 1979  | 10    | 9     |             | 1     |             | 12.17  | -82.2 |       | 1985  | 2     | HongKong         |             |        | 30    | 60    | 10    |
| 0     | 30000   | 9     | 1883  | 5     | 20    |             | 1     |             | 19.18  | 52.5  |       | 2004  | 6     | HongKong         | 10000000    |        |       |       |       |
| 0     | 108800  | 9     | 2006  | 17    | 5     | 1600000000  | 2     | 6000000000  |        |       |       | 2006  | 7     | Singapore        | 1000000000  | 6000   | 92    | 80    | 20    |
| 0     | 20000   | 8     | 1953  | 16    | 5     | 33650000000 | 4     | 14285000000 | 14.72  | 22.22 | 9.3   | 1957  | 1     | Malaysia         | 20000000000 | 7000   | 35    | 47    | 53    |
| 0     | 397339  | 9     | 1984  | 17    | 20    | 53000000000 | 11    | 33000000000 | 29.91  |       |       | 1992  | 4     | Singapore        | 3200000     | 4700   | 75    | 75    | 25    |
| 0     | 25000   | 9     | 1920  | 14    | 14    | 4698000000  | 5     | 3171000000  | 5.48   | -2.55 | 7.5   | 2004  | 6     | France           | 1200000000  | 5000   | 40    | 60    | 40    |
| 0     | 70000   | 9     | 1994  | 17    | 20    | 43500000000 | 11    | 10500000000 |        |       |       | 2004  | 6     | America          | 20700000000 | 30000  | 76    | 82    | 18    |
| 0     | 1500000 | 9     | 2002  | 17    | 20    | 50201910828 | 11    | 36034076433 | 22.7   |       |       | 2005  | 6     | Philippines      |             | 100000 | 90    | 90    | 10    |
| 0     | 80000   | 9     | 1995  | 17    | 20    | 44000000000 | 11    | 12904000000 | 11.69  | 15.79 | 7.1   | 2002  | 6     |                  |             |        |       |       |       |

Appendix 2 Database: Company 81 – Company 160

| hi291 | hi292 | hi293 | hi294 | hi295 | hi296 | hi298 | hi299 | hi300 | hi301 | hi302 | hi303 | hi304 | hi305 | hi306 | hi307 | hi308 | hi309      | hi311 | hi312 | hi313 | hi314 | hi315 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|-------|-------|-------|-------|-------|
|       | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     |       |       |       |       |       |       | Chinese    | 1     | 1     | 10    | 4     | 40    |
|       | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     |       |       |       |       |       |       | Chinese    | 1     | 1     | 10    | 4     | 40    |
| 5.6   | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     | 1     |       |       |       |       |       | Chinese    | 1     | 2     | 7     | 5     | 10    |
|       |       | 1     |       |       | 1     |       | 2     |       |       |       |       |       | 1     |       |       |       | Chinese    | 1     | 3     | 4     | 5     | 11    |
| 48    | 1     |       |       |       |       | 1     | 1     | 1     | 1     | 1     |       |       |       | 1     |       |       | Chinese    | 1     | 4     | 3     | 5     | 3     |
| 183   | 1     |       | 1     |       | 1     |       | 1     | 1     | 1     | 1     |       |       | 1     |       | 1     |       | Chinese    | 1     | 4     | 4     | 5     | 6     |
| 112   | 1     |       |       |       |       | 1     | 1     |       | 1     | 1     |       |       |       | 1     |       | 1     | Chinese    | 2     | 4     | 3     | 5     | 6     |
| 21    | 1     |       | 1     |       | 1     |       | 1     | 1     | 1     | 1     |       |       |       | 1     |       |       | Chinese    | 2     | 4     | 3     | 5     | 4     |
| 5.9   | 1     | 1     |       | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | Russian    | 2     | 4     | 3     | 5     | 3     |
| 300   |       | 1     |       |       | 1     |       | 2     | 1     | 1     | 1     |       | 1     | 1     | 1     |       |       | Chinese    | 1     | 4     | 4     | 5     | 6     |
| 114   | 1     |       |       | 1     |       |       |       | 1     |       | 1     |       |       |       |       |       |       | Chinese    | 2     | 4     | 3     | 5     | 7     |
|       | 1     |       |       |       |       | 1     | 1     | 1     |       | 1     |       | 1     | 1     | 1     |       |       | Kazakhstan | 1     | 4     | 4     | 4     | 1     |
|       |       |       | 1     | 1     |       |       | 1     | 1     |       | 1     |       | 1     |       |       |       |       | Japanese   | 1     | 3     | 5     | 5     | 10    |
|       | 1     |       |       |       | 1     |       | 1     | 1     |       | 1     |       |       |       |       |       |       | American   | 2     | 3     | 3     | 5     | 2     |
| 20    | 1     |       |       |       | 1     |       | 1     | 1     |       | 1     |       |       |       |       | 1     |       | Chinese    | 1     | 4     | 3     | 5     | 3     |
| 21    | 1     |       |       | 1     |       |       | 1     | 1     |       |       |       |       |       |       |       |       | Chinese    | 1     | 4     | 5     | 4     | 2     |
|       |       | 1     |       |       |       | 1     | 1     |       |       |       |       |       | 1     | 1     |       |       | Chinese    | 1     | 4     | 8     | 5     | 14    |
|       |       | 1     |       |       | 1     |       | 2     |       |       |       |       |       | 1     | 1     |       |       | Chinese    | 1     | 3     | 7     | 6     | 12    |
|       |       | 1     |       |       | 1     |       | 2     |       |       |       |       |       | 1     | 1     | 1     |       | Chinese    | 1     | 3     | 7     | 5     | 14    |
|       | 1     |       |       |       | 1     |       | 2     |       | 1     | 1     |       |       |       |       |       |       | Chinese    | 2     | 4     | 3     | 5     | 2     |
| 10    | 1     |       |       |       | 1     |       | 2     | 1     |       | 1     |       |       |       |       |       |       | Chinese    | 1     | 3     | 4     | 5     | 10    |
| 60    |       | 1     |       |       | 1     |       | 1     | 1     |       |       |       |       | 1     | 1     |       |       | Chinese    | 1     | 4     | 5     | 5     | 5     |
| 5     | 1     |       |       |       | 1     |       | 2     |       |       | 1     |       |       | 1     |       |       |       | Chinese    | 2     | 4     | 4     | 2     | 2     |
|       |       | 1     |       |       | 1     |       | 1     | 1     |       |       |       | 1     | 1     | 1     | 1     |       | Chinese    |       | 4     | 6     | 6     | 5     |
| 25    | 1     |       |       |       |       | 1     | 1     |       |       | 1     |       |       | 1     | 1     |       |       | Chinese    | 2     | 2     | 4     | 6     | 6     |
| 300   |       |       | 1     |       | 1     |       | 1     | 1     | 1     | 1     |       | 1     | 1     | 1     | 1     |       | Chinese    | 1     | 3     | 4     | 6     | 4     |
|       | 1     |       |       |       | 1     |       | 2     | 1     |       | 1     |       |       |       | 1     | 1     |       | Chinese    | 1     | 3     | 4     | 5     | 12    |
|       | 1     |       |       |       |       | 1     | 1     |       |       |       |       |       | 1     | 1     |       |       | Chinese    | 1     | 3     | 10    | 5     | 25    |
| 20    | 1     | 1     | 1     |       | 1     |       | 2     | 1     |       | 1     | 1     |       | 1     | 1     |       |       | Chinese    | 1     | 4     | 7     | 5     | 25    |
| 25    | 1     | 1     | 1     |       | 1     |       | 2     | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese    | 1     | 4     | 9     | 6     | 27    |
| 30    | 1     | 1     | 1     |       | 1     |       | 2     | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese    | 1     | 2     | 8     | 5     | 25    |
| 30    | 1     |       |       |       | 1     |       | 2     |       |       | 1     | 1     |       | 1     |       |       |       | Chinese    | 1     | 1     | 9     | 5     | 10    |
| 20    | 1     | 1     |       |       | 1     |       | 2     | 1     |       | 1     |       | 1     | 1     | 1     | 1     |       | Chinese    | 1     | 3     | 9     | 7     | 11    |
| 17    | 1     |       |       |       | 1     |       | 1     | 1     |       | 1     |       |       | 1     |       |       |       | Chinese    | 1     | 1     | 9     | 7     | 2     |
| 16.6  | 1     |       |       |       | 1     |       | 2     |       |       |       |       | 1     |       |       |       |       | Chinese    | 1     | 1     | 8     | 6     | 24    |
| 10    | 1     |       | 1     | 1     | 1     |       | 1     | 1     |       | 1     |       |       | 1     |       | 1     |       | Chinese    | 1     | 1     | 7     | 6     | 2     |
| 15    | 1     | 1     |       |       | 1     |       | 1     | 1     |       | 1     |       | 1     | 1     |       |       |       | Chinese    | 1     | 1     | 9     | 6     | 20    |
| 10    |       |       | 1     | 1     |       |       | 1     | 1     | 1     |       | 1     |       |       |       |       |       | Chinese    | 1     | 2     | 7     | 6     | 5     |
| 7.65  |       | 1     |       |       | 1     |       | 2     |       |       |       |       |       | 1     |       |       |       | Chinese    | 1     | 1     | 9     | 7     | 6     |
|       |       | 1     |       |       | 1     |       | 1     |       |       | 1     |       | 1     |       |       |       |       | Chinese    | 1     | 1     | 10    | 6     | 4     |
| 15    | 1     | 1     | 1     |       | 1     |       | 2     | 1     | 1     | 1     |       | 1     |       |       | 1     |       | Chinese    | 1     | 1     | 9     | 6     | 6     |
|       |       | 1     |       |       | 1     |       | 1     |       |       |       |       |       |       |       |       |       | Chinese    | 1     | 1     | 9     | 7     | 8     |
|       | 1     |       |       |       | 1     |       | 2     |       |       | 1     |       |       |       |       |       |       | Chinese    | 2     | 1     | 9     | 5     | 10    |
|       | 1     |       |       |       | 1     |       | 2     |       |       | 1     | 1     | 1     | 1     |       |       |       | Chinese    | 1     | 1     | 7     | 6     | 4     |
| 40    |       | 1     |       |       | 1     |       | 2     |       |       | 1     |       | 1     |       |       |       |       | Chinese    | 1     | 2     | 7     | 4     | 10    |
| 18    | 1     | 1     | 1     | 1     | 1     |       | 2     | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese    | 1     | 1     | 8     | 6     | 30    |
| 170   | 1     |       |       |       | 1     |       | 1     | 1     | 1     | 1     | 1     |       |       |       |       |       | Chinese    | 1     | 1     | 9     | 7     | 20    |
|       |       | 1     |       |       | 1     |       | 2     |       |       | 1     |       | 1     | 1     |       |       |       | Chinese    | 1     | 2     | 8     | 5     | 5     |
| 90    | 1     |       |       | 1     | 1     |       | 1     | 1     |       | 1     |       | 1     | 1     |       | 1     |       | Chinese    | 2     | 1     | 10    | 7     | 10    |
| 90    | 1     |       |       | 1     | 1     |       | 1     | 1     |       | 1     |       | 1     | 1     |       | 1     |       | Chinese    | 1     | 1     | 9     | 5     | 15    |
| 140   | 1     |       |       | 1     |       |       | 1     | 1     |       | 1     |       | 1     |       | 1     |       |       | Chinese    | 1     | 1     | 8     | 7     | 21    |
|       | 1     |       |       | 1     |       |       | 1     |       | 1     |       |       |       |       | 1     |       |       | Chinese    | 1     | 2     | 8     | 6     | 30    |
| 60    | 1     |       |       | 1     |       |       | 1     |       | 1     | 1     | 1     |       |       |       | 1     |       | Chinese    | 1     | 1     | 8     | 6     | 15    |
| 30    |       |       | 1     | 1     |       |       | 1     | 1     | 1     | 1     | 1     |       |       |       |       |       | Chinese    | 1     | 1     | 9     | 6     | 25    |
|       | 1     |       |       |       | 1     |       | 2     |       |       | 1     |       | 1     |       |       |       |       | Chinese    | 1     | 1     | 7     | 6     | 10    |
| 22    | 1     |       |       |       | 1     |       | 1     |       |       |       |       | 1     | 1     |       |       |       | Chinese    | 1     | 1     | 8     | 7     | 30    |
| 15    | 1     |       |       |       | 1     |       | 1     |       |       |       | 1     |       | 1     |       | 1     |       | Chinese    | 1     | 1     | 7     | 7     | 26    |
| 5     |       | 1     |       | 1     |       |       | 1     |       |       |       |       | 1     | 1     | 1     |       |       | Chinese    | 1     | 2     | 7     | 7     | 7     |
| 20    |       | 1     |       |       | 1     |       | 1     |       |       |       | 1     | 1     | 1     |       |       |       | Chinese    | 1     | 2     | 6     | 6     | 20    |
|       |       | 1     |       |       | 1     |       | 2     |       |       | 1     | 1     | 1     |       |       |       |       | Chinese    | 2     | 3     | 5     | 5     | 2     |
| 10    |       | 1     |       |       | 1     |       | 1     | 1     |       |       | 1     | 1     |       |       |       |       | Chinese    | 1     | 1     | 9     | 6     | 9     |
| 25    |       | 1     |       |       | 1     |       | 1     |       |       |       | 1     | 1     |       |       | 1     |       | Chinese    | 1     | 1     | 9     | 6     | 12    |
| 100   | 1     |       |       | 1     |       |       | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       | Chinese    | 1     | 1     | 10    | 6     | 25    |
| 10    | 1     |       |       | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese    | 1     | 1     | 8     | 7     | 20    |
|       | 1     |       |       | 1     |       |       | 2     |       |       |       |       | 1     |       | 1     |       |       | Chinese    | 1     | 1     | 8     | 7     | 10    |
|       | 1     |       |       | 1     |       |       |       |       |       | 1     |       | 1     |       |       |       |       | Chinese    | 1     | 1     | 10    | 5     | 7     |
| 30    | 1     |       |       |       | 1     |       | 1     |       | 1     |       | 1     |       |       |       | 1     |       | Chinese    | 1     | 1     | 10    | 5     | 28    |
| 100   | 1     |       |       | 1     |       |       | 1     | 1     |       | 1     |       | 1     |       |       |       |       | Chinese    | 1     | 1     | 9     | 6     | 11    |
|       |       | 1     |       |       | 1     |       |       |       | 1     | 1     | 1     | 1     |       |       | 1     |       | Chinese    | 1     | 1     | 9     | 5     |       |
| 10    | 1     |       |       | 1     |       |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese    | 1     | 2     | 8     | 4     | 4     |
|       |       |       | 1     |       |       |       | 2     |       |       | 1     |       | 1     |       |       |       |       | Chinese    | 1     | 2     | 6     | 5     | 5     |
| 20    | 1     |       |       |       | 1     |       | 1     |       | 1     |       | 1     | 1     |       |       |       |       | Chinese    | 1     | 1     | 10    | 6     | 5     |
| 8.7   | 1     |       |       |       | 1     |       | 2     |       | 1     | 1     |       |       |       | 1     |       |       | Chinese    | 1     | 4     | 8     | 7     | 18    |
|       | 1     |       |       |       | 1     |       | 2     |       | 1     |       | 1     |       | 1     |       |       |       | Chinese    | 2     | 2     | 7     | 7     | 6     |
| 8.72  | 1     |       | 1     |       | 1     |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       | Chinese    | 1     | 1     | 6     | 6     | 17    |
| 20    |       | 1     |       |       | 1     |       | 1     | 1     | 1     | 1     |       | 1     |       |       |       |       | Chinese    | 1     | 1     | 8     | 7     | 18    |
| 10    |       | 1     |       |       | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       |       |       | Chinese    | 1     | 2     | 9     | 6     | 10    |
| 6.2   |       | 1     |       |       | 1     |       | 2     | 1     | 1     | 1     |       | 1     |       |       |       |       | Chinese    | 1     | 1     | 7     | 6     | 16    |
| 6.9   | 1     |       |       | 1     |       |       | 2     |       | 1     | 1     |       | 1     |       | 1     | 1     |       | Chinese    | 1     | 4     | 9     | 6     | 24    |
| 7.72  | 1     | 1     |       | 1     | 1     |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     |       | Chinese    | 1     | 4     | 9     | 5     | 26    |

Appendix 2 Database: Company 81 – Company 160

| hi316 | hi317 | hi318 | hi319        | hi320 | hi321 | hi322        | hi323 | hi324 | hi325   | hi326 | hi327  | hi329 | hi330 | hi331 | hi332 | hi333 | hi334 | hi335 |
|-------|-------|-------|--------------|-------|-------|--------------|-------|-------|---------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 17    | 10    | 4     | Vietnam      | 1     | 4     | Vietnam      | 1     | 0     |         | 2     | poor   | 1     | 1     | 1     | 2     | 2     | 2     | 2     |
| 17    | 10    | 4     | Saudi Arabia | 1     | 4     | Saudi Arabia | 1     | 0     |         | 2     | poor   | 1     | 1     | 1     | 2     | 2     | 2     | 2     |
| 8     | 10    |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 2     | 1     | 1     | 2     | 2     | 2     | 2     |
| 6     | 11    | 5     | Laos         | 1     | 5     | Laos         | 1     | 0     |         | 2     | basic  | 2     | 1     | 1     | 2     | 2     | 2     | 2     |
| 1     | 2     |       |              | 2     |       |              | 2     | 0     |         | 2     | poor   | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 6     | 2     |       |              | 2     |       |              | 2     | 0     |         | 2     | poor   | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 6     | 3     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 4     | 2     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 3     | 1     |       |              | 2     |       |              | 2     | 0     |         | 2     |        | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 4     | 2     |       |              | 2     |       |              | 2     | 0     |         | 2     | poor   | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 5     | 2     |       |              | 2     |       |              | 2     | 0     |         | 2     | poor   | 2     | 1     | 1     | 2     | 2     | 2     | 1     |
| 1     | 0.5   |       |              | 2     |       |              | 2     | 0     |         | 2     | poor   | 2     | 1     | 1     | 2     | 2     | 2     | 1     |
| 2     | 2     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 2     | 2     | 1     | 2     | 2     | 1     | 2     |
| 6     | 1     |       |              | 2     |       |              | 2     | 0     |         | 2     |        | 2     | 1     | 1     | 2     | 1     | 2     | 2     |
| 3     | 3     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 2     | 2     |
| 2     | 4     |       |              | 2     |       |              | 2     | 0     |         | 2     |        | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 10    | 14    | 5     | PNG          | 1     | 5     | PNG          | 1     | 0     |         | 2     | fluent | 2     | 2     | 1     | 2     | 2     | 1     | 2     |
| 7     | 10    |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 2     | 2     | 2     | 2     | 2     | 1     | 1     |
| 9     | 10    | 3     | South Africa | 1     | 3     | South Africa | 1     | 0     |         | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 1     | 2     |
| 2     | 2     |       |              | 2     |       |              | 2     | 0     |         | 2     |        | 1     | 1     | 2     | 1     | 1     | 1     | 1     |
| 5     | 5     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 1     | 1     |
| 4     | 2     |       |              | 2     |       |              | 2     | 0     |         | 2     |        | 1     | 2     | 2     | 1     | 1     | 2     | 2     |
| 2     | 2     |       |              | 2     |       |              | 2     | 0     |         | 2     | poor   | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 5     | 1     | Australia    | 1     | 1     | Australia    | 1     | 0     |         | 2     |        | 1     | 2     | 1     | 1     | 2     | 2     | 1     |
| 5     | 7     | 0.5   | UK           | 1     | 3     | UK           | 1     | 1     | UK      | 1     | fluent | 1     | 1     | 1     | 2     | 1     | 2     | 1     |
| 2     | 2     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 6     | 4     |       |              | 2     |       |              | 2     | 0     |         | 2     |        | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 10    | 5     | 5     | Pakistan     | 1     | 5     | Pakistan     | 1     | 0     |         | 2     | basic  | 2     | 1     | 1     | 2     | 2     | 1     | 2     |
| 25    | 12    | 3     | Australia    | 1     | 3     | Australia    | 1     | 0     |         | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 20    | 27    | 2     | Denmark      | 1     | 2     | Denmark      | 1     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 21    | 25    | 3     | Brazil       | 1     | 3     | Brazil       | 1     | 0     |         | 2     |        | 1     | 1     | 1     | 1     | 1     | 2     | 2     |
| 10    | 5     | 5     | Germany      | 1     | 5     | Germany      | 1     | 1     | Germany | 1     | fluent | 2     | 1     | 1     | 1     | 1     | 1     | 2     |
| 11    | 9     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 2     | 1     | 1     | 2     | 1     | 1     |
| 2     | 2     |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 2     | 1     | 2     | 2     | 2     | 2     | 2     |
| 2     | 24    | 1     | UK           | 1     |       |              | 2     | 0     |         | 2     | fluent | 2     | 1     | 2     | 2     | 2     | 2     | 2     |
| 2     | 10    | 5     | America      | 1     | 10    | America      | 1     | 1     | America | 1     | fluent | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 14    | 20    |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 10    |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 6     | 15    |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 2     | 1     |
| 4     | 3     | 2     | America      | 1     | 3     | America      | 1     | 0     |         | 2     | fluent | 1     | 2     | 1     | 1     | 1     | 1     | 1     |
| 6     | 19    |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 8     | 8     | 6     | Japan        | 1     | 7     | Japan        | 1     | 0     |         | 2     | basic  | 1     | 1     | 2     | 1     | 1     | 1     | 2     |
| 8     | 5     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 2     | 1     | 2     | 2     | 1     | 2     |
| 4     | 3     | 2     | America      | 1     | 3     | America      | 1     | 0     |         | 2     | fluent | 1     | 2     | 1     | 1     | 1     | 1     | 1     |
| 8     | 8     |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 1     | 1     | 2     | 1     | 1     | 2     | 2     |
| 30    | 25    | 0.5   | Kenya        | 1     | 0.5   | Kenya        | 1     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 10    | 7     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 5     | 5     |       |              | 2     |       |              | 2     | 0     |         | 2     |        | 1     | 1     | 2     | 1     | 1     | 2     | 1     |
| 10    | 4     |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 2     |
| 10    | 5     |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 2     | 2     | 1     | 1     |
| 10    | 10    |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 30    | 8     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 2     | 2     | 2     | 2     |
| 10    | 6     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 2     | 2     | 1     | 1     | 1     | 1     | 1     |
| 10    | 10    |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 1     | 2     | 2     | 2     | 1     | 2     |
| 10    | 6     | 1     | America      | 1     | 3     | America      | 1     | 0     |         | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 10    | 8     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 2     | 1     | 1     | 1     | 2     | 2     |
| 22    | 10    |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 2     | 1     | 2     | 2     | 1     | 1     |
| 5     | 5     |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 1     | 1     | 2     | 1     | 1     | 1     | 1     |
| 18    | 20    |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 1     | 2     | 2     | 1     | 1     | 2     |
| 2     | 2     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 1     | 2     | 1     | 1     | 1     | 2     |
| 9     | 8     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 1     | 2     | 2     | 2     | 1     | 2     |
| 10    | 8     |       |              | 2     | 2     | America      | 1     | 1     | America | 1     | basic  | 1     | 2     | 2     | 1     | 1     | 1     | 1     |
| 12    | 10    |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 2     | 2     | 1     |
| 10    | 10    | 5     | Singapore    | 1     | 10    | Japan        | 1     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 10    | 10    |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 1     | 1     | 2     | 1     | 1     | 1     | 1     |
| 7     | 5     |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 1     | 1     | 2     | 1     | 2     | 2     | 2     |
| 20    | 30    |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 1     | 2     | 2     | 2     | 2     | 1     |
| 11    | 8     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
|       |       |       |              | 2     |       |              | 2     |       |         | 2     |        | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 4     | 2     |       |              | 2     |       |              | 2     | 0     |         | 2     |        | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 5     | 5     |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 2     | 1     |
| 5     | 5     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 2     | 2     | 1     | 1     | 2     | 2     | 1     |
| 10    | 10    |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 10    |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 2     | 1     | 1     | 2     | 2     | 1     |
| 13    | 10    |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 15    | 8     |       |              | 2     |       |              | 2     | 0     |         | 2     | basic  | 1     | 1     | 2     | 2     | 2     | 1     | 1     |
| 8     | 16    |       |              | 2     |       |              | 2     |       |         | 2     | basic  | 1     | 1     | 2     | 2     | 1     | 1     | 1     |
| 5     | 8     |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 6     | 5     |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 6     | 10    |       |              | 2     |       |              | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 2     | 1     | 1     | 1     |





Appendix 2 Database: Company 81 – Company 160

| si21 | si22 | si23 | si24 | si25 | si26 | si27 | si28 | si29 | si30 | si31 | si32 | si33 | si34 | si35 | si36 | si37 | si38 | si39 | si40 | si41 | si42 | si43 | si44 | si45 | si46 | si47 | si48 | si49 | si50 |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
| 5    | 5    | 4    | 4    | 5    | 4    | 4    | 3    | 5    | 2    | 3    | 2    | 2    | 4    | 3    | 2    | 4    | 4    | 4    | 2    | 2    | 3    | 5    | 4    | 5    | 5    | 5    | 5    | 4    | 5    |   |
| 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 2    | 4    | 3    | 2    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 5    | 4    | 5    | 5    | 5    | 5    | 4    | 5    |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 2    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    |   |
| 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 5    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 5    | 3    | 3    | 4    | 3    | 3    | 2    | 2    | 3    | 2    | 4    | 4    |   |
| 3    | 3    | 3    | 2    | 3    | 3    | 3    | 4    | 3    | 2    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 5    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 2    | 3    | 3    | 4    |   |
| 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 2    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 5    | 3    | 3    | 3    | 3    | 3    | 2    | 4    | 3    |   |
| 4    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 2    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 5    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 2    | 4    | 4    | 4    |   |
| 4    | 5    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 2    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 3    | 4 |
| 3    | 4    | 4    | 4    | 3    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 5    | 4    | 4    |   |
| 3    | 4    | 4    | 4    | 3    | 3    | 5    | 4    | 3    | 3    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 5    | 3    | 4    | 5    | 4    | 5 |
| 3    | 4    | 4    | 4    | 3    | 3    | 5    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 5    | 3    | 5    | 4    | 4    | 5 |
| 3    | 3    | 3    | 2    | 3    | 3    | 3    | 4    | 3    | 2    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 5    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 2    | 3    | 3    | 4    |   |
| 5    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 5    | 2    | 4    | 5    | 5    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    |   |
| 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 5    | 2    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4 |
| 5    | 4    | 4    | 3    | 3    | 4    | 2    | 4    | 3    | 3    | 2    | 2    | 2    | 3    | 1    | 1    | 4    | 3    | 4    | 5    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 5    | 4    | 3 |
| 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 2    | 3    | 3    | 4    | 3    | 4    | 4    | 2    | 4    | 3    | 2    | 2    | 1    | 4    | 3    | 3    | 3    | 3    | 3    | 5    | 4    |   |
| 3    | 3    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 4    | 2    | 4    | 4    | 2    | 2    | 1    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 4    |   |
| 4    | 3    | 3    | 3    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 2    | 4    | 4    | 2    | 2    | 1    | 4    | 2    | 3    | 3    | 3    | 3    | 5    | 4    |   |
| 4    | 4    | 4    | 4    | 3    | 3    | 5    | 3    | 3    | 2    | 3    | 4    | 4    | 3    | 3    | 5    | 3    | 5    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 5    | 4    | 3    |   |
| 5    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 5    | 2    | 3    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 2    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    |   |
| 4    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 2    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    |   |
| 2    | 3    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 2    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    |   |
| 3    | 4    | 3    | 2    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 2    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 3    |   |
| 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 2    | 3    | 3    | 2    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 4    |   |
| 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 5    | 3    | 2    | 2    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 5 |
| 5    | 5    | 4    | 4    | 4    | 5    | 4    | 5    | 5    | 2    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 3    | 4    | 5    | 3    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 2    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 2    | 2    | 2    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    |   |
| 3    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 2    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 3    |   |
| 4    | 4    | 4    | 3    | 4    | 4    | 3    | 2    | 2    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    |   |
| 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 2    | 2    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    |   |
| 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 2    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    |   |
| 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 2    | 2    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 3    | 3    | 3    | 2    | 4    | 3    | 2    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 2    | 3    | 3    | 2    | 3    | 3    | 2    | 4    | 3    | 2    | 3    |   |
| 3    | 3    | 4    | 3    | 2    | 3    | 2    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 3    |   |
| 3    | 2    | 4    | 4    | 3    | 3    | 4    | 3    | 2    | 2    | 4    | 3    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 4    |   |
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| 4    | 3    | 3    | 4    | 4    | 5    | 4    | 4    | 3    | 2    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 4    | 5    | 5    | 5    | 4    | 4    | 5    | 5    | 2    | 2    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 5    | 5    | 5    |   |
| 3    | 3    | 3    | 3    | 4    | 5    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    |   |
| 5    | 4    | 3    | 3    | 4    | 5    | 5    | 4    | 3    | 3    | 4    | 5    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 3    |   |
| 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 2    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 5    | 4    | 4    | 3    |   |
| 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 2    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 4    | 3    |   |
| 5    | 3    | 4    | 4    | 5    | 4    | 5    | 4    | 3    | 2    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 5    | 5    | 4    | 4    | 5    | 5    | 5    | 4    | 5    | 4    | 5    | 4    |   |
| 4    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 2    | 2    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    |   |
| 4    | 5    | 4    | 4    | 4    | 5    | 5    | 4    | 1    | 2    | 4    | 5    | 5    | 3    | 3    | 4    | 5    | 4    | 3    | 5    | 5    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 5    |   |
| 5    | 5    | 4    | 4    | 4    | 5    | 5    | 5    | 1    | 2    | 5    | 4    | 4    | 5    | 5    | 4    | 5    | 5    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    |   |
| 5    | 3    | 5    | 4    | 4    | 4    | 5    | 1    | 2    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 5    | 4    | 5    | 5    |   |
| 3    | 3    | 3    | 3    | 4    | 5    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    |   |
| 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 2    | 2    | 4    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    |   |
| 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 2    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 3    |   |
| 5    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    |   |
| 2    | 2    | 3    | 2    | 2    | 2    | 3    | 2    | 3    | 2    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    |   |
| 4    | 3    | 3    | 3    | 4    | 5    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 3    | 3    |   |
| 4    | 4    | 3    | 3    | 3    | 3    | 4    | 2    | 2    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    |   |
| 4    | 4    | 4    | 4    | 3    | 4    | 2    | 4    | 3    | 1    | 5    | 4    | 5    | 5    | 4    | 3    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 5    | 5    | 5    | 4    | 5 |
| 3    | 4    | 3    | 4    | 4    | 5    | 4    | 3    | 2    | 2    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    |   |
| 3    | 3    | 3    | 3    | 4    | 5    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    |   |
| 4    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 3    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 3    |   |
| 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 2    | 2    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 4    |   |
| 5    | 4    | 4    | 4    | 4    | 5    | 5    | 2    | 1    | 2    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 3    | 4    | 5    | 4    | 5    | 3    | 4    | 4    | 5    | 4    | 4    | 5    |   |
| 5    | 4    | 4    | 4    | 5    | 3    | 4    | 5    | 2    | 2    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 5    | 4    | 5    | 5    | 4    |   |
| 4    | 3    | 4    | 5    | 4    | 4    | 5    | 3    | 2    | 1    | 4    | 5    | 4    | 4    | 5    | 5    | 3    | 4    | 5    | 5    | 3    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 5    |   |
| 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 2    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 3    |   |
| 3    | 5    | 5    | 4    | 3    | 4    | 5    | 3    | 3    | 3    | 3    | 4    | 5    | 4    | 3    | 5    | 4    | 3    | 5    | 3    | 4    | 5    | 4    | 5    | 3    | 4    |      |      |      |      |   |







Appendix 2 Database: Company 81 – Company 160

| si111 | si112 | si113 | si114 | si115 | si116 | si117 | si118 | si119 | si120 | si121 | si122 | si123 | si124 | si125 | si126 | si127 | si128 | si129 | si130 | si131 | si132 | si133 | si134 | si135 | si136 | si137 | si138 | si139 | si140 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 4     | 2     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 2     | 4     | 4     |   |
| 4     | 2     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 2     | 4     | 4     |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 3     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 5     | 4     | 5     | 2     | 5     |   |
| 4     | 5     | 3     | 4     | 4     | 4     | 2     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 2     | 5     | 4     | 4     | 2     |   |
| 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 1     | 4     | 5     | 3     | 5     | 2     | 4     | 2     |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 5     | 3     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 4     | 2     | 4     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     |   |
| 3     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 5     | 4     | 5     | 2     | 5     |   |
| 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     |   |
| 3     | 4     | 2     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 3     | 4     | 4     | 5     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 2     | 2     | 3     | 2     | 2     | 3     | 2     | 4     | 4     | 3     | 2     | 3     | 4     |   |
| 3     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 2     | 3     | 2     | 4     | 2     |   |
| 3     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 4     | 2     |   |
| 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 2     | 2     | 4     | 2     |   |
| 4     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 2     | 4     | 2     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 2     | 5     | 4     |   |
| 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 4     | 4     |   |
| 2     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 4     |   |
| 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     |   |
| 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 3     | 4     | 4     | 3     | 4     | 2     | 5     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 2     | 3     | 4     |   |
| 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 2     | 4     | 3     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 3     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     |   |
| 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 2     | 3     | 2     | 4     | 3     |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 2     | 4     | 2     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     |   |
| 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 2     | 5     | 2     | 5     | 4     | 2     | 3     | 4     | 4     | 4     | 2     | 4     |   |
| 4     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 2     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 2     | 4     | 3     |   |
| 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 1     | 4     | 2     | 4     | 3     | 2     | 5     | 4     | 4     | 3     | 4     | 3     |   |
| 4     | 5     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 4     | 4     | 2     | 4     | 4     |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 2     | 4     | 2     | 3     | 3     | 2     | 3     | 4     | 3     | 4     | 2     | 4     | 4     |   |
| 3     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 2     | 3     | 2     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 3     |   |
| 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 1     | 4     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 4     |   |
| 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 2     | 5     | 2     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 2     | 4     | 4     |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 2     | 3     | 2     | 3     | 2     | 3     | 3     | 4     |   |
| 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 5     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 2     | 4     | 2     | 3     | 3     | 4     | 2     | 3     | 2     | 3     | 3     | 4     |   |
| 5     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 5     | 5     | 4     | 3     | 2     | 5     | 3     | 4     | 5     | 2     | 5     | 5     | 4     | 4     | 2     | 4     | 5     |   |
| 3     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 5     | 5     | 4     | 3     | 3     | 3     | 3     | 4     | 5     | 2     | 3     | 3     | 3     | 4     | 1     | 4     | 3     | 3     | 3     | 3     | 4     | 5     |   |
| 4     | 5     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 3     | 2     | 3     | 3     | 4     | 1     | 5     | 4     | 3     | 3     | 2     | 3     |   |
| 3     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 4     | 3     | 4     | 4     | 1     | 4     | 3     | 4     | 4     | 2     | 3     | 4     |   |
| 3     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 3     | 4     | 1     | 4     | 3     | 4     | 2     | 3     |   |
| 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 2     | 5     | 4     | 3     | 3     | 3     | 3     | 4     |   |
| 5     | 4     | 4     | 5     | 3     | 5     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 1     | 4     | 3     | 4     | 4     | 1     | 4     | 3     | 4     | 4     | 1     | 4     | 5     |   |
| 5     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 1     | 4     | 2     | 5     | 4     | 1     | 5     | 4     | 5     | 5     | 2     | 4     | 4     |   |
| 5     | 4     | 5     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 2     | 4     | 1     | 5     | 5     | 1     | 5     | 5     | 5     | 5     | 2     | 4     | 4     |   |
| 5     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 1     | 5     | 1     | 5     | 5     | 1     | 4     | 4     | 4     | 5     | 2     | 5     |   |
| 5     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 2     | 4     | 2     | 4     | 5     | 2     | 4     | 5     | 4     | 5     | 2     | 4     | 4     |   |
| 4     | 5     | 5     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 2     | 4     | 1     | 5     | 5     | 2     | 5     | 4     | 4     | 5     | 2     | 5     | 4     |   |
| 3     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 5     | 2     | 3     | 3     | 3     | 4     | 1     | 4     | 3     | 3     | 3     | 3     | 3     | 4     |   |
| 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 2     | 4     | 3     | 2     | 4     | 4     | 3     | 4     | 2     | 3     | 4     |   |
| 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 2     | 4     | 3     |   |
| 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 5     | 4     | 3     | 3     | 3     | 4     |   |
| 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 4     | 3     |   |
| 4     | 5     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 2     | 4     | 1     | 3     | 3     | 2     | 5     | 4     | 3     | 3     | 3     | 3     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 2     | 4     | 3     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3 |
| 4     | 2     | 5     | 4     | 4     | 4     | 5     | 5     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 1     | 3     | 2     | 4     | 4     | 1     | 4     | 5     | 2     | 5     | 2     | 4     | 4     |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     | 5     | 3     | 4     | 3     | 5     | 5     | 1     | 4     | 3     | 4     | 3     | 2     | 4     | 3     |   |
| 4     | 5     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 2     | 3     | 3     | 4     | 5     | 1     | 4     | 3     | 4     | 4     | 4     | 2     | 3     | 4     |   |
| 3     | 4     | 5     | 5     | 4     | 3     | 3     | 3     | 4     | 5     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 1     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 3     | 3     | 4     | 2     | 4     | 4     | 3     | 3     | 3     | 4     | 3     |   |
| 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 4     | 2     | 4     | 2     | 4     | 5     | 5     | 4     | 2     | 5     | 4     |       |       |       |   |

Appendix 2 Database: Company 81 – Company 160

| si141 | si142 | si143 | si144 | si145 | si146 | si147 | si148 | si149 | si150 | si151 | si152 | si153 | si154 | si155 | si156 | si157 | si158 | si159 | si160 | si161 | si162 | si163 | si164 | si165 | si166 | si167 | si168 | si169 | si170 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 2     | 3     | 3     | 2     | 2     | 4     | 28.6  | 0.8   | 18.2  | 1.2   | 4     | 4     | 4     | 4     |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     |       |       |       |       | 4     | 4     | 4     | 4     |
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 3     | 2     | 4     | 4     | 4     |       | 36    | 5.6   | 18    | 4     | 4     | 4     | 4     | 4     |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |       |       |       |       | 4     | 4     | 4     | 4     |
| 4     | 2     | 4     | 3     | 2     | 3     | 3     | 2     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 5     | 3     | 3     | 2     | 3     | 14.8  | 10    | 8     | 11    | 5     | 4     | 4     | 5     |
| 4     | 2     | 4     | 3     | 2     | 3     | 3     | 2     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 5     | 3     | 3     | 2     | 3     | 45    | 28    | 33    | 19    | 5     | 4     | 4     | 5     |
| 5     | 2     | 4     | 3     | 2     | 3     | 2     | 4     | 4     | 3     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 3     | 3     | 3     | 4     | 3     | 12    | 28    | 17    | 13    | 5     | 3     | 4     | 5     |
| 4     | 2     | 4     | 3     | 2     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 3     | 3     | 2     | 4     | 12    | 8     | 11    | 10    | 5     | 3     | 4     | 5     |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 4     |       |       |       |       | 4     | 4     | 4     | 4     |
| 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 4     | 4     | 4     | 3     | 4     |       |       |       |       | 4     | 4     | 3     | 3     |
| 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 4     | 3     | 5     | 3     | 4     |       |       |       |       | 5     | 4     | 3     | 4     |
| 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 4     | 3     | 5     | 3     | 4     |       |       |       |       | 5     | 4     | 3     | 4     |
| 4     | 4     | 4     | 3     | 2     | 3     | 3     | 2     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 5     | 3     | 3     | 2     | 3     | 18    | 34    | 27    | 19.3  | 5     | 4     | 4     | 5     |
| 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 5     | 3     | 4     | 2     | 3     | 4     | 4     | 3     | 4     | 10    | 10    | 10    | 30    | 5     | 4     | 5     | 4     |
| 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 2     | 3     | 3     | 3     | 3     | 4     | 20    | 24    | 20    | 15    | 4     | 4     | 4     | 4     |
| 3     | 2     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 3     | 2     | 4     | 4     | 3     | 35    | 30    | 20    | 20    | 3     | 4     | 4     | 3     |
| 3     | 2     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 2     | 2     | 3     | 3     | 4     |       |       |       |       | 4     | 4     | 4     | 4     |       |
| 3     | 2     | 4     | 3     | 4     | 3     | 3     | 3     | 2     | 4     | 4     | 3     | 4     | 3     | 3     | 2     | 2     | 2     | 3     | 3     | 4     |       |       |       |       | 4     | 4     | 3     | 4     |       |
| 4     | 2     | 4     | 3     | 3     | 3     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 2     | 2     | 2     | 2     | 2     | 4     |       |       |       | 4     | 4     | 3     | 4     |       |
| 4     | 4     | 2     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 1     | 3     | 3     | 4     | 3     | 3     |       | 40    |       | 20    | 5     | 4     | 4     | 4     |       |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 2     | 4     | 4     | 3     |       | 8     |       | 8     | 4     | 4     | 4     | 4     |       |
| 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |       |       |       |       | 4     | 4     | 4     | 4     |       |
| 4     | 4     | 2     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 12    | 24    | 23    | 12    | 2     | 2     | 3     | 3     |
| 4     | 3     | 2     | 3     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 3     | 3.1   | 5.2   | 2.7   | 4.2   | 3     | 4     | 3     | 5     |
| 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 2     | 2     | 2     | 3     | 30    | 35    | 25    | 25    | 4     | 4     | 4     | 3     |
| 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 10    | 10    | 100   | 10    | 4     | 4     | 4     | 4     |
| 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 2     | 3     | 2     | 2     | 2     | 4     | 11    | 1.3   | 8.2   |       | 4     | 4     | 4     | 4     |
| 3     | 2     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 2     | 2     | 2     | 2     | 4     |       |       |       |       | 4     | 4     | 4     | 4     |       |
| 4     | 4     | 2     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 35    | 35    | 30    | 30    | 4     | 4     | 5     | 4     |       |
| 4     | 3     | 2     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 30    | 30    | 25    | 25    | 4     | 3     | 3     | 4     |
| 4     | 5     | 2     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 30    | 30    | 25    | 25    | 4     | 3     | 4     | 5     |
| 4     | 5     | 2     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 30    |       |       |       | 4     | 5     | 4     | 4     |       |
| 4     | 4     | 2     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 25    | 25    | 18    | 25    | 4     | 3     | 4     | 4     |
| 5     | 4     | 2     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 17    | 20    | 13    | 4     | 4     | 4     | 4     | 4     |
| 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     |       |       |       |       | 4     | 4     | 3     | 4     |       |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 70    | 60    | 40    | 3     | 4     | 3     | 4     | 4     |
| 5     | 4     | 3     | 3     | 2     | 2     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 11.7  | 20.2  | 7.95  | 5     | 3     | 3     | 4     | 4     |
| 3     | 3     | 2     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 5     | 5     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 10    | 15    | 20    | 30    | 3     | 3     | 4     | 4     |
| 4     | 3     | 2     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 5.5   | 18.2  | 3.6   | 12.3  | 3     | 4     | 3     | 3     |
| 5     | 4     | 2     | 3     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 2.5   | 5     | 5     | 10    | 4     | 5     | 4     | 4     |
| 5     | 4     | 1     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 25    | 25    | 10    | 10    | 4     | 5     | 4     | 4     |
| 4     | 3     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 70    | 20    | 5     | 5     | 3     | 4     | 4     | 5     |
| 4     | 4     | 1     | 4     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 30    | 20    | 30    | 20    | 3     | 4     | 5     | 5     |
| 4     | 4     | 1     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 20    | 30    | 20    | 30    | 3     | 3     | 4     | 4     |
| 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 30    | 20    | 20    | 30    | 3     | 4     | 4     | 3     |       |
| 3     | 4     | 1     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 15    | 17    | 15    | 15    | 5     | 4     | 4     | 5     |
| 4     | 4     | 1     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 60    | 60    | 60    | 60    | 5     | 5     | 4     | 4     |
| 5     | 5     | 2     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 30    | 40    | 20    | 10    | 4     | 5     | 4     | 5     |
| 5     | 4     | 2     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 40    | 50    | 40    | 50    | 4     | 5     | 4     | 4     |
| 5     | 4     | 2     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 20    | 20    | 30    | 20    | 5     | 5     | 4     | 5     |
| 4     | 4     | 2     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 10    | 20    | 20    | 10    | 4     | 4     | 4     | 5     |
| 4     | 4     | 1     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 20    | 40    | 20    | 15    | 4     | 5     | 5     | 5     |
| 4     | 5     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 40    | 40    | 50    | 60    | 5     | 4     | 4     | 4     |
| 5     | 5     | 1     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 70    | 70    | 70    | 50    | 5     | 4     | 5     | 5     |
| 5     | 4     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 20    | 20    | 30    | 30    | 3     | 4     | 5     | 4     |
| 3     | 4     | 2     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 18    | 10    | 15    | 22    | 4     | 4     | 3     | 4     |
| 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 20    | 15    | 10    | 17    | 3     | 3     | 3     | 3     |
| 3     | 3     | 3     | 3     | 3     | 4     | 5     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 30    | 30    | 30    | 10    | 3     | 4     | 4     | 3     |
| 3     | 3     | 2     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 10    | 21    | 17    | 22    | 4     | 3     | 4     | 3     |
| 4     | 5     | 2     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 30    | 20    | 20    | 10    | 3     | 3     | 4     | 4     |
| 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 20    | 21    | 23    | 28    | 4     | 4     | 4     | 4     |
| 3     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 20    | 10    | 10    | 15    | 3     | 4     | 3     | 4     |
| 5     | 4     | 2     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 70    | 70    | 70    | 100   | 5     | 5     | 5     | 5     |
| 4     | 5     | 2     | 5     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 10    | 20    | 5     | 5     | 4     | 5     | 4     | 4     |
| 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 3     |       |       |       |       |       |       |       |       |       |



Appendix 2 Database: Company 81 – Company 160

| si201 | si202 | si203 | si204 | si205 | si206 | si207 | si208 | si209 | si210 | si211 | si212 | si213 | si214 | si215 | si216 | si217 | si218 | si219 | si220 | si221 | si222 | si223 | si224 | si225 | si226 | si227 | si228 | si229 | si230 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 2     | 2     | 2     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 2     | 2     | 2     | 4     | 2     | 4     | 2     | 4     | 2     | 2     | 2     | 4     | 4     | 4     | 2     | 2     | 2     | 4     | 4     | 2     |   |
| 2     | 2     | 2     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 2     | 2     | 2     | 4     | 2     | 4     | 2     | 4     | 2     | 2     | 2     | 4     | 4     | 4     | 4     | 2     | 2     | 2     | 4     | 4     | 2 |
| 2     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 2     | 2     | 4     | 2     | 3     | 4     | 3     | 2     | 4     | 2     | 4     | 3     |   |
| 3     | 3     | 3     | 4     | 3     | 5     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 1     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 3     | 1     | 4     | 5     | 5     | 1     | 2     | 4     | 2     | 3     | 5     | 1     | 2     | 1     | 2     | 3     | 2 |
| 3     | 2     | 3     | 2     | 3     | 4     | 5     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 1     | 4     | 5     | 5     | 1     | 2     | 4     | 2     | 3     | 5     | 1     | 2     | 1     | 2     | 3     | 2     |   |
| 1     | 2     | 3     | 2     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 5     | 4     | 4     | 1     | 2     | 4     | 3     | 5     | 4     | 1     | 1     | 2     | 2     | 4     | 2     |   |
| 1     | 3     | 3     | 2     | 2     | 5     | 4     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 1     | 4     | 4     | 4     | 1     | 2     | 5     | 3     | 4     | 5     | 1     | 2     | 1     | 3     | 4     | 2     |   |
| 2     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     |   |
| 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 4     | 2     | 4     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 2     | 2     | 3     | 3     | 3     | 4     |   |
| 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 4     | 2     | 4     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 2     | 2     | 3     | 3     | 3     | 4     |   |
| 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 4     | 2     | 4     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 2     | 2     | 3     | 3     | 3     | 4     |   |
| 1     | 3     | 3     | 3     | 3     | 4     | 5     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 1     | 4     | 5     | 5     | 1     | 2     | 4     | 2     | 3     | 5     | 1     | 2     | 1     | 2     | 3     | 2     |   |
| 2     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 4     | 2     | 4     | 3     | 2     | 3     | 2     | 2     | 4     | 2     | 2     | 3     | 3     | 4     | 3     |   |
| 2     | 4     | 2     | 4     | 4     | 4     | 2     | 3     | 4     | 4     | 4     | 2     | 2     | 4     | 2     | 4     | 1     | 4     | 1     | 1     | 3     | 3     | 4     | 4     | 1     | 1     | 2     | 3     | 3     | 2     |   |
| 3     | 5     | 3     | 2     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 5     | 4     | 3     | 3     | 4     | 2     | 4     | 4     | 2     | 2     | 3     | 2     | 2     | 1     | 3     | 4     | 4     | 2     | 2     |   |
| 2     | 3     | 2     | 4     | 4     | 4     | 2     | 4     | 3     | 2     | 2     | 4     | 3     | 3     | 2     | 4     | 2     | 4     | 2     | 3     | 4     | 2     | 3     | 3     | 2     | 2     | 2     | 2     | 4     | 4     |   |
| 2     | 4     | 2     | 4     | 4     | 4     | 2     | 3     | 3     | 3     | 2     | 4     | 3     | 3     | 2     | 3     | 2     | 4     | 2     | 3     | 4     | 3     | 3     | 3     | 2     | 2     | 2     | 3     | 4     | 4     |   |
| 2     | 4     | 2     | 4     | 4     | 4     | 2     | 4     | 4     | 3     | 2     | 4     | 3     | 3     | 2     | 4     | 2     | 4     | 2     | 2     | 3     | 4     | 4     | 4     | 2     | 2     | 2     | 2     | 3     | 4     | 4 |
| 4     | 4     | 4     | 4     | 4     | 3     | 3     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 2     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     |   |
| 2     | 4     | 4     | 5     | 5     | 4     | 1     | 3     | 3     | 3     | 2     | 2     | 2     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 2     | 2     | 4     | 2     |   |
| 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     |   |
| 2     | 3     | 4     | 4     | 3     | 3     | 2     | 2     | 2     | 2     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 2     | 3     | 4     | 5     | 4     | 4     | 3     | 2     |   |
| 4     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 3     | 4     |   |
| 1     | 2     | 4     | 4     | 4     | 3     | 2     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 2     | 3     | 2     | 4     | 2     | 3     | 4     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 2     |   |
| 2     | 2     | 2     | 2     | 4     | 4     | 2     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 2     | 4     | 2     | 4     | 2     | 2     | 4     | 2     | 2     | 2     | 2     | 2     | 2     | 3     | 3     | 4     | 3 |
| 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 2     | 2     | 2     | 4     | 2     | 4     | 2     | 4     | 2     | 2     | 2     | 2     | 4     | 4     | 4     | 2     | 2     | 2     | 4     | 2     | 2 |
| 2     | 3     | 2     | 4     | 4     | 4     | 2     | 4     | 3     | 2     | 3     | 4     | 3     | 2     | 2     | 4     | 2     | 4     | 2     | 3     | 3     | 2     | 2     | 3     | 2     | 2     | 2     | 2     | 4     | 4     |   |
| 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3 |
| 4     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 5     | 4     | 5     | 5     | 4     | 4     |   |
| 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     |   |
| 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5 |
| 3     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4 |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 2     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 |
| 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4 |
| 4     | 4     | 4     | 4     | 3     | 2     | 1     | 3     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 5     | 1     | 5     | 3     | 3     | 2     | 4     | 4     | 5     | 5     | 4     | 2     | 4     | 4     | 2     |   |
| 2     | 3     | 3     | 2     | 3     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     |   |
| 4     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 5 |
| 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     |   |
| 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     |   |
| 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 3     | 3     |   |
| 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 5     | 5     | 4     | 3     | 3 |
| 5     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 3     |   |
| 4     | 3     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     |   |
| 5     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 5 |
| 4     | 3     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 5     |   |
| 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4 |
| 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 4 |
| 5     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 5 |
| 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 4 |
| 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 5     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 5     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 3     | 3     | 4     | 4     | 4     | 4 |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3 |
| 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4 |
| 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4 |
| 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |
| 5     | 2     | 5     | 5     | 5     | 5     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 1     | 4     | 2     | 1     | 4     | 4     | 4     | 4     | 1     | 4     | 2     | 4     | 4     | 5     |   |
| 3     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4 |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     |   |



Appendix 2 Database: Company 81 – Company 160

| si261 | si262 | si263 | si264 | si265 | si266 | si267 | si268 | si269 | si270 | si271 | si272 | si273 | si274 | si275 | si276 | si277 | si278 | si279 | si280 | si281 | si282 | si283 | si284 | si285 | si286 | si287  | si288 | si289 | si290 |    |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|----|
| 4     | 4     | 4     | 4     | 4     | 2     | 2     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 3     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 13     | 2008  | 7     | 16    |    |
| 4     | 4     | 4     | 4     | 4     | 2     | 2     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 3     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 28     | 2010  | 7     | 16    |    |
| 4     | 3     | 4     | 4     | 4     | 4     | 2     | 2     | 3     | 4     | 4     | 3     | 2     | 2     | 2     | 4     | 3     | 3     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 16     | 2011  | 8     | 16    |    |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     |        | 2006  | 7     | 5     |    |
| 3     | 1     | 2     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 50    |       |       |       | 67    | 2008   | 7     | 17    |       |    |
| 4     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 5     | 3     | 3     | 3     | 5     | 5     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 185    | 2004  | 6     | 17    |    |
| 4     | 1     | 4     | 3     | 3     | 3     | 4     | 2     | 2     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 50    |       |       |       | 74    | 2008   | 7     | 2     |       |    |
| 4     | 1     | 3     | 3     | 3     | 2     | 4     | 3     | 1     | 3     | 3     | 5     | 3     | 2     | 2     | 4     | 3     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 86     | 2008  | 7     | 14    |    |
| 3     | 3     | 4     | 4     | 4     | 4     | 4     | 2     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 50    | 30    | 20    | 30    | 70    | 685    | 1995  | 4     | 14    |    |
| 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 250    | 2008  | 7     | 5     |    |
| 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 78     | 2004  | 6     | 1     |    |
| 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 68    | 32    | 0     | 100   | 0     | 58     | 2010  | 7     | 17    |    |
| 3     | 2     | 3     | 3     | 3     | 3     | 4     | 2     | 2     | 3     | 3     | 5     | 3     | 2     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 68    | 32    | 0     | 100   | 0     | 280    | 2005  | 6     | 14    |    |
| 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 5     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 3     | 4     | 5     | 4     | 4     | 100   | 0     | 0     | 0     | 0     |        | 2010  | 7     | 17    |    |
| 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     |        | 2009  | 7     | 14    |    |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 85    | 10    | 5     | 95    | 5     | 37     | 2007  | 7     | 17    |    |
| 4     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 2     | 2     | 4     | 3     | 4     | 85    | 15    | 0     | 100   | 0     | 1500   | 2003  | 6     | 5     |    |
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 2     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 2     | 4     | 2     | 4     | 4     | 100   | 0     | 0     | 0     | 0     |        | 2002  | 6     | 5     |    |
| 4     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 2     | 4     | 4     | 100   | 0     | 0     | 0     | 0     |        | 2003  | 6     | 5     |    |
| 3     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 10     | 2002  | 6     | 14    |    |
| 3     | 3     | 3     | 4     | 4     | 3     | 2     | 2     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 500    | 2007  | 7     | 11    |    |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 35     | 2008  | 7     | 17    |    |
| 3     | 2     | 3     | 4     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     |        | 2003  | 6     | 17    |    |
| 3     | 2     | 4     | 3     | 2     | 4     | 4     | 5     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 19.9  | 80.1  | 0     | 100   | 0     | 500    | 2006  | 7     | 5     |    |
| 3     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 2     | 4     | 4     | 4     | 4     | 2     | 2     | 3     | 2     | 2     | 4     | 4     | 4     | 50    | 50    | 0     | 0     | 0     | 25     | 2008  | 7     | 17    |    |
| 4     | 4     | 5     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     | 400    | 2008  | 7     | 17    |    |
| 3     | 3     | 3     | 4     | 4     | 4     | 3     | 2     | 3     | 4     | 4     | 4     | 4     | 3     | 2     | 4     | 3     | 3     | 4     | 4     | 4     | 97    | 3     | 0     | 100   | 0     | 30     | 2007  | 7     | 17    |    |
| 4     | 4     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 2     | 2     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 15     | 2002  | 6     | 17    |    |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 45    | 30    | 25    | 50    | 50    | 1100   | 1995  | 4     | 17    |    |
| 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 40    | 30    | 30    | 52    | 52    | 850    | 2003  | 6     | 17    |    |
| 4     | 4     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 55    | 45    | 0     | 0     | 100   | 17000  | 1996  | 5     | 17    |    |
| 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 50    | 30    | 20    | 20    | 80    | 28000  | 1988  | 3     | 5     |    |
| 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 45    | 25    | 30    | 60    | 40    | 15000  | 2003  | 6     | 5     |    |
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 64    | 19    | 17    | 0     | 100   | 1000   | 2001  | 6     | 17    |    |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 6000   | 2008  | 7     | 16    |    |
| 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 36    | 34    | 30    | 0     | 100   | 50     | 1998  | 5     | 17    |    |
| 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 100   | 0     | 0     | 0     | 0     | 4000   | 2001  | 6     | 17    |    |
| 4     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 40    | 60    | 0     | 0     | 100   | 10000  | 2002  | 6     | 17    |    |
| 4     | 4     | 3     | 4     | 3     | 3     | 4     | 2     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 40    | 34    | 26    | 60    | 40    | 3000   | 2006  | 7     | 17    |    |
| 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 60    | 20    | 20    | 60    | 40     | 3500  | 2004  | 6     | 17 |
| 5     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 60    | 40    | 0     | 70    | 30    | 2000   | 2006  | 7     | 5     |    |
| 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 50    | 30    | 20    | 40    | 60    |        | 1990  | 3     | 5     |    |
| 5     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 3     | 3     | 3     | 50    | 30    | 20    | 50    | 50    | 7400   | 1990  | 3     | 17    |    |
| 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 30    | 30    | 40    | 50    | 50    | 9750   | 2005  | 6     | 17    |    |
| 5     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 30    | 30    | 40    | 30    | 70    | 500000 | 2000  | 5     | 12    |    |
| 4     | 4     | 5     | 5     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 45    | 35    | 20    | 70    | 30    | 1200   | 2008  | 7     | 17    |    |
| 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 30000  | 2005  | 6     | 17    |    |
| 5     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 30    | 20    | 50    | 60    | 40    | 872    | 2003  | 6     | 17    |    |
| 5     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 100   | 0     | 0     | 0     | 0     | 3000   | 2000  | 5     | 17    |    |
| 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 100   | 0     | 0     | 0     | 0     | 2000   | 2007  | 7     | 16    |    |
| 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     | 30000  | 2000  | 5     | 17    |    |
| 5     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 100   | 0     | 0     | 0     | 0     | 150000 | 1968  | 1     | 14    |    |
| 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 20000  | 2008  | 7     | 10    |    |
| 5     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 5000   | 1995  | 4     | 4     |    |
| 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 30    | 30    | 40    | 40    | 60    | 50     | 2003  | 6     | 12    |    |
| 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 50    | 30    | 20    | 20    | 80    | 174    | 1999  | 5     | 17    |    |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 40    | 40    | 20    | 70    | 30    | 6000   | 2002  | 6     | 14    |    |
| 4     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 3     | 3     | 4     | 4     | 5     | 4     | 50    | 40    | 10    | 100   | 0     | 50000  | 1997  | 5     | 16    |    |
| 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 50    | 40    | 10    | 77    | 23    | 30000  | 1989  | 3     | 14    |    |
| 5     | 4     | 3     | 3     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 30    | 20    | 50    | 50    | 90000 | 2007   | 7     | 14    |       |    |
| 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 46    | 40    | 14    | 70    | 30    | 23     | 2002  | 6     | 17    |    |
| 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 10    | 65    | 25    | 35    | 65    | 20000  | 1999  | 5     | 17    |    |

Appendix 2 Database: Company 81 – Company 160

| si291 | si292        | si293       | si294 | si295 | si296 | si297 | si298 | si299 | si300 | si301 | si302 | si303 | si304 | si305 | si306 | si307 | si308 | si309 | si310      |
|-------|--------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| 5     | Vietnam      | 2000000     | 1     | 0     | 0     |       | 1     |       | 2     |       | 1     |       |       |       |       |       |       |       | Chinese    |
| 5     | Saudi Arabia | 5000000     | 1     | 0     | 0     |       | 1     |       | 2     |       | 1     |       |       |       |       |       |       |       | Chinese    |
| 5     | Kenya        | 20000000    | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     | 1     |       |       |       |       |       |       | Chinese    |
| 20    | Laos         | 8422800     | 0     | 1     | 0     | 1     |       |       | 2     |       |       |       |       | 1     |       |       |       |       | Chinese    |
| 20    | Laos         | 150000      | 1     | 0     | 0     |       |       | 1     | 1     | 1     | 1     | 1     |       |       |       | 1     |       |       | Chinese    |
| 20    | Zambia       | 1000000     | 1     | 0     | 1     |       | 1     |       | 1     | 1     | 1     |       |       | 1     |       | 1     | 1     |       | Chinese    |
| 1     | India        | 50000       | 1     | 0     | 1     |       |       | 1     | 1     |       | 1     | 1     |       | 1     |       | 1     |       |       | Chinese    |
| 20    | Zambia       | 450000      | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     | 1     |       |       |       | 1     |       |       | Chinese    |
| 16    | Ruassia      | 100000      | 1     | 0     | 1     | 1     |       |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     |       | Russian    |
| 20    | Laos         | 30000000    | 0     | 1     | 0     |       | 1     |       | 1     | 1     |       |       |       | 1     | 1     | 1     |       |       | Chinese    |
| 6     | America      | 300000      | 1     | 0     | 0     |       | 1     |       | 1     | 1     |       | 1     |       | 1     |       | 1     |       |       | American   |
| 20    | Kazakhstan   | 380000      | 1     | 0     | 0     |       |       | 1     | 1     | 1     |       | 1     |       | 1     | 1     | 1     |       |       | Kazakhstan |
| 16    | Japan        | 38000       | 1     | 0     | 1     | 1     |       |       | 1     | 1     | 1     | 1     |       | 1     |       | 1     |       |       | Japanese   |
| 20    | America      | 200000      | 1     | 0     | 0     |       | 1     |       | 1     |       |       | 1     |       |       |       | 1     | 1     |       | American   |
| 16    | HongKong     |             | 1     | 0     | 0     |       | 1     |       | 1     | 1     |       | 1     |       |       |       |       | 1     |       | Chinese    |
| 19    | India        |             | 0     | 1     | 0     | 1     |       |       | 1     | 1     |       |       | 1     |       |       |       |       |       | Chinese    |
| 19    | PNG          | 1380000000  | 0     | 1     | 0     |       |       | 1     | 1     |       |       | 1     |       |       | 1     | 1     |       |       | Chinese    |
| 19    | Zambia       |             | 0     | 1     | 0     |       | 1     |       | 2     |       | 1     |       |       |       | 1     | 1     |       |       | Chinese    |
| 19    | South Africa |             | 0     | 1     | 0     |       | 1     |       | 2     |       | 1     |       |       |       | 1     | 1     | 1     |       | Chinese    |
| 14    | Iran         |             | 1     | 0     | 0     |       | 1     |       | 2     |       | 1     |       |       |       |       | 1     |       |       | Chinese    |
| 9     | HongKong     | 10000000    | 1     | 0     | 0     |       | 1     |       | 2     | 1     |       | 1     |       |       | 1     | 1     | 1     |       | Chinese    |
| 19    | Congo        |             | 0     | 1     | 0     |       | 1     |       | 2     |       | 1     |       |       |       |       |       |       |       | Chinese    |
| 20    | Angola       |             | 1     | 0     | 0     |       | 1     |       | 2     |       |       | 1     |       |       |       |       |       |       | Chinese    |
| 20    | Australia    | 80000000    | 0     | 1     | 0     | 1     |       |       | 1     | 1     |       |       |       | 1     | 1     | 1     | 1     |       | Chinese    |
| 20    | Nigeria      | 1500000     | 1     | 0     | 0     |       |       | 1     | 1     |       | 1     |       |       |       | 1     | 1     |       |       | Chinese    |
| 20    | Laos         | 200000000   | 0     | 0     | 1     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese    |
| 20    | Turkey       | 6600000     | 1     | 0     | 0     |       | 1     |       | 2     |       | 1     |       |       |       |       | 1     |       |       | Chinese    |
| 20    | Pakistan     |             | 1     | 0     | 0     |       |       | 1     | 1     |       |       |       |       |       | 1     |       |       |       | Chinese    |
| 20    | Australia    | 2.5E+11     | 1     | 1     | 1     |       |       | 1     | 2     | 1     |       | 1     | 1     |       | 1     | 1     |       |       | Chinese    |
| 20    | Singapore    | 2E+11       | 1     | 1     | 1     |       |       | 1     | 2     | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese    |
| 20    | New Zealand  | 2E+11       | 1     | 1     | 1     | 1     |       |       | 2     | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese    |
| 20    | Thailand     | 1.3E+11     | 0     | 1     | 0     |       |       | 1     | 2     |       | 1     | 1     |       |       |       |       |       |       | Chinese    |
| 20    | Australia    | 15000000000 | 1     | 0     | 1     |       |       | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |       | Chinese    |
| 20    | Australia    | 18000000000 | 1     | 1     | 0     |       |       | 1     | 1     | 1     |       |       |       |       | 1     |       |       |       | Chinese    |
| 5     | America      | 1070000000  | 1     | 0     | 0     |       | 1     |       | 2     |       |       | 1     |       | 1     |       |       |       |       | Chinese    |
| 20    | South Korea  |             | 0     | 1     | 0     | 1     |       |       | 1     | 1     | 1     |       |       |       |       | 1     |       |       | Chinese    |
| 20    | America      | 150000000   | 1     | 1     | 0     |       | 1     |       | 1     | 1     |       | 1     |       | 1     | 1     |       |       |       | Chinese    |
| 20    | HongKong     | 20000000000 | 0     | 0     | 1     | 1     |       |       | 1     |       |       | 1     |       | 1     |       |       |       |       | Chinese    |
| 20    | America      | 4500000000  | 0     | 1     | 0     | 1     |       |       | 2     | 1     | 1     |       |       | 1     | 1     | 1     |       |       | Chinese    |
| 20    | Germany      |             | 1     | 0     | 0     | 1     |       |       | 2     |       |       | 1     | 1     | 1     |       |       |       |       | Chinese    |
| 20    | Australia    | 35000000    | 1     | 1     | 1     |       |       | 1     | 2     | 1     | 1     | 1     |       | 1     |       |       | 1     |       | Chinese    |
| 20    | Canada       |             | 0     | 1     | 0     |       |       | 1     | 2     |       |       | 1     |       | 1     | 1     |       |       |       | Chinese    |
| 13    | America      |             | 1     | 0     | 0     | 1     |       |       | 2     | 1     |       |       | 1     |       | 1     |       |       |       | Chinese    |
| 20    | Japan        |             | 1     | 0     | 0     | 1     |       |       | 2     |       |       | 1     | 1     | 1     | 1     |       |       |       | Chinese    |
| 20    | Tanzania     |             | 0     | 1     | 0     |       |       | 1     | 2     |       |       | 1     |       | 1     |       |       |       |       | Chinese    |
| 20    | Kenya        | 15800000000 | 1     | 1     | 1     | 1     |       |       | 2     | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese    |
| 20    | America      | 5000000000  | 1     | 0     | 0     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     |       | Chinese    |
| 20    | HongKong     |             | 0     | 1     | 0     |       |       | 1     | 2     |       | 1     | 1     | 1     | 1     |       |       |       |       | Chinese    |
| 20    | Australia    | 1000000000  | 1     | 0     | 0     | 1     |       |       | 1     | 1     |       | 1     |       |       | 1     |       | 1     |       | Chinese    |
| 5     | America      | 1000000     | 1     | 0     | 0     | 1     |       |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     |       |       | Chinese    |
| 20    | Canada       | 4000000000  | 1     | 0     | 0     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     |       |       | Chinese    |
| 16    | America      | 7000000000  | 1     | 0     | 0     | 1     |       |       | 1     | 1     |       |       |       |       |       | 1     |       |       | Chinese    |
| 9     | America      | 1000000000  | 1     | 0     | 0     | 1     |       |       | 1     | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese    |
| 7     | America      | 2000000000  | 0     | 0     | 1     | 1     |       |       | 1     | 1     | 1     | 1     | 1     |       |       |       | 1     |       | Chinese    |
| 20    | UAE          |             | 0     | 1     | 0     |       |       | 1     | 2     |       |       | 1     |       | 1     |       | 1     |       |       | Chinese    |
| 20    | Australia    | 10400000    | 1     | 0     | 0     |       |       | 1     | 1     |       |       |       | 1     | 1     |       |       |       |       | Chinese    |
| 17    | Portugal     | 400000000   | 1     | 0     | 0     |       |       | 1     | 1     |       |       | 1     |       | 1     |       | 1     |       |       | Chinese    |
| 5     | Singapore    |             | 0     | 1     | 0     |       |       | 1     | 2     |       |       | 1     |       | 1     |       |       |       |       | Chinese    |
| 16    | America      | 10000000000 | 0     | 1     | 0     |       |       | 1     | 1     |       |       | 1     | 1     | 1     |       |       |       |       | Chinese    |
| 17    | HongKong     | 79365000    | 0     | 1     | 0     |       |       | 1     | 2     |       | 1     | 1     | 1     | 1     | 1     |       |       |       | Chinese    |
| 20    | Brazil       | 2000000000  | 0     | 1     | 0     |       |       | 1     | 1     | 1     |       |       | 1     | 1     |       |       |       |       | Chinese    |
| 20    | Germany      | 290000000   | 0     | 1     | 0     |       |       | 1     | 1     |       |       |       |       | 1     | 1     |       | 1     |       | Chinese    |
| 20    | Australia    | 150000      | 0     | 1     | 0     | 1     |       |       | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       | Chinese    |
| 20    | America      |             | 0     | 1     | 0     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     |       | Chinese    |
| 20    | America      | 1000000     | 1     | 0     | 0     |       | 1     |       | 1     |       |       | 1     |       |       |       | 1     | 1     |       | Chinese    |
| 9     | HongKong     |             | 1     | 0     | 0     | 1     |       |       | 2     | 1     |       |       | 1     |       |       |       |       |       | Chinese    |
| 16    | Germany      | 18350000000 | 1     | 0     | 0     |       |       | 1     | 1     |       | 1     |       |       |       |       | 1     |       |       | Chinese    |
| 20    | America      | 3000000000  | 0     | 1     | 0     |       | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       | Chinese    |
| 20    | HongKong     |             | 1     | 0     | 0     | 1     |       |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     |       | Chinese    |
| 9     | HongKong     |             | 1     | 0     | 0     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     |       | Chinese    |
| 20    | HongKong     |             | 1     | 0     | 0     | 1     |       |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     |       | Chinese    |
| 5     | Singapore    | 800000000   | 1     | 0     | 0     |       |       | 1     | 1     |       |       | 1     | 1     | 1     | 1     |       |       |       | Chinese    |
| 5     | Malaysia     | 200000000   | 1     | 0     | 0     |       | 1     |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       | Chinese    |
| 20    | Singapore    | 3200000     | 1     | 0     | 0     |       |       | 1     | 2     |       | 1     |       |       | 1     |       |       |       |       | Chinese    |
| 14    | France       | 80000000    | 1     | 0     | 1     | 1     |       |       | 2     | 1     | 1     | 1     | 1     | 1     |       |       | 1     |       | Chinese    |
| 20    | America      | 3000000000  | 0     | 1     | 0     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       | Chinese    |
| 20    | Philippines  |             | 0     | 1     | 0     |       |       | 1     | 1     |       | 1     |       | 1     |       | 1     |       |       |       | Chinese    |
| 5     | Congo        | 450000000   | 1     | 0     | 0     |       | 1     |       | 1     |       | 1     | 1     | 1     | 1     |       | 1     |       |       | Chinese    |
| 5     | HongKong     | 500000000   | 0     | 0     | 1     | 1     |       |       | 2     | 1     | 1     | 1     | 1     | 1     |       | 1     | 1     |       | Chinese    |
| 14    | HongKong     | 200000000   | 1     | 0     | 0     |       | 1     |       | 2     | 1     | 1     | 1     | 1     | 1     |       | 1     |       |       | Chinese    |



Appendix 2 Database: Company 81 – Company 160

| si312 | si313 | si314 | si315 | si316 | si317 | si318 | si319        | si320 | si321        | si322 | si323   | si324 | si325  | si326 | si327 | si328 | si329 | si330 |
|-------|-------|-------|-------|-------|-------|-------|--------------|-------|--------------|-------|---------|-------|--------|-------|-------|-------|-------|-------|
| 2     | 6     | 4     | 5     | 5     | 5     | 6     | Vietnam      | 6     | Vietnam      | 0     |         | 2     | poor   | 1     | 1     | 1     | 2     | 1     |
| 2     | 6     | 5     | 2     | 2     | 2     | 6     | Saudi Arabia | 6     | Saudi Arabia | 0     |         | 2     | poor   | 1     | 1     | 1     | 1     | 2     |
| 4     | 7     | 5     | 11    | 9     | 11    | 0.5   | Kenya        | 0.5   | Kenya        | 0     |         | 2     | poor   | 1     | 2     | 1     | 1     | 2     |
| 3     | 4     | 5     | 11    | 6     | 11    | 6     | Laos         | 5     | Laos         | 0     |         | 2     | basic  | 2     | 2     | 1     | 1     | 2     |
| 4     | 3     | 4     | 4     | 4     | 3     | 0.5   | Laos         | 0.5   | Laos         | 0     |         | 2     | poor   | 1     | 1     | 1     | 1     | 1     |
| 4     | 3     | 5     | 3     | 3     | 2     | 1     | Zambia       | 1     | Zambia       | 0     |         | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 4     | 3     | 5     | 2     | 2     | 2     | 1     | India        | 1     | India        | 0     |         | 2     | poor   | 1     | 1     | 1     | 1     | 1     |
| 4     | 4     | 5     | 2     | 2     | 2     | 1     | Zambia       | 1     | Zambia       | 0     |         | 2     | poor   | 1     | 1     | 1     | 1     | 1     |
| 2     | 4     | 5     | 5     | 5     | 5     | 5     | Russia       | 5     | Russia       | 0     |         | 2     |        |       | 1     | 1     | 1     | 1     |
| 4     | 3     | 5     | 5     | 3     | 5     | 1     | Laos         | 1     | Laos         | 0     |         | 2     | poor   | 1     | 1     | 1     | 1     | 2     |
| 4     | 3     | 5     | 5     | 3     | 3     | 0.5   | America      | 0.5   | America      | 0     |         | 2     | basic  | 2     | 1     | 1     | 1     | 2     |
| 4     | 2     | 4     | 1     | 1     | 1     | 0.5   | Kazakhstan   | 0.5   | Kazakhstan   | 0     |         | 2     | poor   | 1     | 1     | 1     | 1     | 2     |
| 4     | 3     | 4     | 2     | 2     | 2     | 1     | Japan        | 1     | Japan        | 0     |         | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 3     | 4     | 6     | 2     | 2     | 2     | 1     | America      | 1     | America      | 0     |         | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 3     | 5     | 6     | 5     | 3     | 5     | 1     | HongKong     | 1     | HongKong     | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 4     | 3     | 5     | 3     | 3     | 3     | 3     | India        | 3     | India        | 0     |         | 2     |        |       | 1     | 1     | 1     | 1     |
| 3     | 6     | 6     | 9     | 9     | 10    | 5     | PNG          | 5     | PNG          | 1     | America | 1     | fluent | 4     | 1     | 1     | 1     | 2     |
| 3     | 6     | 6     | 10    | 10    | 10    | 5     | Zambia       | 5     | Zambia       | 1     | America | 1     | fluent | 4     | 1     | 1     | 1     | 2     |
| 3     | 6     | 6     | 10    | 10    | 10    | 8     | South Africa | 8     | South Africa | 1     | UK      | 1     | fluent | 4     | 2     | 2     | 1     | 2     |
| 4     | 3     | 5     | 2     | 2     | 2     | 1     | Iran         | 1     | Iran         | 0     |         | 2     |        |       | 1     | 1     | 2     | 1     |
| 3     | 4     | 5     | 5     | 2     | 5     | 1     | HongKong     | 1     | HongKong     | 0     |         | 2     | basic  | 2     | 2     | 1     | 1     | 2     |
| 4     | 5     | 5     | 3     | 2     | 1     | 1     | Congo        | 1     | Congo        | 0     |         | 2     |        |       | 2     | 2     | 1     | 1     |
| 4     | 4     | 5     |       |       |       |       |              |       |              |       |         | 2     |        |       | 1     | 2     | 2     | 2     |
| 4     | 5     | 5     | 5     | 1     | 5     | 1     | Australia    | 1     | Australia    | 0     |         | 2     |        |       | 1     | 2     | 1     | 1     |
| 2     | 5     | 5     | 4     | 4     | 8     | 9     | Nigeria      | 7     | Nigeria      | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 3     | 4     | 6     | 4     | 2     | 2     | 1     | Laos         | 1     | Laos         | 0     |         | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 3     | 4     | 5     | 5     | 4     | 5     | 4     | Turkey       | 4     | Turkey       | 0     |         | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 3     | 9     | 5     | 20    | 8     | 10    | 5     | Pakistan     | 5     | Pakistan     | 0     |         | 2     | basic  | 2     | 1     | 1     | 1     | 2     |
| 4     | 8     | 6     | 10    | 10    | 12    | 10    | Australia    | 10    | Australia    | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 2     | 8     | 6     | 9     | 9     | 27    | 9     | Singapore    | 9     | Singapore    | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 3     | 9     | 6     | 23    | 22    | 23    | 2     | New Zealand  | 2     | New Zealand  | 0     |         | 2     |        |       | 1     | 2     | 1     | 1     |
| 2     | 3     | 5     | 5     | 5     | 5     | 5     | Thailand     | 5     | Thailand     | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 7     | 7     | 9     | 9     | 11    | 9     | Australia    | 9     | Australia    | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 1     | 8     | 6     | 19    | 3     | 19    | 4     | America      |       |              | 0     |         | 2     | fluent | 4     | 1     | 2     | 1     | 2     |
| 2     | 8     | 5     | 30    | 3     | 30    | 4     | America      | 6     | Algeria      | 0     |         | 2     | fluent | 4     | 2     | 1     | 1     | 1     |
| 2     | 7     | 7     | 14    | 2     | 10    | 5     | South Korea  | 5     | South Korea  | 0     |         | 2     | fluent | 4     | 2     | 1     | 1     | 2     |
| 1     | 9     | 5     | 24    | 11    | 24    | 14    | America      |       |              | 0     |         | 2     | fluent | 4     | 2     | 1     | 2     | 2     |
| 3     | 9     | 7     | 15    | 15    | 10    |       |              |       |              | 0     |         | 2     | fluent | 4     | 2     | 1     | 1     | 1     |
| 2     | 8     | 6     | 15    | 6     | 15    | 11    | America      | 11    | America      | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 2     | 6     | 6     | 8     | 8     | 5     | 8     | Germany      | 8     | Germany      | 0     |         | 2     | fluent | 4     | 1     | 2     | 1     | 1     |
| 2     | 9     | 6     | 6     | 19    | 6     | 6     | Australia    | 6     | Australia    | 0     |         | 2     | basic  | 2     | 1     | 1     | 1     | 2     |
| 2     | 8     | 5     | 6     | 6     | 6     | 5     | Canada       | 5     | Canada       | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 5     | 5     | 5     | 6     | 5     | 3     | America      | 5     | America      | 0     |         | 2     | fluent | 4     | 1     | 1     | 2     | 1     |
| 3     | 4     | 5     | 5     | 4     | 4     | 4     | Japan        | 4     | Japan        | 0     |         | 2     | basic  | 2     | 1     | 2     | 1     | 1     |
| 2     | 7     | 5     | 6     | 6     | 4     |       |              |       |              | 0     |         | 2     | fluent | 4     | 1     | 1     | 2     | 1     |
| 1     | 8     | 6     | 4     | 4     | 25    | 4     | Kenya        | 4     | Kenya        | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 8     | 6     | 7     | 7     | 7     | 10    | America      | 10    | America      | 0     |         | 2     | fluent | 4     | 2     | 2     | 2     | 1     |
| 2     | 7     | 5     | 6     | 6     | 6     | 3     | HongKong     | 3     | HongKong     | 0     |         | 2     | fluent | 4     | 1     | 1     | 2     | 1     |
| 2     | 9     | 5     | 30    | 25    | 4     | 6     | Australia    | 10    | Australia    |       |         | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 2     | 8     | 6     | 5     | 5     | 5     | 6     | America      | 10    | America      | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 8     | 7     | 10    | 10    | 10    | 15    | Canada       | 15    | Canada       | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 8     | 5     | 8     | 20    | 8     | 4     | America      | 10    | America      | 0     |         | 2     | fluent | 4     | 2     | 2     | 1     | 2     |
| 2     | 8     | 7     | 4     | 4     | 6     | 7     | America      | 10    | America      | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 9     | 6     | 17    | 5     | 10    | 15    | America      | 15    | America      | 1     | America | 1     | fluent | 4     | 1     | 1     | 1     | 1     |
| 3     | 4     | 5     | 3     | 3     | 1     | 1     | HongKong     | 3     | HongKong     | 0     |         | 2     |        |       | 1     | 2     | 1     | 1     |
| 1     | 7     | 7     | 10    | 10    | 8     | 7     | Australia    | 7     | Australia    | 0     |         | 2     | fluent | 4     | 2     | 2     | 1     | 1     |
| 1     | 6     | 6     | 10    | 10    | 10    | 8     | Portugal     | 8     | Portugal     | 0     |         | 2     | fluent | 4     | 1     | 2     | 2     | 1     |
| 2     | 4     | 4     | 3     | 3     | 3     | 2     | UK           | 3     | UK           | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 1     | 5     | 6     | 20    | 15    | 20    | 15    | America      | 15    | America      | 1     | America | 1     | fluent | 4     | 1     | 1     | 1     | 2     |
| 2     | 10    | 6     | 3     | 3     | 3     | 3     | HongKong     | 5     | HongKong     | 0     |         | 2     |        |       | 1     | 2     | 1     | 1     |
| 1     | 8     | 6     | 9     | 8     | 8     | 7     | Brazil       | 7     | Brazil       | 1     | Brazil  | 1     | fluent | 4     | 1     | 1     | 1     | 2     |
| 1     | 8     | 6     | 8     | 8     | 8     | 7     | Germany      | 7     | Germany      | 1     | Germany | 1     | fluent | 4     | 1     | 2     | 1     | 2     |
| 2     | 9     | 7     | 15    | 15    | 10    | 10    | Australia    | 10    | Australia    | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 1     | 8     | 7     | 5     | 5     | 5     | 3     | HongKong     | 5     | America      | 0     |         | 2     | basic  | 2     | 2     | 1     | 1     | 1     |
| 2     | 7     | 6     | 9     | 4     | 9     | 4     | America      | 4     | America      | 0     |         | 2     | fluent | 4     | 1     | 2     | 1     | 1     |
| 3     | 9     | 3     | 1     | 1     | 1     | 2     | Japan        | 2     | Japan        | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 1     | 10    | 6     | 20    | 17    | 30    | 12    | Germany      | 12    | Germany      | 1     | Germany | 1     | fluent | 4     | 1     | 2     | 2     | 1     |
| 2     | 8     | 6     | 8     | 8     | 8     | 10    | America      | 10    | America      | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 7     | 2     | 6     | 6     | 6     | 5     | HongKong     | 5     | HongKong     | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 7     | 4     | 7     | 7     | 7     | 3     | Singapore    | 4     | Singapore    | 0     |         | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 2     | 6     | 4     | 5     | 5     | 5     | 5     | HongKong     | 5     | HongKong     | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 1     | 8     | 6     | 5     | 5     | 5     | 5     | Singapore    | 5     | Singapore    | 0     |         | 2     | fluent | 4     | 1     | 1     | 2     | 2     |
| 3     | 7     | 5     | 7     | 7     | 10    | 7     | Malaysia     | 7     | Malaysia     | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 3     | 7     | 6     | 8     | 5     | 10    | 3     | Singapore    | 3     | Singapore    | 0     |         | 2     | basic  | 2     | 2     | 1     | 1     | 2     |
| 2     | 7     | 6     | 7     | 7     | 10    | 7     | France       | 7     | France       | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 7     | 7     | 8     | 8     | 8     | 5     | America      | 5     | America      | 0     |         | 2     | fluent | 4     | 2     | 2     | 1     | 1     |
| 2     | 8     | 6     | 8     | 9     | 16    | 3     | Philippines  | 3     | Philippines  | 0     |         | 2     | basic  | 2     | 1     | 2     | 1     | 2     |
| 3     | 7     | 5     | 11    | 4     | 8     | 6     | Malaysia     | 6     | Malaysia     | 0     |         | 2     | fluent | 4     | 1     | 2     | 1     | 1     |
| 3     | 8     | 5     | 20    | 4     | 10    | 4     | HongKong     | 4     | HongKong     | 0     |         | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 4     | 8     | 5     | 17    | 6     | 12    | 6     | HongKong     | 6     | HongKong     | 0     |         | 2     | fluent | 4     | 1     | 2     | 1     | 1     |





Appendix 2 Database: Company 161 – Company 240

| ID  | hi1 | hi2 | hi3 | hi4 | hi5 | hi6 | hi7 | hi8 | hi9 | hi10 | hi11 | hi12 | hi13 | hi14 | hi15 | hi16 | hi17 | hi18 | hi19 | hi20 | hi21 | hi22 | hi23 | hi24 | hi25 | hi26 | hi27 | hi28 | hi29 | hi30 |   |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|---|
| 161 | 4   | 3   | 3   | 4   | 4   | 4   | 3   | 4   | 3   | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 2    | 3    |      |   |   |
| 162 | 3   | 3   | 4   | 4   | 4   | 3   | 3   | 3   | 4   | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    |   |   |
| 163 | 4   | 4   | 4   | 3   | 3   | 4   | 4   | 3   | 3   | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 4    |   |   |
| 164 | 4   | 3   | 4   | 3   | 4   | 3   | 4   | 4   | 3   | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 2    | 3    |   |   |
| 165 | 3   | 3   | 3   | 4   | 4   | 4   | 3   | 4   | 4   | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 2    | 3    |   |   |
| 166 | 5   | 5   | 4   | 4   | 4   | 5   | 5   | 4   | 4   | 5    | 5    | 4    | 4    | 5    | 5    | 5    | 5    | 4    | 4    | 4    | 5    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 3    | 2    |   |   |
| 167 | 3   | 4   | 3   | 4   | 4   | 3   | 4   | 3   | 4   | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 3    |   |   |
| 168 | 4   | 3   | 4   | 4   | 3   | 4   | 4   | 3   | 4   | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    |   |   |
| 169 | 4   | 4   | 3   | 4   | 5   | 4   | 5   | 5   | 5   | 4    | 3    | 4    | 5    | 5    | 5    | 5    | 5    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 1    | 1    |   |   |
| 170 | 3   | 4   | 4   | 4   | 3   | 4   | 4   | 3   | 4   | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 2    | 2 |   |
| 171 | 5   | 4   | 4   | 3   | 4   | 5   | 4   | 4   | 3   | 4    | 4    | 3    | 4    | 5    | 4    | 5    | 5    | 4    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 5    | 2    | 2    |   |   |
| 172 | 3   | 4   | 4   | 3   | 4   | 4   | 3   | 4   | 4   | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 3 |   |
| 173 | 4   | 3   | 4   | 3   | 4   | 4   | 3   | 4   | 3   | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 2    | 3    |   |   |
| 174 | 3   | 4   | 3   | 4   | 3   | 3   | 4   | 4   | 3   | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 2    | 2    |   |   |
| 175 | 5   | 5   | 4   | 3   | 4   | 3   | 4   | 3   | 3   | 4    | 5    | 3    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 2    | 1 |   |
| 176 | 4   | 4   | 3   | 4   | 3   | 4   | 4   | 4   | 3   | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 2    | 2 |   |
| 177 | 5   | 5   | 4   | 5   | 3   | 4   | 3   | 5   | 4   | 4    | 3    | 5    | 3    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 3    | 4    | 5    | 5    | 4    | 3    | 4    | 3    | 2    | 1    |   |   |
| 178 | 4   | 3   | 3   | 3   | 4   | 4   | 3   | 4   | 3   | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    |   |   |
| 179 | 5   | 4   | 5   | 5   | 4   | 3   | 5   | 4   | 5   | 4    | 3    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 5    | 4    | 3    | 5    | 4    | 3    | 5    | 3    | 4    | 3    | 5    | 2    | 2 |   |
| 180 | 4   | 3   | 4   | 4   | 3   | 4   | 4   | 3   | 4   | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3 |   |
| 181 | 3   | 4   | 4   | 3   | 3   | 4   | 3   | 4   | 3   | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 2    | 2    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 2    |   |   |
| 182 | 3   | 4   | 3   | 3   | 3   | 4   | 4   | 4   | 3   | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 2    | 3 |   |
| 183 | 3   | 3   | 4   | 3   | 2   | 3   | 4   | 3   | 2   | 3    | 3    | 2    | 3    | 3    | 3    | 3    | 2    | 1    | 2    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 2    | 2    | 2 |   |
| 184 | 4   | 4   | 3   | 4   | 5   | 4   | 5   | 5   | 4   | 4    | 4    | 5    | 5    | 5    | 4    | 5    | 5    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 5    | 5    | 4    | 1    | 1    |   |   |
| 185 | 3   | 4   | 3   | 4   | 3   | 4   | 4   | 3   | 4   | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 2    | 3 |   |
| 186 | 4   | 5   | 4   | 4   | 4   | 3   | 4   | 4   | 3   | 3    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 5    | 3    | 4    | 2    | 2    |   |   |
| 187 | 3   | 3   | 2   | 2   | 2   | 3   | 4   | 4   | 3   | 4    | 3    | 2    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 2    | 3    | 2    | 3    | 2    | 3    | 4    | 4    | 3    | 2    | 3    | 2 | 2 |
| 188 | 4   | 3   | 4   | 4   | 4   | 3   | 4   | 4   | 4   | 5    | 2    | 3    | 3    | 4    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 3    | 2 | 2 |
| 189 | 4   | 3   | 4   | 2   | 3   | 4   | 3   | 4   | 3   | 3    | 4    | 2    | 3    | 4    | 3    | 4    | 3    | 3    | 2    | 4    | 3    | 2    | 4    | 4    | 2    | 3    | 4    | 3    | 2    | 2    | 2 |   |
| 190 | 4   | 3   | 3   | 2   | 3   | 3   | 4   | 4   | 4   | 4    | 4    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 3 |   |
| 191 | 4   | 3   | 4   | 4   | 3   | 4   | 4   | 4   | 4   | 5    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 2    | 1    | 1 |   |
| 192 | 4   | 3   | 3   | 4   | 5   | 3   | 4   | 4   | 5   | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 5    | 4    | 4    | 3    | 4    | 3    | 5    | 4    | 3    | 4    | 5    | 4    | 1    | 2    | 2 |   |
| 193 | 4   | 3   | 3   | 4   | 4   | 3   | 3   | 4   | 5   | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 2    | 2 |   |
| 194 | 4   | 4   | 4   | 3   | 3   | 4   | 4   | 3   | 3   | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3 |   |
| 195 | 4   | 5   | 4   | 4   | 5   | 4   | 5   | 4   | 5   | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 1    | 2    | 2 |   |
| 196 | 3   | 4   | 3   | 4   | 4   | 4   | 3   | 3   | 4   | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 2    | 3    | 3 |   |
| 197 | 4   | 3   | 4   | 5   | 4   | 4   | 3   | 4   | 5   | 4    | 3    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 5    | 4    | 1    | 1 |   |
| 198 | 4   | 4   | 3   | 3   | 4   | 4   | 4   | 3   | 3   | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3 |   |
| 199 | 4   | 3   | 4   | 5   | 4   | 3   | 4   | 5   | 4   | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 1    | 2    | 2 |   |
| 200 | 4   | 4   | 3   | 3   | 3   | 4   | 4   | 4   | 3   | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 2    | 2 |   |
| 201 | 5   | 4   | 5   | 4   | 5   | 4   | 3   | 4   | 3   | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 5    | 4    | 4    | 5    | 4    | 3    | 2    | 1    | 1 |   |
| 202 | 3   | 4   | 3   | 4   | 3   | 4   | 3   | 3   | 4   | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3 |   |
| 203 | 4   | 3   | 4   | 4   | 4   | 5   | 4   | 5   | 4   | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 3    | 3    | 4    | 5    | 2    | 2    | 2 |   |
| 204 | 4   | 5   | 4   | 3   | 4   | 5   | 5   | 5   | 4   | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 5    | 4    | 4    | 3    | 4    | 1    | 1 |   |
| 205 | 4   | 3   | 4   | 4   | 5   | 4   | 4   | 4   | 3   | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 2    | 2 |   |
| 206 | 3   | 3   | 4   | 3   | 3   | 3   | 4   | 3   | 4   | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 2    | 2    | 3 |   |
| 207 | 5   | 4   | 4   | 5   | 4   | 4   | 5   | 4   | 5   | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 2    | 2    | 2 |   |
| 208 | 3   | 4   | 4   | 3   | 3   | 3   | 4   | 4   | 4   | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 2    | 2 |   |
| 209 | 4   | 3   | 4   | 5   | 4   | 3   | 4   | 4   | 3   | 4    | 3    | 5    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 5    | 4    | 3    | 3    | 4    | 3    | 2    | 2    | 2 |   |
| 210 | 4   | 4   | 3   | 3   | 2   | 4   | 2   | 4   | 3   | 4    | 2    | 4    | 5    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 3    | 4    | 4    | 5    | 5    | 5    | 2    | 3    | 3 |   |
| 211 | 4   | 5   | 5   | 4   | 4   | 4   | 5   | 5   | 5   | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 5    | 5    | 1    | 2    | 2 |   |
| 212 | 4   | 3   | 4   | 4   | 3   | 4   | 3   | 2   | 3   | 1    | 2    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3 |   |
| 213 | 3   | 2   | 1   | 3   | 2   | 3   | 4   | 4   | 3   | 2    | 3    | 3    | 3    | 3    | 4    | 2    | 3    | 2    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 2    | 3    | 3 |   |
| 214 | 3   | 3   | 3   | 4   | 4   | 4   | 4   | 5   | 5   | 5    | 5    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 3    | 3    | 1    | 1    | 1 |   |
| 215 | 4   | 4   | 3   | 3   | 4   | 3   | 4   | 3   | 4   | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 2    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 2    | 3    | 3 |   |
| 216 | 3   | 4   | 3   | 4   | 4   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 2    | 3    | 3 |   |
| 217 | 4   | 5   | 4   | 3   | 4   | 5   | 4   | 3   | 4   | 5    | 4    | 3    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 5    | 3    | 4    | 4    | 5    | 2    | 2    | 2 |   |
| 218 | 5   | 5   | 4   | 3   | 3   | 3   | 3   | 4   | 4   | 3    | 3    | 3    | 3    | 4    | 4    | 5    | 4    | 4    | 3    | 3    | 4    | 5    | 3    | 4    | 5    | 3    | 4    | 4    | 3    | 3    | 3 |   |
| 219 | 4   | 5   | 4   | 4   | 5   | 4   | 4   | 4   | 5   | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 3    | 4    | 2    | 2    | 2 |   |
| 220 | 4   | 4   | 4   | 4   | 3   | 3   | 4   | 4   | 4   | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 4    | 4    | 4    | 5    | 3    | 4    | 4    | 5    | 5    | 5    | 2    | 2    | 2    | 2 |   |
| 221 | 4   | 3   | 5   | 4   | 3   | 4   | 5   | 3   | 4   | 5    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 4    | 3    | 4    | 4    |      |      |      |      |   |   |







Appendix 2 Database: Company 161 – Company 240

| hi121 | hi122 | hi123 | hi124 | hi125 | hi126 | hi127 | hi128 | hi129 | hi130 | hi131 | hi132 | hi133 | hi134 | hi135 | hi136 | hi137 | hi138 | hi139 | hi140 | hi141 | hi142 | hi143 | hi144 | hi145 | hi146 | hi147 | hi148 | hi149 | hi150 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 4     |   |
| 4     | 3     | 4     | 4     | 3     | 3     | 4     | 2     | 3     | 2     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     |   |
| 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 2     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 2     | 3     | 3     | 4     | 4     |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     |   |
| 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4     |   |
| 4     | 5     | 4     | 4     | 4     | 5     | 5     | 2     | 4     | 1     | 4     | 4     | 1     | 5     | 4     | 2     | 5     | 5     | 4     | 4     | 1     | 5     | 5     | 4     | 4     | 1     | 5     | 5     | 5     | 5     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 3     | 3     | 4     | 2     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 3     |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 2     | 3     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 4     |   |
| 5     | 3     | 4     | 5     | 5     | 4     | 3     | 2     | 3     | 2     | 4     | 5     | 2     | 5     | 3     | 2     | 5     | 4     | 3     | 2     | 3     | 5     | 4     | 5     | 3     | 5     | 4     | 3     | 4     | 4     |   |
| 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 4     | 2     | 3     | 2     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 4     | 4     | 3     | 4     |   |
| 4     | 4     | 3     | 4     | 5     | 4     | 3     | 2     | 5     | 2     | 5     | 5     | 2     | 3     | 2     | 3     | 5     | 4     | 3     | 4     | 1     | 4     | 3     | 4     | 5     | 2     | 5     | 4     | 3     | 4     |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 4     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 4     | 4     | 4     | 3     | 2     | 4     | 4     | 3     | 2     | 4     | 4     | 3     | 3     | 3     | 4     | 4     |   |
| 5     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 4     | 4     | 3     | 4     | 2     | 4     | 3     | 3     | 3     | 2     | 4     | 4     | 4     | 5     |   |
| 4     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 2     | 3     | 2     | 2     | 3     | 3     | 4     | 4     | 2     | 3     | 4     | 4     | 3     | 2     | 4     | 3     | 4     | 4     |   |
| 3     | 4     | 5     | 5     | 4     | 5     | 5     | 2     | 3     | 2     | 4     | 4     | 1     | 3     | 2     | 3     | 5     | 5     | 4     | 3     | 2     | 3     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 5     |   |
| 4     | 4     | 4     | 3     | 4     | 4     | 3     | 2     | 3     | 2     | 3     | 4     | 2     | 4     | 2     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     |   |
| 4     | 3     | 5     | 5     | 4     | 3     | 4     | 2     | 3     | 1     | 4     | 4     | 1     | 5     | 2     | 2     | 5     | 5     | 4     | 4     | 3     | 5     | 5     | 4     | 3     | 2     | 4     | 5     | 4     | 3     |   |
| 3     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 3     |   |
| 3     | 5     | 4     | 4     | 5     | 4     | 3     | 2     | 5     | 2     | 4     | 5     | 2     | 3     | 2     | 1     | 3     | 4     | 5     | 3     | 2     | 3     | 5     | 4     | 3     | 2     | 5     | 4     | 3     | 4     |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 2     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 3     | 4     |   |
| 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 2     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 4     |   |
| 3     | 4     | 4     | 4     | 3     | 3     | 4     | 2     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 3     | 2     | 3     | 3     | 2     | 3     |   |
| 4     | 3     | 2     | 5     | 3     | 4     | 2     | 2     | 4     | 3     | 2     | 2     | 5     | 2     | 5     | 2     | 3     | 3     | 5     | 2     | 2     | 3     | 2     | 3     | 2     | 2     | 1     | 3     | 4     | 5     | 3 |
| 3     | 4     | 4     | 4     | 5     | 4     | 4     | 2     | 4     | 2     | 4     | 3     | 2     | 4     | 1     | 2     | 4     | 4     | 5     | 4     | 1     | 4     | 4     | 4     | 4     | 2     | 4     | 5     | 5     | 4     |   |
| 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 2     | 3     | 4     | 2     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 2     | 3     | 4     | 4     | 4     |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 4     | 1     | 4     | 1     | 4     | 3     | 2     | 5     | 2     | 1     | 4     | 5     | 4     | 4     | 2     | 5     | 4     | 4     | 5     | 2     | 4     | 5     | 4     | 5     |   |
| 2     | 4     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 2     | 4     | 4     | 2     | 4     | 3     | 4     | 3     | 3     | 4     |   |
| 4     | 4     | 5     | 4     | 4     | 5     | 4     | 2     | 4     | 1     | 4     | 3     | 2     | 5     | 2     | 2     | 5     | 4     | 3     | 4     | 1     | 4     | 4     | 3     | 4     | 1     | 4     | 4     | 3     | 4     |   |
| 3     | 2     | 4     | 4     | 3     | 3     | 4     | 2     | 4     | 3     | 2     | 2     | 3     | 4     | 2     | 2     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 4     | 3     | 3 |
| 4     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 2     | 3     | 3 |
| 5     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 5     | 2     | 5     | 4     | 2     | 4     | 1     | 2     | 3     | 4     | 5     | 4     | 2     | 5     | 4     | 4     | 4     | 1     | 5     | 4     | 4     | 5     |   |
| 3     | 5     | 4     | 5     | 4     | 4     | 3     | 2     | 5     | 2     | 4     | 3     | 2     | 4     | 2     | 3     | 3     | 3     | 2     | 2     | 2     | 4     | 4     | 5     | 3     | 3     | 4     | 4     | 3     | 5     |   |
| 5     | 4     | 3     | 4     | 5     | 4     | 4     | 2     | 4     | 1     | 4     | 5     | 2     | 3     | 2     | 1     | 4     | 4     | 5     | 4     | 2     | 3     | 4     | 4     | 5     | 2     | 4     | 5     | 4     | 3     |   |
| 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 2     | 3     | 3     | 4     | 4     |   |
| 3     | 4     | 4     | 5     | 4     | 4     | 3     | 2     | 5     | 2     | 5     | 4     | 1     | 4     | 3     | 2     | 5     | 4     | 4     | 5     | 2     | 5     | 4     | 4     | 5     | 2     | 5     | 4     | 4     | 5     |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 2     | 2     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     |   |
| 4     | 5     | 4     | 5     | 4     | 5     | 4     | 1     | 5     | 2     | 4     | 3     | 2     | 5     | 2     | 4     | 3     | 5     | 4     | 5     | 2     | 5     | 4     | 3     | 5     | 2     | 5     | 4     | 5     | 4     |   |
| 4     | 4     | 4     | 3     | 3     | 4     | 4     | 2     | 4     | 2     | 3     | 3     | 3     | 3     | 2     | 2     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 2     | 3     | 3     | 3     | 3     |   |
| 4     | 5     | 4     | 5     | 4     | 5     | 4     | 1     | 4     | 1     | 4     | 5     | 2     | 5     | 2     | 1     | 4     | 5     | 4     | 5     | 2     | 5     | 4     | 5     | 4     | 1     | 4     | 5     | 4     | 5     |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 4     | 3     | 4     | 2     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 3     | 3     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 2     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     |   |
| 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 2     | 4     | 4     | 3     | 4     | 2     | 2     | 4     | 5     | 4     | 3     | 2     | 4     | 5     | 4     | 4     | 2     | 5     | 4     | 4     | 5     |   |
| 3     | 4     | 4     | 4     | 4     | 5     | 4     | 1     | 4     | 1     | 5     | 4     | 2     | 4     | 2     | 3     | 4     | 5     | 4     | 4     | 2     | 5     | 4     | 4     | 5     | 2     | 5     | 4     | 4     | 4     |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 4     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 1     | 2     | 4     | 4     | 4     | 3     | 2     | 3     | 4     | 5     | 4     | 2     | 4     | 3     | 4     | 5     |   |
| 3     | 4     | 5     | 3     | 2     | 3     | 3     | 2     | 4     | 2     | 3     | 4     | 2     | 4     | 3     | 3     | 2     | 3     | 3     | 4     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 3     | 2     | 3     | 1     | 4     | 3     | 2     | 5     | 2     | 1     | 4     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 4     | 2     | 4     | 4     | 3     | 4     |   |
| 5     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 2     | 4     | 3     | 2     | 5     | 1     | 1     | 4     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 4     | 2     | 4     | 4     | 3     | 4     |   |
| 5     | 4     | 5     | 4     | 4     | 3     | 5     | 2     | 4     | 2     | 4     | 3     | 2     | 4     | 1     | 2     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     |   |
| 4     | 4     | 4     | 3     | 3     | 3     | 4     | 2     | 3     | 2     | 4     | 4     | 2     | 4     | 1     | 1     | 5     | 5     | 4     | 5     | 2     | 5     | 5     | 4     | 4     | 2     | 3     | 3     | 4     | 4     |   |
| 5     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 2     | 5     | 1     | 1     | 5     | 4     | 4     | 3     | 2     | 4     | 4     | 4     | 5     | 1     | 4     | 4     | 4     | 4     |   |
| 5     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 2     | 4     | 2     | 2     | 3     | 4     | 3     | 4     | 2     | 5     | 4     | 4     | 4     | 2     | 3     | 3     | 3     | 4     |   |
| 3     | 3     | 4     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 2     |   |
| 4     | 4     | 4     | 4     | 3     | 3     | 4     | 2     | 4     | 4     | 5     | 1     | 5     | 2     | 1     | 5     | 4     | 4     | 4     | 1     | 5     | 5     | 5     | 4     | 2     | 4     | 4     | 3     | 4     | 5     |   |
| 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 2     | 4     | 3     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 2     | 3     | 4     | 2     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 2     | 3     | 4     | 4     | 4     |   |
| 4     | 4     | 4     | 3     | 4     | 4     | 1     | 4     | 2     | 3     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3 |
| 4     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 1     | 1     | 4     | 4     | 4     | 3     | 2     | 5     | 4     | 3     | 3     | 2     | 4     | 5     | 5     | 4     |   |
| 5     | 4     | 4     | 5     | 4     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 2     | 5     | 3     | 2     | 4     | 3     | 4     | 4     | 2     | 3     | 4     | 3     | 3     | 2     | 4     | 4     | 3     | 4     |   |
| 4     | 4     | 4     | 3     | 3     | 5     | 4     | 2     | 4     | 2     | 3     | 3     | 3     | 4     | 2     | 2     | 4     | 5     | 5     | 5     | 1     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 5     |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 2     | 3     | 4     | 2     | 4     | 3     | 2     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 2     | 4     | 3     | 4     | 4     |   |
| 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 2     | 4     | 3     | 3     |   |
| 3     | 4     | 3     | 5     | 4     | 4     | 3     | 2     | 4     | 2     | 4     | 3     | 2     | 5     | 2     | 2     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 2     | 4     | 3     | 5     | 4     |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 2     | 4     | 4     | 3     | 4 |
| 4     | 4     | 5     | 4     | 3     | 4     | 4     | 1     | 4     | 3     | 4     | 3     | 2     | 5     | 2     | 3     | 4     | 3     | 4     | 5     | 2     | 4     | 3     | 4     | 4     | 2     | 5     | 4     | 3     | 4     |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 3     | 2     | 4     | 2     | 4     | 4     | 2     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     |       |       |       |       |       |       |       |       |   |





Appendix 2 Database: Company 161 – Company 240

| hi181 | hi182 | hi183 | hi184 | hi185 | hi186 | hi187 | hi188 | hi189 | hi190 | hi191 | hi192 | hi193 | hi194 | hi195 | hi196 | hi197 | hi198 | hi199 | hi200 | hi201 | hi202 | hi203 | hi204 | hi205 | hi206 | hi207 | hi208 | hi209 | hi210 |   |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|
| 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4 |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4 |   |
| 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3 |   |
| 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4 |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 |   |
| 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 4 |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4 |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4 |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4 |   |
| 5     | 5     | 4     | 5     | 3     | 3     | 4     | 3     | 4     | 5     | 5     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5 |   |
| 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3 |   |
| 5     | 4     | 3     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 5     | 4     | 4 |   |
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4 |   |
| 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4 |   |
| 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4 |   |
| 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 5     | 5     | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 5     | 5 |   |
| 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 |   |
| 3     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 4 |   |
| 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3 |   |
| 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 5     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5 |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4 |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 3 |   |
| 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3 |   |
| 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 3 |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 5     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4 |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4 |   |
| 3     | 4     | 4     | 3     | 2     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 4     | 4     | 2     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 2     | 4     | 4     | 3     | 3     | 3     |   |   |
| 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3 |   |
| 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 3 |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 5     | 3     | 4     | 3     | 4     | 4     | 3     | 4 |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4 |   |
| 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 5     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 4     | 4     | 5     | 4 |   |
| 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3 |   |
| 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 2     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3 |   |
| 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4 |   |
| 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 | 4 |
| 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4 |   |
| 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4 |   |
| 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3 |   |
| 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 2     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3 |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 3     | 3 |   |
| 3     | 2     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4 |   |
| 5     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 3     | 4 |   |
| 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 3 |   |
| 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4 |   |
| 3     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5 |   |
| 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4 |   |
| 4     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4 |   |
| 3     | 3     | 4     | 4     | 4     | 5     | 5     | 3     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 3     | 4     | 3     | 3     | 4     | 3 |   |
| 4     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4 |   |
| 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3 |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3 |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3 |   |
| 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4 |   |
| 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4 |   |
| 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 3 |   |
| 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3 |   |
| 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4 |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4 |   |
| 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3 |   |
| 3     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3 |   |
| 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4 |   |
| 4     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 3     | 2     | 3     |       |       |       |   |   |

Appendix 2 Database: Company 161 – Company 240

| hi211 | hi212 | hi213 | hi214 | hi215 | hi216 | hi217 | hi218 | hi219 | hi220 | hi221 | hi222 | hi223 | hi224 | hi225 | hi226 | hi227 | hi228 | hi229 | hi230 | hi231 | hi232 | hi233 | hi234 | hi235 | hi236 | hi237 | hi238 | hi239 | hi240 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     |
| 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     |
| 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     |
| 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     |
| 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     |
| 5     | 4     | 3     | 4     | 5     | 5     | 4     | 4     | 5     | 3     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 4     |
| 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     |
| 4     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 4     |
| 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     |
| 5     | 5     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     |
| 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     |
| 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     |
| 4     | 4     | 5     | 3     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 3     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 5     |
| 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     |
| 5     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     |
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     |
| 4     | 3     | 5     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 3     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 5     | 4     | 5     | 3     | 4     | 3     | 5     | 4     | 4     | 5     |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     |
| 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 5     | 3     | 3     | 2     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 3     |
| 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 4     | 4     | 4     | 3     |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 2     | 4     | 3     | 4     | 5     | 3     | 2     | 4     | 3     | 2     | 4     | 4     | 3     | 2     | 4     | 4     | 3     | 2     | 4     | 4     | 3     | 2     | 4     |
| 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 5     | 4     |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |
| 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     |
| 4     | 4     | 3     | 2     | 4     | 3     | 4     | 2     | 4     | 4     | 3     | 4     | 2     | 2     | 4     | 3     | 3     | 4     | 3     | 4     | 2     | 2     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     |
| 4     | 5     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 5     |
| 5     | 4     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 4     | 4     | 3     | 2     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     |
| 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 4     |
| 3     | 4     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 5     |
| 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     |
| 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     |
| 3     | 2     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 2     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 2     | 2     | 4     | 4     | 4     |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     |
| 4     | 3     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 4     |
| 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     |
| 5     | 5     | 5     | 5     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     |
| 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 5     | 5     | 5     | 4     | 4     |
| 4     | 4     | 5     | 4     | 4     | 3     | 5     | 3     | 3     | 2     | 3     | 3     | 4     | 2     | 2     | 3     | 5     | 3     | 2     | 4     | 3     | 5     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     |
| 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 2     |
| 4     | 4     | 5     | 5     | 4     | 4     | 3     | 3     | 3     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 5     | 5     | 4     |
| 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 3     |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     |
| 4     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 5     |
| 3     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |
| 5     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     |
| 4     | 3     | 3     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 5     |
| 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     |
| 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     |
| 4     | 5     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 2     | 4     | 3     | 4     | 5     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     |
| 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |
| 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     |
| 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     |
| 5     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 3     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 5     |
| 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     |
| 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     |
| 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     |
| 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     |
| 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |
| 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     |
| 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 2     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     |
| 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     |
| 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     |       |       |       |

Appendix 2 Database: Company 161 – Company 240

| hi241 | hi242 | hi243 | hi244 | hi245 | hi246 | hi247 | hi248 | hi249 | hi250 | hi251 | hi252 | hi253 | hi254 | hi255 | hi256 | hi257 | hi258 | hi259 | hi260 | hi261 | hi262 | hi263 | hi264 | hi265 | hi266 | hi267 | hi269 | hi270 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 1     | 20    | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 100   | 0     | 0     |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 1     | 13    | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 100   | 0     | 0     |   |
| 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 2     |       | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 20    | 50    | 30    |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 2     |       | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 100   | 0     | 0     |       |   |
| 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 1     | 10    | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 100   | 0     | 0 |
| 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 2     |       | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 4     | 0     | 0     | 100   |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 2     |       | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 40    | 50    | 10    |       |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 2     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 100   | 0     | 0     |   |
| 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 3     | 2     |       | 4     | 5     | 4     | 3     | 3     | 5     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 3     | 100   | 0     | 0     |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 2     |       | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 100   | 0     | 0     |       |   |
| 4     | 3     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 2     |       | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 0     | 0     | 100   |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 2     |       | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 100   | 0     | 0     |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 2     |       | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 100   | 0     | 0     |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 1     | 21    | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 100   | 0     | 0     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 2     |       | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 100   | 0     | 0     |   |
| 5     | 5     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 5     |       |       | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 5     | 0     | 0     | 100   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 2     |       | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 8     | 50    | 42    |       |   |
| 3     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 2     |       | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 47.5  | 0     | 52.5  |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 1     | 10    | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 20    | 40    | 40    |   |
| 3     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 2     |       | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 0     | 0     | 100   |       |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 2     |       | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 100   | 0     | 0     |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     |       |       | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 0     | 0     | 100   |   |
| 4     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 1     | 40    | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 60    | 20    | 20    |       |   |
| 4     | 4     | 3     | 2     | 3     | 5     | 2     | 4     | 3     | 4     | 2     |       | 3     | 2     | 3     | 4     | 5     | 4     | 3     | 2     | 1     | 3     | 3     | 4     | 4     | 0     | 0     | 100   |       |   |
| 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 1     | 20    | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 40    | 30    | 30    |       |   |
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 2     |       | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 60    | 30    | 10    |       |   |
| 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 1     | 10    | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 50    | 20    | 30    |       |   |
| 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 1     |       | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 30    | 30    | 40    |   |
| 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 1     | 10    | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 23    | 30    | 50    |   |
| 3     | 4     | 3     | 4     | 2     | 4     | 3     | 2     | 3     | 4     |       |       | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 40    | 30    | 30    |   |
| 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 2     | 2     |       |       | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 3     | 2     | 4     | 75    | 25    | 0     |   |
| 5     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 1     | 20    | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 60    | 20    | 20    |       |   |
| 4     | 5     | 5     | 4     | 5     | 3     | 4     | 4     | 3     | 4     |       |       | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 100   | 0     | 0     |       |   |
| 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 1     | 20    | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 20    | 20    | 60    |   |
| 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 1     | 10    | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 0     | 30    | 70    |   |
| 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     |       |       | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 30    | 20    | 50    |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 2     |       | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 0     | 0     | 100   |       |   |
| 5     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 1     | 10    | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 40    | 10    | 50    |       |   |
| 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 1     | 23    | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 0     | 0     | 100   |   |
| 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 1     | 10    | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 50    | 20    | 30    |       |   |
| 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 2     |       | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 0     | 0     | 100   |       |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 1     | 10    | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 20    | 0     | 80    |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 1     | 15    | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 10    | 20    | 25    |       |   |
| 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 1     | 10    | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 10    | 10    | 80    |       |   |
| 4     | 4     | 5     | 3     | 4     | 5     | 4     | 5     | 4     | 1     | 20    | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 3     | 100   | 0     | 0     |   |
| 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 1     | 30    | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 20    | 30    | 50    |       |   |
| 3     | 3     | 4     | 4     | 5     | 3     | 2     | 3     | 2     | 3     |       |       | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 2     | 4     | 4     | 3     | 4     | 100   | 0     | 0     |       |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 1     | 20    | 3     | 2     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 4     | 40    | 40    | 20    | 40    |   |
| 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 1     | 30    | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 40    | 50    | 10    |       |   |
| 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 1     | 15    | 3     | 4     | 3     | 4     | 5     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 60    | 40    | 0     |       |   |
| 4     | 5     | 5     | 5     | 5     | 4     | 5     | 4     | 5     | 1     | 18    | 4     | 4     | 5     | 5     | 5     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 60    | 40    | 0     |       |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 1     | 18    | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 100   | 0     | 0     |       |   |
| 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 1     | 15    | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 5     | 4     | 100   | 0     | 0     |       |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 1     | 35    | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 100   | 0     | 0     |       |   |
| 3     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 1     | 20    | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 100   | 0     | 0     |       |   |
| 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 3     | 1     | 10    | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 100   | 0     | 0     |       |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 1     | 11    | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 100   | 0     | 0     |       |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 1     | 10    | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 100   | 0     | 0     |       |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 1     | 20    | 5     | 5     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 100   | 0     | 0     |       |   |
| 4     | 3     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 1     | 13    | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 0     | 0     | 100   |       |   |
| 5     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 1     | 15    | 5     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 5     | 3     | 3     | 3     | 100   | 0     | 0     |       |   |
| 3     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 1     | 15    | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 100   | 0     | 0     |   |
| 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     |       | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 100   | 0     | 0     |       |   |
| 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 1     | 25    | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 3     | 60    | 0     | 40    |       |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 1     | 20    | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 0     | 0     | 100   |       |   |
| 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 1     | 20    | 4     | 5     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 100   | 0     | 0     |       |   |
| 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 2     |       | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 0     | 54.55 | 45.55 |       |   |
| 5     | 5     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 1     | 20    | 3     | 4     | 4     | 4     | 4     | 3     | 3     |       |       |       |       |       |       |       |       |       |       |       |   |

Appendix 2 Database: Company 161 – Company 240

| hi271 | hi272   | hi273 | hi274 | hi275 | hi276 | hi277       | hi278 | hi279       | hi280  | hi281 | hi282 | hi283 | hi284 | hi285           | hi286       | hi287  | hi288 | hi289 | hi290 |
|-------|---------|-------|-------|-------|-------|-------------|-------|-------------|--------|-------|-------|-------|-------|-----------------|-------------|--------|-------|-------|-------|
| 0     | 50000   | 9     | 2004  | 6     | 11    | 4000000000  | 11    | 27800000000 |        |       |       | 2004  | 6     | France          | 16500000000 | 9000   | 82    | 76    | 24    |
| 0     | 301537  | 9     | 2004  | 17    | 20    | 1.712E+12   | 11    | 1.1E+11     | 22.61  |       |       | 2005  | 6     | UK              | 15100000    | 35018  | 72    | 72    | 28    |
| 0     | 110000  | 9     | 1987  | 14    | 14    | 6340021300  | 7     | 1585000000  |        |       |       | 2000  | 5     | Germany         | 2113300000  | 5000   | 89    | 71    | 29    |
| 0     | 1700000 | 9     | 2009  | 17    | 20    | 1.85E+11    | 11    | 1.32E+12    | 20.46  |       |       | 2002  | 6     | UK              | 1E+11       | 20000  | 80    | 80    | 20    |
| 0     | 100000  | 9     | 1999  | 17    | 20    | 3E+11       | 11    | 600000000   | 2.3    |       |       | 2007  | 7     | Singapore       | 10000000    | 4000   | 90    | 88    | 12    |
| 0     | 50000   | 9     | 1987  | 17    | 13    | 867000000   | 1     | 5567000000  | 0.52   | 81.39 |       | 2006  | 7     | America         | 3000000000  | 20000  | 15    | 25    | 30    |
| 0     | 26000   | 9     | 1988  | 14    | 16    | 12000000000 | 11    | 10000000000 | 35     | 2.2   |       | 2005  | 6     | America         | 5000000     | 1000   | 70    | 70    | 30    |
| 0     | 230000  | 9     | 2007  | 16    | 5     | 55763375796 | 11    | 676114649   | 35.7   |       |       | 2007  | 7     | Antigua Barbuda | 10000000000 | 3      | 80    | 85    | 15    |
| 0     | 90000   | 9     | 1952  | 16    | 5     | 780000000   | 1     | 4810000000  | 4.8    | 31.77 | 1.7   | 2005  | 6     | Singapore       | 80000000    | 13000  | 40    | 65    | 35    |
| 0     | 100000  | 9     | 1912  | 17    | 20    | 1.4256E+12  | 11    | 4.5E+11     | 20     | -0.4  |       | 1978  | 1     | Australia       |             | 30000  | 58    | 58    | 42    |
| 0     | 16000   | 8     | 1993  | 16    | 5     | 2056000000  | 11    | 7622000000  | 23.8   | 18.7  |       | 1993  | 4     | America         |             | 50000  | 30    | 60    | 10    |
| 0     | 293     | 3     | 1950  | 16    | 5     | 6199140273  | 7     | 1192356687  | 8.7    |       |       | 1997  | 5     | Spain           | 1000000000  | 50000  | 90    | 95    | 5     |
| 0     | 58000   | 9     | 1919  | 17    | 13    | 23000000000 | 11    | 5300000000  |        |       |       | 1959  | 1     | America         | 15000000000 | 20000  | 85    | 74    | 26    |
| 0     | 5714    | 7     | 1994  | 17    | 20    | 81716976    | 1     | 40000000    | 15     | 61.2  |       | 1998  | 5     | Singapore       | 70000000    | 2000   | 70    | 80    | 20    |
| 0     | 60000   | 9     | 1997  | 14    | 16    | 4789000000  | 5     | 3327000000  | 0.4    | 15    | 2     | 2005  | 6     | Singapore       | 50000000    | 400    | 60    | 70    | 30    |
| 0     | 1000000 | 9     | 1949  | 4     | 6     | 1.56E+11    | 11    | 68300000000 |        |       |       | 1980  | 1     | Japan           | 70000000000 | 20000  | 85    | 65    | 35    |
| 0     | 1000000 | 9     | 1974  | 6     | 11    | 4376000000  | 5     | 1606000000  | 7.01   | 29.02 | 4     | 2004  | 6     | India           | 150000000   | 3000   | 55    | 60    | 40    |
| 0     | 70000   | 9     | 1985  | 14    | 16    | 86200000000 | 11    | 21500000000 |        |       |       | 1985  | 2     | Netherlands     | 40200000000 | 35000  | 85    | 70    | 30    |
| 0     | 40000   | 9     | 1970  | 6     | 11    | 2737000000  | 3     | 1306000000  | 12.05  | 19.15 |       | 2003  | 6     | Japan           | 50000000    | 4000   | 30    | 50    | 50    |
| 0     | 24431   | 8     | 2002  | 17    | 20    | 4000000000  | 5     | 2000000000  |        |       |       | 2002  | 6     | South Korea     | 6000000     | 1000   | 60    | 60    | 40    |
| 0     | 25000   | 9     | 1999  | 17    | 20    | 2000000000  | 3     | 900000000   | 7      |       |       | 2004  | 6     | Japan           | 1000000     | 3000   | 60    | 60    | 40    |
| 0     | 15000   | 8     | 1993  | 14    | 16    | 36770000    | 1     | 50230000    |        |       |       | 2002  | 6     | Sweden          | 5050000     | 2012   | 80    | 80    | 20    |
| 0     | 11800   | 8     | 1994  | 10    | 9     | 1105000000  | 2     | 463000000   | 24     |       |       | 2004  | 6     | Paraguay        | 10000000    | 1500   | 95    | 95    | 5     |
| 0     | 11583   | 8     | 2000  | 14    | 16    | 6499000000  | 7     | 8125000000  | 48.9   |       |       | 2004  | 6     | India           | 875000000   | 1500   | 50    | 80    | 20    |
| 0     | 20000   | 8     | 1992  | 14    | 14    | 15400000000 | 11    | 5600000000  |        |       |       | 2003  | 6     | Italy           | 7000000000  | 6000   | 88    | 71    | 29    |
| 0     | 2900    | 6     | 1995  | 16    | 5     | 4003400000  | 5     | 7466000000  | 4      |       |       | 2002  | 6     | Australia       | 2388000000  | 500    | 80    | 80    | 20    |
| 0     | 22000   | 8     | 1988  | 14    | 16    | 1694000000  | 2     | 600000000   | 5      |       |       | 2000  | 5     | Malaysia        | 500000000   | 2000   | 90    | 90    | 10    |
| 0     | 34020   | 9     | 1998  | 17    | 20    | 16903000000 | 11    | 24668000000 |        |       |       | 2001  | 6     | Spain           | 4860000000  | 7058   | 82    | 82    | 18    |
| 0     | 200000  | 9     | 1994  | 17    | 20    | 11032000000 | 11    | 10034000000 | 12     |       |       | 2004  | 6     | Japan           | 2000000000  | 70000  | 80    | 80    | 20    |
| 0     | 53000   | 9     | 1994  | 17    | 20    | 12000000000 | 11    | 7800000000  | 15.5   |       |       | 2008  | 7     | Singapore       | 2300000000  | 350    | 60    | 60    | 40    |
| 0     | 11461   | 8     | 1991  | 17    | 20    | 95947000000 | 11    | 7239000000  |        |       |       | 2004  | 6     | Japan           | 2587000000  | 1089   | 80    | 80    | 20    |
| 0     | 120000  | 9     | 1958  | 5     | 13    | 54540000000 | 11    | 6121000000  | 0.84   | 28.32 | 6     | 2010  | 7     | Malaysia        | 7800000000  | 500    | 70    | 90    | 10    |
| 0     | 4497    | 6     | 1998  | 17    | 20    | 6311000000  | 7     | 5233000000  |        |       |       | 2005  | 6     | South Korea     | 825000000   | 482    | 90    | 90    | 10    |
| 0     | 2426    | 6     | 1990  | 17    | 20    | 1686674433  | 2     | 838770800   | 72.2   | 80    |       | 1994  | 4     | Thailand        | 7000000     | 600    | 70    | 80    | 20    |
| 0     | 5048    | 7     | 1958  | 14    | 14    | 6595000000  | 7     | 13428000000 |        |       |       | 2002  | 6     | Russia          | 4668000000  | 617    | 70    | 70    | 30    |
| 0     | 13000   | 8     | 1988  | 17    | 20    | 1.72503E+11 | 11    | 5686920000  | -28.72 | -15   |       | 2004  | 6     | UK              | 10000000    | 2000   | 83    | 78    | 22    |
| 0     | 3397    | 6     | 1993  | 17    | 20    | 12157000000 | 11    | 6014000000  | 7.5    |       |       | 2002  | 6     | Sweden          | 1899000000  | 482    | 80    | 80    | 20    |
| 0     | 17000   | 8     | 1991  | 17    | 20    | 9901959000  | 10    | 131347266   | -30.85 | 15.38 |       | 2009  | 7     | Vietnam         | 1274660000  | 5000   | 89    | 83    | 17    |
| 0     | 9381    | 7     | 1958  | 17    | 20    | 5479000000  | 6     | 5000000000  |        |       |       | 2006  | 7     | Italy           | 479000000   | 300    | 80    | 80    | 20    |
| 0     | 1750    | 6     | 2000  | 17    | 20    | 2814114000  | 3     | 802539780   | 45.48  | 63    |       | 2004  | 6     | America         |             | 2000   | 85    | 89    | 11    |
| 0     | 1262    | 6     | 1999  | 17    | 20    | 3393000000  | 4     | 5012000000  |        |       |       | 2002  | 6     | Sweden          | 860000000   | 128    | 80    | 80    | 20    |
| 45    | 38000   | 9     | 2002  | 14    | 14    | 3447400000  | 4     | 915907739   |        |       |       | 2007  | 7     | Russia          | 280000000   | 177    | 82    | 78    | 22    |
| 0     | 18485   | 6     | 1994  | 14    | 14    | 50086000000 | 11    | 20816000000 |        |       |       | 2005  | 6     | Malaysia        | 4890000000  | 5100   | 80    | 80    | 20    |
| 0     | 28002   | 9     | 1999  | 17    | 20    | 9200000000  | 10    | 5000000000  | 28.4   | 3.5   |       | 2008  | 7     | Belgium         | 40000000    | 4000   | 60    | 60    | 40    |
| 0     | 9046    | 7     | 1998  | 17    | 20    | 12737000000 | 11    | 9001000000  | 25.8   |       |       | 2004  | 6     | Germany         | 523000000   | 233    | 80    | 80    | 20    |
| 0     | 39458   | 9     | 2005  | 17    | 20    | 30000000000 | 11    | 11000000000 | 30     |       |       | 2005  | 6     | Singapore       | 4000000000  | 20000  | 50    | 50    | 50    |
| 0     | 8846    | 7     | 1988  | 17    | 20    | 1.15413E+11 | 11    | 6833000000  |        |       |       | 2002  | 6     | America         | 1233000000  | 822    | 80    | 80    | 20    |
| 0     | 9435    | 7     | 2002  | 17    | 20    | 17921000000 | 11    | 5130000000  |        |       |       | 2005  | 6     | Iran            | 420000000   | 1200   | 80    | 80    | 20    |
| 0     | 30000   | 9     | 2002  | 10    | 9     | 2100000000  | 3     | 1000000000  | 23     | 45    |       | 2010  | 7     | Japan           | 70000000    | 3000   | 57    | 57    | 43    |
| 0     | 10000   | 8     | 1984  | 17    | 20    | 2000000000  | 3     | 1300000000  | 74.9   | 18.8  | 11.7  | 1997  | 5     | Australia       | 98000000    | 450    | 55    | 50    | 50    |
| 0     | 3365    | 6     | 1980  | 14    | 14    | 1700000000  | 2     | 2500000000  |        | 9.72  |       | 2007  | 7     | UAE             | 1500000000  | 1275   | 67    | 57    | 43    |
| 0     | 16027   | 8     | 1990  | 4     | 6     | 2100000000  | 3     | 2800000000  | 2.1    | -24.6 | 2.9   | 2000  | 5     | Chile           | 180000000   | 6000   | 75    | 47    | 53    |
| 0     | 60000   | 9     | 1997  | 17    | 20    | 19500000000 | 11    | 6100000000  | 20     | 3     | 20    | 2012  | 8     | Russia          | 300000000   | 1000   | 30    | 30    | 70    |
| 0     | 1016    | 6     | 1984  | 17    | 20    | 900000000   | 1     | 1000000000  | 3.2    | 3.1   | 3.7   | 1988  | 3     | Cuba            | 300000000   | 370    | 65    | 55    | 45    |
| 0     | 1400    | 6     | 2005  | 17    | 20    | 40000000    | 1     | 1900000000  | 25.5   | 37.8  | 61    | 2009  | 7     | Germany         | 25000000    | 102    | 37    | 75    | 25    |
| 0     | 1000    | 6     | 1983  | 17    | 20    | 14500000000 | 11    | 1300000000  |        |       |       | 2008  | 7     | Zambia          | 2000000000  | 470    | 85    | 75    | 25    |
| 0     | 30000   | 9     | 1980  | 12    | 5     | 6276000000  | 7     | 2193462000  |        |       |       | 2010  | 7     | South Africa    | 1000000000  | 8000   | 75    | 81    | 19    |
| 0     | 10524   | 8     | 1998  | 17    | 20    | 1400000000  | 2     | 8500000000  | 8.2    | 8.1   | 2.7   | 2000  | 6     | Philippines     | 2500000000  | 6400   | 65    | 50    | 50    |
| 0     | 30000   | 9     | 1998  | 17    | 20    | 1532800000  | 2     | 1032800000  | 20     | 28    | 20    | 2005  | 6     | Thailand        | 105040      | 5000   | 95    | 90    | 10    |
| 0     | 9424    | 7     | 2004  | 17    | 20    | 4500000000  | 5     | 1700000000  | 101.4  |       | 0.8   | 2007  | 7     | America         | 100000000   | 3575   | 60    | 45    | 55    |
| 0     | 10700   | 8     | 2000  | 14    | 14    | 21276670000 | 11    | 1339210000  |        |       |       | 2010  | 7     | Ukraine         | 1500000     | 2000   | 80    | 73    | 27    |
| 0     | 33552   | 9     | 1987  | 17    | 20    | 2.08131E+13 | 11    | 34133790000 | 50.2   | 40    |       | 2006  | 7     | Spain           | 20000000000 | 5000   | 90    | 86    | 14    |
| 0     | 490000  | 9     | 1958  | 17    | 20    | 2.71E+11    | 11    | 2E+11       | -41    | -22   |       | 2010  | 7     | Liberia         | 6000        | 78     | 85    | 15    | 5     |
| 0     | 15476   | 8     | 1995  | 17    | 20    | 2.8458E+12  | 11    | 3103044904  | 3      | 10    |       | 1998  | 5     | America         | 1000000000  | 100    | 93    | 91    | 9     |
| 0     | 130000  | 9     | 1953  | 17    | 20    | 2709250000  | 3     | 20000000000 | 4      | 20    |       | 1991  | 4     | Germany         | 5000000000  | 31000  | 90    | 95    | 5     |
| 0     | 50000   | 9     | 1996  | 17    | 20    | 40473600000 | 11    | 149978652   | -50    | -15   |       | 2009  | 7     | Nigeria         | 150000000   | 10000  | 90    | 88    | 12    |
| 0     | 10000   | 8     | 1994  | 14    | 16    | 700000000   | 1     | 900000000   | 30.3   | 7.2   | 10.3  | 2000  | 5     | Vietnam         | 1200000     | 1300   | 90    | 88    | 12    |
| 0     | 150000  | 9     | 1991  | 14    | 16    | 22500000000 | 11    | 13000000000 |        |       |       | 1999  | 5     | Brazil          | 5600000000  | 36000  | 75    | 62    | 38    |
| 0     | 300000  | 9     | 1999  | 17    | 20    | 50000000000 | 11    | 20000000000 |        |       |       | 1999  | 5     | Germany         | 21000000000 | 120000 | 88    | 60    | 40    |
| 0     | 400000  | 9     | 2008  | 17    | 20    | 82600000000 | 11    | 20400000000 |        |       |       | 2008  | 7     | France          |             | 230000 | 75    | 72    | 28    |
| 0     | 312520  | 9     | 2002  | 17    | 20    | 85400000000 | 11    | 39500000000 |        |       |       | 2002  | 6     | America         | 24500000000 | 52143  | 76    | 85    | 15    |
| 0     | 24459   | 8     | 2002  | 17    | 20    | 26000000000 | 11    | 8000000000  | 42.8   | 15.1  |       | 2009  | 7     | UK              | 2000000000  | 4      |       |       |       |

Appendix 2 Database: Company 161 – Company 240

| hi291 | hi292 | hi293 | hi294 | hi295 | hi296 | hi298 | hi299 | hi300 | hi301 | hi302 | hi303 | hi304 | hi305 | hi306 | hi307 | hi308 | hi309           | hi311 | hi312 | hi313 | hi314 | hi315 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|
| 10    |       | 1     |       |       | 1     |       | 2     |       | 1     |       | 1     | 1     | 1     |       |       |       | Chinese         | 1     | 2     | 10    | 7     | 8     |
|       | 1     |       |       |       | 1     |       | 2     |       | 1     |       | 1     | 1     | 1     |       |       |       | Chinese         | 1     | 2     | 7     | 7     | 8     |
| 10    |       | 1     |       |       | 1     |       | 1     |       | 1     |       | 1     | 1     | 1     |       |       |       | Chinese         | 2     | 1     | 8     | 6     | 20    |
| 20    | 1     |       |       |       | 1     |       | 1     | 1     |       | 1     | 1     |       |       |       |       |       | Chinese         | 1     | 4     | 3     | 6     | 1     |
| 20    |       | 1     |       |       | 1     |       | 1     |       |       | 1     | 1     | 1     |       |       |       |       | Chinese         | 1     | 1     | 9     | 6     | 1     |
| 30    |       | 1     |       |       | 1     |       | 2     |       |       | 1     |       | 1     |       |       |       |       | Chinese         | 1     | 1     | 9     | 5     | 7     |
| 30    | 1     |       |       |       | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       |       |       | Chinese         | 1     | 3     | 4     | 6     | 7     |
| 10    | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     | 1     | 1     | 1     |       |       |       | Antigua Barbuda | 1     | 3     | 7     | 6     | 13    |
| 7.3   | 1     |       |       |       | 1     |       | 1     | 1     |       | 1     | 1     |       | 1     |       |       |       | Chinese         | 1     | 1     | 7     | 6     | 15    |
| 19.87 | 1     |       |       |       | 1     |       | 2     |       |       | 1     | 1     |       | 1     |       |       |       | Australian      | 1     | 3     | 8     | 7     | 32    |
| 15    |       | 1     |       |       | 1     |       | 2     | 1     | 1     | 1     | 1     | 1     |       |       |       |       | Chinese         | 1     | 1     | 8     | 5     | 7     |
| 23    |       | 1     |       |       | 1     |       | 2     |       |       | 1     | 1     | 1     | 1     |       |       |       | Spanish         | 1     | 1     | 8     | 6     | 30    |
| 20    |       | 1     |       |       | 1     |       | 1     |       | 1     |       | 1     |       |       |       | 1     |       | Chinese         | 1     | 2     | 8     | 7     | 30    |
| 7     |       | 1     |       |       | 1     |       | 1     | 1     |       | 1     |       |       |       |       |       |       | Chinese         | 1     | 1     | 10    | 6     | 18    |
| 8     | 1     |       |       |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       |       | Chinese         | 1     | 4     | 7     | 7     | 15    |
| 10    |       | 1     |       |       | 1     |       | 1     |       | 1     |       | 1     |       |       | 1     |       |       | Chinese         | 1     | 1     | 8     | 6     | 45    |
| 5.8   | 1     |       |       |       | 1     |       | 1     | 1     | 1     | 1     |       |       |       | 1     |       |       | Chinese         | 1     | 4     | 8     | 4     | 22    |
| 10    |       | 1     |       |       | 1     |       | 1     |       | 1     | 1     |       | 1     |       |       |       |       | Chinese         | 1     | 1     | 10    | 6     | 27    |
| 40    | 1     |       |       |       | 1     |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       | Chinese         | 1     | 1     | 7     | 6     | 10    |
| 30    |       |       | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       |       |       | 1     |       | Chinese         | 1     | 2     | 9     | 6     | 10    |
| 50    | 1     |       |       |       | 1     |       | 2     |       |       | 1     |       | 1     |       |       |       |       | Chinese         | 1     | 1     | 7     | 5     | 13    |
| 10    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Swedish         | 1     | 2     | 7     | 5     | 3     |
| 20    |       | 1     |       |       | 1     |       | 2     | 1     |       | 1     |       |       |       |       |       |       | Paraguay        | 1     | 2     | 5     | 5     | 8     |
| 15    |       | 1     |       |       | 1     |       | 1     |       |       |       | 1     | 1     | 1     |       |       |       | Indian          | 1     | 2     | 4     | 6     | 7     |
| 24    |       |       | 1     |       | 1     |       | 1     |       |       | 1     | 1     |       | 1     |       |       |       | Chinese         | 1     | 1     | 9     | 7     | 18    |
| 10    |       | 1     |       |       | 1     |       | 1     |       |       | 1     | 1     | 1     |       |       |       |       | Chinese         | 1     | 3     | 5     | 5     | 8     |
| 12    | 1     |       |       |       | 1     |       | 1     |       | 1     |       |       |       | 1     | 1     |       |       | Malaysian       | 1     | 1     | 7     | 6     | 11    |
| 20    | 1     |       |       |       | 1     |       | 1     |       | 1     |       | 1     | 1     |       |       |       |       | Chinese         | 1     | 3     | 4     | 5     | 8     |
| 11    | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       | 1     | 1     | 1     | 1     |       | Japanese        | 1     | 1     | 8     | 6     | 30    |
| 20    | 1     |       |       |       | 1     |       | 1     |       |       | 1     |       | 1     |       | 1     |       |       | Chinese         | 1     | 2     | 8     | 6     | 5     |
| 15    |       | 1     |       |       | 1     |       | 1     | 1     |       |       | 1     | 1     |       |       | 1     |       | Japanese        | 1     | 3     | 5     | 5     | 4     |
| 7     |       | 1     |       |       | 1     |       | 1     | 1     |       |       | 1     | 1     | 1     |       |       |       | Chinese         | 1     | 4     | 7     | 6     | 20    |
| 15    | 1     |       |       |       | 1     |       | 1     | 1     |       |       | 1     | 1     |       |       |       |       | South Korean    | 1     | 3     | 4     | 5     | 4     |
| 5.3   |       |       | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       | 1     | 1     |       |       | Chinese         | 1     | 1     | 7     | 6     | 80    |
| 12    |       | 1     |       |       | 1     |       | 2     |       | 1     | 1     |       |       | 1     | 1     |       |       | Chinese         | 2     | 2     | 5     | 5     | 4     |
|       | 1     |       |       |       | 1     |       | 1     |       | 1     |       | 1     | 1     |       |       |       |       | Chinese         | 1     | 1     | 7     | 5     | 20    |
| 20    | 1     |       |       |       | 1     |       | 1     | 1     |       | 1     |       |       | 1     |       |       |       | Swedish         | 1     | 1     | 6     | 6     | 12    |
| 6.3   |       | 1     |       |       | 1     |       | 1     | 1     |       | 1     | 1     |       |       |       |       |       | Chinese         | 1     | 1     | 7     | 6     | 20    |
| 10    |       | 1     |       |       | 1     |       | 1     |       | 1     | 1     |       |       | 1     |       |       |       | Italian         | 1     | 3     | 4     | 5     | 3     |
| 3.8   |       | 1     |       |       | 1     |       | 2     |       | 1     |       | 1     |       | 1     |       |       |       | Chinese         | 1     | 1     | 10    | 6     | 10    |
| 15    | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     |       | 1     |       |       |       |       | Swedish         | 1     | 3     | 4     | 5     | 4     |
| 5     |       | 1     |       |       | 1     |       |       |       |       |       | 1     | 1     |       |       |       |       | Russian         | 1     | 3     | 8     | 6     | 25    |
| 15    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Malaysian       | 1     | 2     | 7     | 5     | 10    |
| 8     | 1     |       |       |       | 1     |       | 1     | 1     |       | 1     |       |       |       |       | 1     |       | Chinese         | 1     | 2     | 8     | 6     | 13    |
| 10    | 1     |       |       |       | 1     |       | 1     | 1     |       | 1     |       | 1     |       |       |       |       | Chinese         | 1     | 3     | 4     | 4     | 8     |
| 21.8  |       | 1     |       |       | 1     |       | 1     |       |       |       |       | 1     | 1     |       |       |       | Chinese         | 1     | 2     | 6     | 6     | 7     |
| 10    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Chinese         | 1     | 3     | 5     | 6     | 4     |
| 5     |       | 1     |       |       | 1     |       | 1     | 1     |       | 1     | 1     | 1     |       |       |       |       | Iranian         | 1     | 3     | 4     | 5     | 3     |
| 8     | 1     |       |       |       | 1     |       | 1     |       | 1     |       | 1     |       |       |       | 1     |       | Chinese         | 1     | 2     | 5     | 7     | 7     |
| 22    | 1     |       |       |       | 1     |       | 1     | 1     |       | 1     |       | 1     |       |       |       |       | New Zealander   | 1     | 3     | 7     | 5     | 5     |
| 15    | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       | 1     | 1     |       |       |       | Chinese         | 1     | 2     | 4     | 6     | 4     |
| 65    | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     |       | 1     |       |       |       |       | Chinese         | 2     | 3     | 7     | 5     | 10    |
| 3     | 1     |       |       |       | 1     |       | 1     | 1     |       | 1     |       | 1     |       |       |       |       | Chinese         | 1     | 2     | 8     | 6     | 20    |
| 25    | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       | 1     |       |       | 1     |       | Japanese        | 1     | 3     | 7     | 5     | 21    |
| 30    | 1     |       |       |       | 1     |       | 2     |       | 1     |       | 1     | 1     |       |       | 1     |       | American        | 1     | 1     | 7     | 6     | 22    |
| 7.8   |       | 1     |       |       | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       | Chinese         | 1     | 2     | 9     | 6     | 25    |
| 4.2   |       | 1     |       |       | 1     |       | 1     | 1     |       | 1     |       | 1     |       |       |       |       | South African   | 1     | 1     | 8     | 6     | 31    |
| 20    | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       | 1     | 1     | 1     |       |       | Chinese         | 1     | 4     | 6     | 5     | 10    |
| 7     | 1     |       |       |       | 1     |       | 1     | 1     |       | 1     |       |       |       |       |       |       | Chinese         | 1     | 1     | 7     | 6     | 14    |
| 20    | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       | 1     | 1     |       | 1     |       | Chinese         | 2     | 1     | 7     | 7     | 1     |
| 3.9   |       |       | 1     |       | 1     |       | 2     |       |       |       |       |       | 1     | 1     |       |       | Ukrainian       | 1     | 2     | 8     | 6     | 30    |
| 7     | 1     |       |       |       | 1     |       | 2     |       |       | 1     |       | 1     | 1     |       | 1     |       | Chinese         | 1     | 2     | 8     | 7     | 20    |
| 1     |       |       |       |       | 1     |       | 1     |       |       |       |       |       | 1     |       |       |       | Chinese         | 1     | 2     | 10    | 6     | 37    |
| 6.7   |       |       | 1     |       | 1     |       | 1     | 1     |       | 1     | 1     |       | 1     |       |       |       | Chinese         | 1     | 1     | 9     | 6     | 16    |
| 10    | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       |       |       |       | 1     |       | German          | 1     | 1     | 9     | 6     | 37    |
| 3     |       | 1     |       |       | 1     |       | 2     |       |       | 1     | 1     | 1     | 1     |       |       |       | Chinese         | 1     | 1     | 7     | 6     | 15    |
| 25    | 1     |       |       |       | 1     |       | 1     | 1     |       |       |       | 1     | 1     | 1     |       |       | Chinese         | 2     | 3     | 5     | 5     | 8     |
| 15.4  | 1     |       |       |       | 1     |       |       |       |       | 1     | 1     | 1     | 1     |       |       |       | Chinese         | 2     | 1     | 9     | 6     | 20    |
| 20    |       | 1     |       |       | 1     |       | 1     |       |       | 1     |       | 1     | 1     |       |       |       | Chinese         | 1     | 1     | 7     | 7     | 13    |
| 6.9   |       |       | 1     |       | 1     |       | 1     |       |       |       | 1     | 1     | 1     |       |       |       | Chinese         | 1     | 1     | 8     | 7     | 4     |
| 10.2  |       |       | 1     |       | 1     |       | 1     |       |       | 1     | 1     | 1     | 1     |       | 1     |       | Chinese         | 1     | 1     | 8     | 7     | 10    |
| 40    |       |       | 1     |       | 1     |       | 2     |       |       |       | 1     | 1     |       |       | 1     |       | Chinese         | 1     | 2     | 9     | 7     | 5     |
| 7.6   | 1     |       |       |       | 1     |       | 1     |       |       | 1     | 1     | 1     |       |       |       |       | Chinese         | 1     | 2     | 7     | 7     | 30    |
| 40    | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       | 1     |       |       |       |       | South Korean    | 1     | 2     | 8     | 5     | 20    |
| 9.5   |       | 1     |       |       | 1     |       | 1     |       |       | 1     |       |       | 1     |       | 1     |       | Chinese         | 1     | 3     | 5     | 5     | 7     |
| 10    | 1     |       |       |       | 1     |       | 1     |       |       | 1     |       | 1     |       |       |       |       | Japanese        | 1     | 2     | 5     | 5     | 4     |
| 3.2   | 1     |       |       |       | 1     |       | 2     |       |       |       | 1     | 1     |       |       |       |       | Chinese         | 1     | 3     | 5     | 5     | 5     |
| 14.2  |       | 1     |       |       | 1     |       | 1     |       |       | 1     | 1     | 1     | 1     |       |       |       | Chinese         | 1     | 2     | 10    | 7     | 14    |
| 9.8   |       | 1     |       |       | 1     |       | 2     |       | 1     |       |       | 1     |       |       | 1     |       | Chinese         | 1     | 1     | 7     | 7     | 30    |
| 38    |       |       | 1     |       | 1     |       | 1     |       |       |       |       | 1     | 1     |       | 1     |       | Chinese         | 2     | 3     | 8     | 6     | 13    |

Appendix 2 Database: Company 161 – Company 240

| hi316 | hi317 | hi318 | hi319       | hi320 | hi321 | hi322       | hi323 | hi324 | hi325       | hi326 | hi327  | hi329 | hi330 | hi331 | hi332 | hi333 | hi334 | hi335 |
|-------|-------|-------|-------------|-------|-------|-------------|-------|-------|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 8     | 4     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 1     | 2     | 1     | 1     | 2     |
| 6     | 12    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 2     | 1     | 2     | 1     | 2     |
| 20    | 7     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 2     | 2     | 1     | 1     | 2     |
| 1     | 1     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 2     | 1     | 1     | 1     |
| 1     | 5     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 2     | 1     | 2     | 2     | 2     | 1     | 2     |
| 5     | 5     | 3     | Netherlands | 1     | 5     | Netherlands | 1     | 0     |             | 2     | fluent | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 3     | 5     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 1     | 1     | 1     | 2     |
| 5     | 5     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 1     | 1     | 1     | 2     | 2     |
| 12    | 7     |       |             | 2     |       |             | 2     | 0     |             | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 8     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 1     | 1     | 1     | 2     | 2     |
| 6     | 6     |       |             | 2     |       |             | 2     | 0     |             | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 5     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 2     | 1     | 1     | 1     |
| 9     | 9     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 1     | 1     | 1     | 2     | 2     |
| 16    | 1     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 2     | 1     | 2     | 2     | 1     | 1     | 1     |
| 15    | 6     | 6     | America     | 1     | 6     | America     | 1     | 1     | America     | 1     | fluent | 1     | 1     | 1     | 1     | 2     | 1     | 1     |
| 45    | 25    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 1     | 2     | 2     | 2     | 1     |
| 8     | 6     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 1     | 1     | 2     | 1     | 1     |
| 27    | 25    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 2     | 2     | 2     | 1     | 2     |
| 8     | 7     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 8     | 20    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 1     | 1     | 2     | 2     | 1     |
| 13    | 18    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 2     | 2     | 2     | 2     | 1     | 1     | 2     |
| 2     | 3     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 2     | 1     | 1     | 1     | 2     |
| 6     | 4     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 2     | 1     | 1     | 1     |
| 2     | 3     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 1     | 2     | 2     | 1     |
| 15    | 7     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 2     | 2     | 1     | 1     | 1     | 1     | 2     |
| 7     | 3     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 1     | 1     | 2     | 1     | 2     |
| 11    | 10    |       |             | 2     |       |             | 2     | 0     |             | 2     |        | 2     | 1     | 2     | 2     | 2     | 1     | 1     |
| 7     | 6     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 1     | 2     | 1     | 1     | 2     |
| 30    | 8     |       |             | 2     |       |             | 2     | 0     |             | 2     |        | 1     | 2     | 1     | 1     | 2     | 1     | 1     |
| 3     | 5     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 1     | 2     | 2     | 2     | 1     |
| 3     | 4     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 1     | 1     | 2     | 2     | 1     |
| 8     | 4     |       |             | 2     |       |             | 2     | 0     |             | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 4     |       |             | 2     |       |             | 2     | 1     | South Korea | 1     | basic  | 1     | 2     | 1     | 1     | 2     | 2     | 1     |
| 17    | 1     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 2     | 1     | 1     | 2     |
| 3     | 4     | 3     | Russia      | 1     | 3     | Russia      | 1     | 0     |             | 2     | basic  | 1     | 1     | 2     | 2     | 1     | 2     | 1     |
| 15    | 8     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 2     | 2     | 1     | 1     | 2     | 2     | 1     |
| 8     | 8     |       |             | 2     |       |             | 2     | 0     |             | 2     | fluent | 2     | 1     | 2     | 2     | 1     | 2     | 1     |
| 8     | 2     |       |             | 2     |       |             | 2     | 0     |             | 2     | fluent | 1     | 1     | 1     | 2     | 2     | 1     | 1     |
| 3     | 2     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 1     | 2     | 2     | 1     | 2     |
| 8     | 8     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 2     | 2     | 1     | 1     |
| 3     | 2     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 5     | 3     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 1     | 2     | 2     | 1     | 1     |
| 6     | 10    |       |             | 2     |       |             | 2     | 0     |             | 2     |        | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 9     | 10    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 2     |
| 7     | 6     |       |             | 2     |       |             | 2     | 0     |             | 2     |        | 1     | 2     | 1     | 1     | 2     | 1     | 2     |
| 5     | 7     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 1     | 1     | 1     | 2     | 2     |
| 4     | 2     |       |             | 2     |       |             | 2     | 0     |             | 2     |        | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 2     | 3     |       |             | 2     |       |             | 2     |       |             | 2     |        | 1     | 2     | 2     | 1     | 2     | 2     | 1     |
| 5     | 7     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 2     | 2     | 1     | 1     | 1     | 1     | 2     |
| 5     | 5     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 1     | 1     |
| 4     | 1     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 4     | 10    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 2     | 1     | 1     | 2     | 1     | 2     | 2     |
| 15    | 8     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 1     | 2     |
| 9     | 21    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 2     | 2     | 2     | 2     | 1     |
| 22    | 22    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 2     | 2     | 2     | 1     | 2     | 1     | 2     |
| 20    | 4     |       |             | 2     |       |             | 2     | 0     |             | 2     | poor   | 2     | 1     | 1     | 1     | 2     | 2     | 1     |
| 7     | 2     |       |             | 2     |       |             | 2     | 0     |             | 2     |        | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 10    | 5     |       |             | 2     |       |             | 2     | 1     | Norway      | 1     | fluent | 2     | 1     | 1     | 1     | 2     | 2     | 2     |
| 14    | 2     |       |             | 2     |       |             | 2     | 0     |             | 2     |        | 1     | 1     | 1     | 2     | 2     | 2     | 2     |
| 1     | 1     | 27    | America     | 1     | 27    | America     | 1     | 1     | America     | 1     | fluent | 1     | 2     | 1     | 2     | 2     | 1     | 2     |
| 4     | 4     |       |             | 2     |       |             | 2     | 0     |             | 2     |        | 2     | 2     | 2     | 2     | 2     | 2     | 1     |
| 15    | 5     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 2     | 2     | 2     | 2     | 1     | 1     | 2     |
| 12    | 2     |       |             | 2     |       |             | 2     | 0     |             | 2     |        | 1     | 1     | 2     | 2     | 1     | 1     | 1     |
| 10    | 4     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 1     | 1     | 2     | 2     |
| 12    | 15    |       |             | 2     |       |             | 2     | 0     |             | 2     |        | 1     | 1     | 1     | 2     | 2     | 2     | 1     |
| 8     | 1     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 2     | 8     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 2     | 1     | 2     | 2     | 1     |
| 20    | 10    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 2     | 1     | 1     | 2     |
| 13    | 13    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 1     | 1     | 2     | 2     | 1     |
| 4     | 4     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 2     | 2     | 1     | 2     | 2     | 1     | 1     |
| 10    | 10    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 2     | 2     | 2     | 1     |
| 3     | 5     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 1     | 1     | 2     | 2     |
| 28    | 25    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 2     | 2     | 2     | 1     |
| 7     | 5     |       |             | 2     |       |             | 2     | 0     |             | 2     | poor   | 1     | 1     | 2     | 1     | 2     | 2     | 2     |
| 4     | 2     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 2     | 2     | 1     | 2     | 1     | 2     | 1     |
| 4     | 4     |       |             | 2     |       |             | 2     | 0     |             | 2     | fluent | 2     | 1     | 1     | 2     | 1     | 1     | 2     |
| 2     | 2     |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 2     | 1     | 2     | 1     | 2     | 2     | 1     |
| 10    | 10    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 1     | 2     | 1     | 1     | 2     | 1     |
| 25    | 25    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 2     | 1     | 2     | 2     | 2     | 2     | 1     |
| 4     | 15    |       |             | 2     |       |             | 2     | 0     |             | 2     | basic  | 1     | 2     | 2     | 1     | 1     | 2     | 2     |





Appendix 2 Database: Company 161 – Company 240

| hi361 | hi362 | hi363 | hi364 | hi365 | hi366 | hi367 | hi368 | si1 | si2 | si3 | si4 | si5 | si6 | si7 | si8 | si9 | si10 | si11 | si12 | si13 | si14 | si15 | si16 | si17 | si18 | si19 | si20 |
|-------|-------|-------|-------|-------|-------|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
| 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 4   | 4   | 3   | 4   | 4   | 4   | 3   | 3   | 3   | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 3    |
| 1     | 2     | 2     | 2     | 1     | 2     | 2     | 1     | 3   | 3   | 4   | 3   | 3   | 4   | 4   | 4   | 3   | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    |
| 2     | 1     | 1     | 1     | 1     | 2     | 2     | 1     | 3   | 4   | 3   | 4   | 4   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    |
| 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 4   | 3   | 4   | 3   | 4   | 4   | 3   | 4   | 4   | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    |
| 2     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 3   | 3   | 4   | 3   | 3   | 3   | 4   | 3   | 3   | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    |
| 1     | 2     | 1     | 1     | 1     | 2     | 1     | 1     | 5   | 4   | 5   | 4   | 3   | 4   | 4   | 5   | 5   | 5    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 5    | 4    | 4    |
| 1     | 2     | 2     | 1     | 1     | 1     | 1     | 1     | 4   | 3   | 4   | 3   | 4   | 4   | 4   | 3   | 4   | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    |
| 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 3   | 4   | 4   | 3   | 4   | 4   | 4   | 3   | 4   | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 5   | 5   | 4   | 3   | 4   | 4   | 3   | 5   | 4   | 4    | 3    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 4    | 4    |
| 1     | 2     | 1     | 1     | 2     | 1     | 1     | 1     | 3   | 4   | 4   | 3   | 4   | 4   | 4   | 3   | 4   | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    |
| 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 4   | 3   | 4   | 5   | 4   | 5   | 5   | 4   | 4   | 3    | 4    | 5    | 4    | 3    | 4    | 3    | 5    | 5    | 4    | 3    |
| 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 4   | 3   | 4   | 4   | 4   | 4   | 3   | 4   | 3   | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    |
| 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 3   | 4   | 4   | 4   | 4   | 4   | 4   | 3   | 4   | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    |
| 1     | 1     | 2     | 2     | 2     | 1     | 2     | 1     | 3   | 4   | 4   | 3   | 3   | 4   | 3   | 4   | 4   | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 4   | 4   | 3   | 4   | 5   | 4   | 5   | 4   | 5   | 5    | 4    | 4    | 3    | 4    | 4    | 5    | 5    | 5    | 4    | 4    |
| 1     | 1     | 1     | 2     | 2     | 2     | 2     | 1     | 4   | 4   | 4   | 3   | 3   | 3   | 3   | 3   | 4   | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    |
| 1     | 1     | 1     | 1     | 2     | 1     | 1     | 2     | 4   | 5   | 4   | 3   | 4   | 4   | 3   | 5   | 5   | 4    | 3    | 4    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 3    |
| 1     | 2     | 2     | 1     | 2     | 2     | 2     | 2     | 4   | 3   | 4   | 3   | 4   | 4   | 4   | 3   | 4   | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    |
| 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 5   | 5   | 4   | 3   | 4   | 5   | 4   | 5   | 5   | 4    | 3    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    |
| 2     | 1     | 1     | 2     | 2     | 1     | 1     | 1     | 4   | 3   | 4   | 3   | 4   | 4   | 4   | 4   | 3   | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    |
| 1     | 2     | 1     | 2     | 1     | 1     | 1     | 1     | 4   | 3   | 4   | 4   | 3   | 3   | 4   | 3   | 4   | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 3    |
| 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 4   | 3   | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    |
| 1     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 4   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 4   | 3    | 2    | 3    | 2    | 3    | 2    | 3    | 4    | 4    | 3    | 4    |
| 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 3   | 4   | 3   | 4   | 4   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    |
| 2     | 2     | 1     | 2     | 2     | 2     | 1     | 1     | 4   | 5   | 4   | 4   | 5   | 4   | 4   | 5   | 4   | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 3    | 3    | 4    |
| 1     | 1     | 1     | 2     | 2     | 2     | 1     | 1     | 3   | 4   | 4   | 4   | 2   | 4   | 3   | 4   | 3   | 2    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 2    | 4    | 3    |
| 1     | 2     | 1     | 1     | 2     | 2     | 1     | 2     | 4   | 3   | 3   | 3   | 4   | 3   | 4   | 4   | 5   | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 3    |
| 1     | 1     | 2     | 2     | 1     | 2     | 1     | 1     | 3   | 3   | 2   | 2   | 2   | 4   | 4   | 4   | 3   | 2    | 3    | 3    | 2    | 4    | 4    | 3    | 3    | 4    | 3    | 4    |
| 2     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 2   | 4   | 3   | 3   | 4   | 4   | 4   | 3   | 3   | 4    | 3    | 3    | 3    | 2    | 4    | 4    | 3    | 3    | 4    | 4    |
| 2     | 1     | 1     | 2     | 2     | 1     | 2     | 1     | 4   | 4   | 3   | 3   | 3   | 3   | 3   | 4   | 4   | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    |
| 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 4   | 4   | 3   | 3   | 3   | 3   | 3   | 4   | 4   | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    |
| 2     | 1     | 2     | 2     | 2     | 1     | 2     | 1     | 5   | 4   | 3   | 4   | 5   | 4   | 4   | 5   | 4   | 4    | 3    | 5    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 4    |
| 1     | 2     | 1     | 2     | 2     | 1     | 2     | 2     | 4   | 3   | 4   | 5   | 4   | 4   | 4   | 4   | 5   | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 5    |
| 2     | 2     | 2     | 1     | 2     | 2     | 2     | 2     | 3   | 4   | 4   | 3   | 4   | 4   | 4   | 3   | 2   | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 2    |
| 1     | 2     | 1     | 2     | 2     | 1     | 2     | 2     | 4   | 3   | 4   | 3   | 4   | 4   | 3   | 3   | 4   | 5    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 5    | 4    |
| 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 4   | 3   | 4   | 4   | 3   | 4   | 4   | 3   | 3   | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 4   | 4   | 4   | 3   | 3   | 5   | 5   | 4   | 4   | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 3    |
| 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 3   | 4   | 3   | 4   | 4   | 3   | 3   | 4   | 3   | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    |
| 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 4   | 4   | 4   | 3   | 4   | 4   | 4   | 3   | 3   | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 4    |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 3   | 4   | 3   | 4   | 4   | 4   | 3   | 4   | 3   | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    |
| 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 4   | 4   | 4   | 3   | 3   | 3   | 5   | 5   | 4   | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    |
| 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 3   | 4   | 3   | 4   | 4   | 3   | 3   | 4   | 3   | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    |
| 1     | 1     | 1     | 1     | 2     | 1     | 1     | 2     | 4   | 3   | 4   | 3   | 4   | 3   | 4   | 4   | 3   | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    |
| 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 4   | 4   | 4   | 4   | 3   | 3   | 5   | 5   | 4   | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    |
| 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 3   | 4   | 4   | 3   | 4   | 4   | 3   | 4   | 3   | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    |
| 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 4   | 4   | 4   | 3   | 4   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |
| 1     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 3   | 4   | 3   | 4   | 4   | 4   | 3   | 4   | 3   | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    |
| 1     | 2     | 2     | 1     | 2     | 1     | 2     | 1     | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |
| 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 4   | 4   | 4   | 3   | 4   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |
| 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 3   | 4   | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 4   | 4   | 3   | 4   | 4   | 3   | 3   | 4   | 3   | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    |
| 1     | 1     | 2     | 2     | 1     | 2     | 2     | 2     | 3   | 3   | 4   | 4   | 3   | 3   | 4   | 3   | 2   | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    |
| 2     | 2     | 2     | 1     | 2     | 1     | 2     | 1     | 2   | 4   | 3   | 4   | 3   | 3   | 4   | 4   | 4   | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    |
| 1     | 2     | 1     | 1     | 2     | 1     | 1     | 1     | 3   | 3   | 4   | 3   | 4   | 3   | 3   | 4   | 4   | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 5    | 4    | 3    |
| 2     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 3   | 4   | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    |
| 1     | 1     | 2     | 1     | 1     | 2     | 2     | 2     | 4   | 4   | 3   | 4   | 3   | 3   | 4   | 3   | 3   | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    |
| 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 3   | 4   | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    |
| 1     | 1     | 2     | 1     | 1     | 2     | 2     | 2     | 4   | 4   | 3   | 4   | 3   | 3   | 4   | 3   | 3   | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    |
| 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 3   | 4   | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    |
| 1     | 1     | 2     | 1     | 1     | 2     | 2     | 2     | 4   | 4   | 3   | 4   | 3   | 3   | 4   | 3   | 3   | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    |
| 2     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 3   | 4   | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    |
| 1     | 1     | 2     | 1     | 1     | 2     | 2     | 2     | 4   | 4   | 3   | 4   | 3   | 3   | 4   | 3   | 3   | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    |
| 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 3   | 3   | 4   | 3   | 4   | 3   | 3   | 4   | 4   | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 5    | 4    | 3    | 4    |
| 1     | 1     | 2     | 1     | 1     | 2     | 2     | 2     | 4   | 4   | 3   | 4   | 3   | 3   | 4   | 3   | 3   | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    |
| 2     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 3   | 4   | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    |
| 1     | 1     | 2     | 1     | 1     | 2     | 2     | 2     | 4   | 4   | 3   | 4   | 3   | 3   | 4   | 3   | 3   | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    |
| 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 3   | 4   | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    |
| 1     | 1     | 2     | 1     | 1     | 2     | 2     | 2     | 4   | 4   | 3   | 4   | 3   | 3   | 4   | 3   | 3   | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    |
| 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 3   | 4   | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 4    | 4    |      |      |      |      |      |      |      |      |      |



Appendix 2 Database: Company 161 – Company 240

| si51 | si52 | si53 | si54 | si55 | si56 | si57 | si58 | si59 | si60 | si61 | si62 | si63 | si64 | si65 | si66 | si67 | si68 | si69 | si70 | si71 | si72 | si73 | si74 | si75 | si76 | si77 | si78 | si79 | si80 |   |   |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|---|---|
| 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    |   |   |   |
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| 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4 | 3 |   |
| 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4 | 3 |   |
| 4    | 5    | 4    | 3    | 4    | 3    | 4    | 4    | 5    | 4    | 3    | 4    | 5    | 5    | 5    | 4    | 5    | 4    | 5    | 5    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 3    | 4    | 3    | 4 | 3 |   |
| 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3 | 4 |   |
| 4    | 3    | 4    | 4    | 5    | 3    | 4    | 3    | 5    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 5    | 5    | 4    | 3    | 4    | 3    | 4    | 5    | 4 |   |   |
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| 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 3 | 4 |   |
| 4    | 4    | 4    | 4    | 5    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 3    | 4 | 3 |   |
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| 4    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 5    | 4    | 5    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 5    | 4    | 5    | 4 | 5 |   |
| 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 3 | 4 |   |
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| 4    | 4    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3 | 4 |   |
| 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4 | 4 |   |
| 2    | 3    | 4    | 2    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 2    | 4    | 3    | 2    | 4    | 4    | 3    | 4    | 4 | 5 |   |
| 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5 | 4 |   |
| 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4 | 4 |   |
| 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4 | 5 |   |
| 3    | 4    | 3    | 3    | 4    | 3    | 2    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 2    | 4    | 4    | 3    | 2    | 4    | 4    | 3    | 4    | 3    | 3    | 2    | 4    | 3    | 4 | 3 |   |
| 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4 | 4 |   |
| 3    | 4    | 2    | 3    | 4    | 2    | 2    | 3    | 4    | 3    | 2    | 2    | 3    | 2    | 3    | 2    | 3    | 2    | 4    | 3    | 2    | 3    | 2    | 3    | 4    | 2    | 4    | 3    | 4    | 3    | 4 | 2 |   |
| 3    | 4    | 3    | 3    | 2    | 3    | 4    | 3    | 3    | 4    | 2    | 2    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 2    | 3    | 3    | 2    | 3    | 3    | 2    | 3 | 3 |   |
| 3    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 5    | 5    | 4    | 4    | 4    | 3    | 4    | 5    | 4    | 4 | 4 |   |
| 4    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 3    | 5    | 5    | 4    | 3    | 4    | 3 | 4 |   |
| 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 | 4 |   |
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| 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4 | 4 |   |
| 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 5    | 4    | 4    | 4    | 3    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 5    | 4    | 4    | 5    | 4 | 4 |   |
| 3    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 | 4 |   |
| 5    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 4 | 5 |   |
| 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4 | 4 |   |
| 3    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 3    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4 | 4 |   |
| 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4 | 4 |   |
| 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4 | 4 |   |
| 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3 | 4 | 4 |
| 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 5 | 4 |   |
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| 3    | 3    | 4    | 5    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 5    | 4    | 4 | 4 |   |
| 3    | 2    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 2    | 2    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 2 | 3 |   |
| 4    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4 | 4 |   |
| 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 4 | 4 | 3 |
| 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3 | 4 | 4 |
| 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 5    | 5    | 5    | 5    | 5    | 4    | 4    | 4 | 4 |   |
| 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3 | 4 | 4 |
| 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3 | 3 | 3 |
| 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 2    | 3    | 4    | 3    | 3 | 3 |   |
| 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3 | 3 |   |
| 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3 | 3 |   |
| 4    | 4    | 3    | 3    | 2    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 2    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 2 | 2 |   |
| 3    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4 | 3 | 3 |
| 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 1    | 2    | 2    | 2    | 2    | 3    | 3    | 2    | 4    | 3    | 2    | 3    | 3    | 2    | 3    | 3    | 2    | 3    | 3    | 3    | 3 | 3 |   |
| 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4 | 3 | 3 |
| 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 2    | 3    | 3 | 3 |   |
| 3    | 4    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |   |   |



Appendix 2 Database: Company 161 – Company 240

| si111 | si112 | si113 | si114 | si115 | si116 | si117 | si118 | si119 | si120 | si121 | si122 | si123 | si124 | si125 | si126 | si127 | si128 | si129 | si130 | si131 | si132 | si133 | si134 | si135 | si136 | si137 | si138 | si139 | si140 |   |   |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|
| 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 2     | 4     | 3     | 3     | 4     | 3     | 3     | 4     |   |   |   |
| 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     |   |   |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 2     | 4     | 4     | 3     | 4     | 3     | 4     | 4     |   |   |   |
| 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 2     | 4     | 1     | 4     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 2     | 3     | 3     |   |   |   |
| 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 2     | 3     | 3     |   |   |   |
| 5     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 2     | 4     | 1     | 4     | 4     | 1     | 5     | 4     | 4     | 5     | 1     | 5     | 5     |   |   |   |
| 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 2     | 4     | 2     | 3     | 4     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 3     |   |   |   |
| 3     | 2     | 2     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 2     | 3     | 4     | 4     | 3     | 3     | 4     | 3 |   |   |
| 4     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 2     | 3     | 2     | 5     | 4     | 2     | 3     | 5     | 5     | 4     | 2     | 3     | 4     | 4 |   |   |
| 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 2     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4 |   |   |
| 5     | 4     | 3     | 4     | 2     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 4     | 1     | 4     | 2     | 4     | 4     | 1     | 4     | 3     | 5     | 4     | 1     | 4     | 4     | 4 |   |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 2     | 4     | 2     | 4     | 2     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 3 |   |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 4     | 2     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4 |   |   |
| 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 2     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 2     | 3     | 4     | 4 |   |   |
| 5     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 1     | 4     | 1     | 5     | 5     | 2     | 5     | 4     | 3     | 4     | 1     | 5     | 4     | 4 |   |   |
| 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 2     | 3     | 3     | 3     | 4     | 3     | 2     | 4     | 4 |   |   |
| 5     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 1     | 4     | 3     | 5     | 5     | 2     | 5     | 4     | 5     | 4     | 2     | 3     | 4     | 4 |   |   |
| 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 2     | 3     | 4     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4 |   |   |
| 5     | 4     | 3     | 4     | 5     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 2     | 4     | 5     | 4     | 3     | 4     | 2     | 4     | 3     | 4     | 5     | 2     | 5 | 4 |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 2     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4 |   |   |
| 2     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 2     | 4     | 3     | 4     | 4     | 2     | 4     | 3     | 4     | 4     | 2     | 3     | 4     | 4 |   |   |
| 5     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 2     | 4     | 1     | 4     | 3     | 2     | 5     | 5     | 5     | 4     | 2     | 5     | 4     | 4 |   |   |
| 3     | 3     | 4     | 3     | 2     | 3     | 2     | 4     | 4     | 3     | 2     | 4     | 3     | 3     | 4     | 3     | 4     | 1     | 3     | 2     | 3     | 4     | 2     | 4     | 2     | 4     | 4     | 3     | 4     | 3     | 4 | 3 |   |
| 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 2     | 5     | 2     | 4     | 4     | 2     | 3     | 4     | 4     | 5     | 2     | 4     | 3     | 3 |   |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 2     | 3     | 4     | 4     | 4     | 2     | 3     | 3 |   |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 2     | 4     | 2     | 4     | 5     | 2     | 4     | 4     | 4     | 5     | 2     | 4     | 3 |   |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 4     | 2     | 4     | 5     | 2     | 4     | 4     | 4     | 5     | 4     | 4     | 4 |   |   |
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| 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 2     | 4     | 4     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 4 | 4 |   |
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| 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 2     | 3     | 3     | 2     | 4     | 2     | 3     | 3     | 3     | 2     | 4     | 4 |   |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 2     | 3     | 3     | 2     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4 | 3 |   |
| 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 1     | 4     | 2     | 4     | 5     | 2     | 4     | 5     | 4     | 4     | 1     | 4     | 4     | 4 |   |   |
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| 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 2     | 5     | 2     | 5     | 4     | 1     | 4     | 5     | 4     | 5     | 2     | 5     | 4     | 4 | 5 |   |
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| 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 2     | 4     | 2     | 4     | 5     | 2     | 4     | 3     | 4     | 5     | 1     | 5     | 4     | 4 |   |   |
| 4     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 4     | 4     | 3     | 3     | 4     | 3 | 3 |   |
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| 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 1     | 4     | 1     | 4     | 5     | 2     | 3     | 4     | 5     | 4     | 1     | 4     | 4 | 4 |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 2     | 4     | 2     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4 | 4 |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3 | 4 | 4 |
| 5     | 4     | 3     | 3     | 4     | 5     | 5     | 3     | 4     | 4     | 5     | 5     | 3     | 4     | 4     | 5     | 5     | 3     | 4     | 2     | 4     | 2     | 4     | 4     | 2     | 4     | 4     | 5     | 5     | 2     | 3 | 3 | 3 |
| 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4 | 4 | 4 |
| 3     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 1     | 5     | 5 | 5 |   |
| 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4 | 4 | 4 |
| 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 2     | 4     | 2     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4 | 4 | 4 |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3 | 4 | 4 |
| 5     | 4     | 3     | 3     | 4     | 5     | 5     | 3     | 4     | 4     | 5     | 5     | 3     | 4     | 4     | 5     | 5     | 3     | 3     | 2     | 4     | 2     | 4     | 4     | 2     | 4     | 4     | 5     | 5     | 2     | 3 | 3 | 3 |
| 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4 | 4 | 4 |
| 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4 | 4 | 4 |
| 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 | 3 | 3 |
| 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 4     | 2     | 3     | 3     | 3     | 3     | 3     | 3 | 4 | 3 |
| 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 | 4 |
| 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 2     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4 | 4 | 4 |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 2     | 4     | 2     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4 | 4 | 4 |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 4     | 3     | 2     | 4 | 3 | 3 |
| 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 4 | 4 |
| 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 | 3 | 3 |
| 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 | 3 | 3 |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 4 | 4 | 4 |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |   |   |

Appendix 2 Database: Company 161 – Company 240

| si141 | si142 | si143 | si144 | si145 | si146 | si147 | si148 | si149 | si150 | si151 | si152 | si153 | si154 | si155 | si156 | si157 | si158 | si159 | si160 | si161 | si162 | si163 | si164 | si165 | si166 | si167 | si168 | si169 | si170 |   |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|
| 4     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 20    | 15    | 17    | 14    | 3     | 3     | 3     | 3     | 4 |   |
| 4     | 3     | 2     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 10    | 12    | 10    | 13    | 4     | 3     | 3     | 3     | 4 |   |
| 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 10    | 20    | 10    | 20    | 3     | 4     | 3     | 4     | 4 |   |
| 3     | 3     | 2     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 12    | 14    | 20    | 18    | 4     | 4     | 4     | 3     | 4 |   |
| 3     | 4     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 10    | 15    | 13    | 3     | 3     | 3     | 4     | 3     | 3 |   |
| 4     | 4     | 1     | 5     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     |       |       |       |       | 4     | 4     | 4     | 4     | 4 |   |
| 3     | 3     | 2     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 10    | 12    | 13    | 14    | 3     | 4     | 3     | 4     | 4 |   |
| 3     | 3     | 2     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 10    | 12    | 14    | 15    | 4     | 4     | 4     | 3     | 4 |   |
| 4     | 3     | 1     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 5.6   | 2.5   | 4.5   | 7.5   | 5     | 5     | 4     | 3     | 5 |   |
| 4     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 8     | 16    | 12    | 13    | 3     | 4     | 4     | 3     | 4 |   |
| 3     | 4     | 1     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 5     |       |       |       | 3     | 4     | 4     | 3     | 4 |   |
| 3     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 10    | 8     | 12    | 16    | 3     | 4     | 4     | 3     | 4 |   |
| 3     | 4     | 2     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 15    | 17    | 16    | 13    | 3     | 4     | 3     | 4     | 4 |   |
| 4     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 45    | 16    | 12    | 10    | 3     | 4     | 3     | 4     | 4 |   |
| 4     | 5     | 3     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 5     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 7     | 20    | 3.5   | 12    | 5     | 4     | 5     | 5     | 5 |   |
| 4     | 4     | 2     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 20    | 16    | 13    | 12    | 4     | 4     | 4     | 4     | 4 |   |
| 3     | 5     | 2     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 7.5   | 9     | 4.5   | 8.1   | 5     | 4     | 3     | 4     | 4 |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 12    | 16    | 17    | 10    | 3     | 4     | 4     | 4     | 4 |   |
| 3     | 4     | 2     | 5     | 4     | 5     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 5     |       |       |       | 4     | 5     | 4     | 3     | 4 |   |
| 4     | 3     | 2     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 12    | 10    | 12    | 13    | 3     | 4     | 4     | 3     | 4 |   |
| 3     | 3     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     |       |       |       |       | 4     | 3     | 4     | 4     | 4 |   |
| 4     | 5     | 1     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 15    | 20    | 20    | 6.7   | 4     | 3     | 4     | 4     | 4 |   |
| 4     | 3     | 2     | 3     | 2     | 4     | 3     | 2     | 3     | 4     | 2     | 4     | 3     | 2     | 4     | 4     | 3     | 2     | 4     | 4     | 3     | 2     | 4     |       |       |       | 3     | 4     | 3     | 4     | 4 |   |
| 4     | 4     | 2     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 20    | 30    | 15    | 5     | 4     | 4     | 5     | 4     | 4 |   |
| 3     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 14    | 17    | 15    | 12    | 4     | 3     | 4     | 4     | 4 |   |
| 5     | 4     | 2     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 20    | 10    | 20    | 5     | 5     | 4     | 4     | 4     | 5 |   |
| 2     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     |       |       |       |       | 3     | 4     | 4     | 4     | 4 |   |
| 4     | 4     | 1     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 50    | 50    | 15    | 20    | 4     | 3     | 4     | 5     | 4 |   |
| 3     | 4     | 3     | 4     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 4     | 4     | 2     | 3     | 4     | 4     | 2     | 3     | 4     |       |       |       |       | 4     | 3     | 3     | 4     | 3 | 4 |
| 3     | 4     | 3     | 3     | 2     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 3     |       |       |       |       | 2     | 3     | 3     | 3     | 3 | 4 |
| 4     | 5     | 2     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 15    | 9     | 18    | 21    | 5     | 4     | 3     | 5     | 5 |   |
| 4     | 4     | 1     | 4     | 5     | 4     | 5     | 4     | 5     | 3     | 4     | 3     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 6.5   | 9     | 2     | 12    | 4     | 3     | 4     | 3     | 4 |   |
| 4     | 4     | 1     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 17    | 25    | 31    | 15    | 5     | 4     | 4     | 4     | 4 |   |
| 4     | 3     | 1     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 10    | 6.3   | 5.8   | 7.5   | 3     | 3     | 3     | 3     | 3 |   |
| 5     | 4     | 2     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 15    | 20    | 15    | 18    | 5     | 4     | 4     | 5     | 4 |   |
| 4     | 3     | 1     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 7.5   | 6.4   | 8.3   | 5.7   | 4     | 4     | 4     | 4     | 4 |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 21    | 15    | 28    | 7.3   | 4     | 5     | 4     | 4 | 4 |
| 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 10    | 9     | 8     | 6     | 3     | 3     | 4     | 4     | 4 |   |
| 4     | 4     | 1     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 5     |       |       |       |       | 4     | 3     | 4     | 4     | 4 |   |
| 3     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 10    | 12    | 9     | 8     | 4     | 3     | 4     | 3     | 4 |   |
| 3     | 4     | 1     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 8     | 12    | 14.6  | 7.8   | 5     | 4     | 5     | 4     | 4 |   |
| 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 8     | 15    | 20    | 20    | 3     | 4     | 3     | 4     | 4 |   |
| 5     | 4     | 1     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 10    | 18    | 20    | 5     | 5     | 4     | 4     | 5     | 4 |   |
| 4     | 4     | 1     | 3     | 4     | 5     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 4     | 2     | 5     | 3     | 2     | 4     | 4     | 3     | 4     | 5     | 15    | 10    | 6     | 4     | 5     | 3     | 4     | 4 |   |
| 4     | 3     | 2     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 40    | 30    | 30    | 35    | 4     | 3     | 3     | 4     | 4 |   |
| 3     | 2     | 2     | 4     | 3     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     |       |       |       | 2     | 2     | 2     | 3     | 3 |   |
| 4     | 4     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 35    | 25    | 30    | 35    | 4     | 3     | 4     | 4 | 4 |
| 4     | 4     | 2     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 30    | 40    | 30    | 20    | 5     | 5     | 4     | 4     | 4 |   |
| 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 10    | 15    | 20    | 25    | 3     | 4     | 3     | 4     | 4 |   |
| 4     | 3     | 2     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 20    | 15    | 15    | 15    | 4     | 4     | 5     | 5     | 4 |   |
| 4     | 4     | 1     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 3     | 3     | 4     |       |       |       |       | 4     | 4     | 4     | 4     | 3 |   |
| 4     | 4     | 2     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 5     | 18    | 20    | 20    | 25    | 4     | 4     | 4     | 5     | 4 |   |
| 3     | 3     | 2     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     |       |       |       |       | 2     | 3     | 3     | 3     | 3 |   |
| 4     | 4     | 2     | 5     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 5     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 17    | 25    | 20    | 10    | 4     | 4     | 4     | 4     | 4 |   |
| 5     | 4     | 1     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 15    | 20    | 10    | 8     | 4     | 5     | 4     | 5     | 4 |   |
| 3     | 4     | 2     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 9.5   | 7.6   | 8.2   | 6.1   | 3     | 4     | 4     | 4     | 4 |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 8     | 10    | 15    | 20    | 3     | 4     | 3     | 4     | 3 | 4 |
| 3     | 3     | 2     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 30    | 26    | 23    | 10    | 4     | 4     | 4     | 4     | 3 |   |
| 3     | 4     | 2     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 10    | 20    | 25    | 15    | 3     | 4     | 3     | 4     | 4 |   |
| 4     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 20    | 20    | 18    | 10    | 4     | 4     | 3     | 3     | 3 |   |
| 5     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 8     | 10    | 15    | 20    | 3     | 4     | 4     | 3     | 4 |   |
| 4     | 4     | 2     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 10    | 12    | 11.8  | 9.5   | 4     | 3     | 3     | 4     | 4 |   |
| 3     | 4     | 3     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |   |

Appendix 2 Database: Company 161 – Company 240

| si171 | si172 | si173 | si174 | si175 | si176 | si177 | si178 | si179 | si180 | si181 | si182 | si183 | si184 | si185 | si186 | si187 | si188 | si189 | si190 | si191 | si192 | si193 | si194 | si195 | si196 | si197 | si198 | si199 | si200 |   |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|
| 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     |   |   |
| 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     |   |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     |   |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     |   |   |
| 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     |   |   |
| 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 5     |   |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     |   |   |
| 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     |   |   |
| 3     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 5     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     |   |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     |   |   |
| 4     | 5     | 3     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 5     | 5     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 3     | 4 |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3 |   |
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| 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4 |   |
| 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 5     | 4     | 5     | 5     | 4     | 3 |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3 |   |
| 4     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4 |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3 |   |
| 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5 |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 2     | 3     | 4     | 3 |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4 |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4 |   |
| 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4 |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4 |   |
| 3     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 2     | 4     | 3     | 3     | 4     | 3     | 4     | 4 |   |
| 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4 |   |
| 4     | 2     | 3     | 4     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 4 |   |
| 4     | 3     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 2     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 |   |
| 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4 |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 3     | 4     | 3     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 3 | 4 |
| 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5 |   |
| 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4 |   |
| 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3 |   |
| 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3 |   |
| 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 5     | 3     | 4     | 5     | 3     | 4     | 3     | 5     | 4     | 3     | 3     | 4     | 4     | 3 |   |
| 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4 |   |
| 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4 |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3 | 4 |
| 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4 |   |
| 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5 |   |
| 5     | 5     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 3     | 4     | 4     | 5 |   |
| 3     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 2     | 2     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 4 |   |
| 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5 |   |
| 4     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 5 |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3 |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4 |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 3     | 4 |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4 |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3 |   |
| 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4 |   |
| 4     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 3 |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3 |   |
| 4     | 5     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 5     | 5     | 5     | 5     | 5 |   |
| 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4 |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4 |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3 |   |
| 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3 |   |
| 3     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 2     | 3     | 2     | 3 | 4 |
| 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3 |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 2     | 4     | 4 |   |
| 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4 |   |
| 5     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4 |   |
| 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3 |   |
| 3     | 4     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |   |

Appendix 2 Database: Company 161 – Company 240

| si201 | si202 | si203 | si204 | si205 | si206 | si207 | si208 | si209 | si210 | si211 | si212 | si213 | si214 | si215 | si216 | si217 | si218 | si219 | si220 | si221 | si222 | si223 | si224 | si225 | si226 | si227 | si228 | si229 | si230 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     |
| 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     |
| 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     |
| 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 2     | 3     | 5     | 4     |
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     |
| 5     | 5     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 5     |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     |
| 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     |
| 5     | 4     | 3     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 3     | 4     | 5     | 3     | 4     | 3     | 5     | 4     | 4     | 4     |
| 3     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     |
| 5     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     |
| 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     |
| 4     | 5     | 3     | 5     | 5     | 4     | 3     | 5     | 5     | 4     | 3     | 3     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 5     |
| 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     |
| 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 5     | 3     | 4     | 3     | 5     | 4     | 5     | 4     |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     |
| 4     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 5     |
| 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     |
| 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 4     | 3     |
| 4     | 5     | 4     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     |
| 4     | 2     | 4     | 5     | 4     | 3     | 3     | 4     | 2     | 4     | 2     | 4     | 2     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 2     | 3     | 2     | 4     | 3     | 4     | 4     | 4     | 3     | 2     |
| 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     |
| 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     |
| 2     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 2     | 4     | 3     | 4     | 2     | 4     | 2     | 3     | 3     | 4     |
| 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     |
| 4     | 4     | 3     | 2     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 4     | 4     | 2     | 4     | 4     | 3     | 3     | 2     | 4     | 2     | 4     | 3     | 2     | 4     | 3     | 5     | 2     | 4     | 2     |
| 4     | 3     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 2     | 3     |
| 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     |
| 4     | 5     | 3     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 3     |
| 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     |
| 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     |
| 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     |
| 3     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     |
| 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     |
| 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     |
| 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     |
| 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 3     | 5     | 3     | 3     |
| 4     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 5     |
| 2     | 5     | 2     | 4     | 4     | 5     | 5     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 4     | 4     | 4     | 4     | 3     |       |
| 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 4     |
| 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     |
| 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 5     |
| 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 3     | 4     | 3     | 4     | 3     | 3     |
| 5     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     |
| 5     | 4     | 4     | 5     | 5     | 4     | 5     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     |
| 5     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 3     | 4     | 3     | 3     | 4     | 5     | 3     | 4     | 2     | 2     | 2     | 4     | 3     | 3     |
| 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 2     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 2     | 4     | 4     | 4     | 3     | 2     |
| 5     | 5     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     |
| 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 5     |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     |
| 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 3     |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     |
| 3     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 2     | 3     | 3     | 3     | 4     |
| 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     |
| 4     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 3     |
| 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     |
| 4     | 5     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     |       |       |



Appendix 2 Database: Company 161 – Company 240

| si231 | si232 | si233 | si234 | si235 | si236 | si237 | si238 | si239 | si240 | si241 | si242 | si243 | si244 | si245 | si246 | si247 | si248 | si249 | si250 | si251 | si252 | si253 | si254 | si255 | si256 | si257 | si258 | si259 | si260 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 1     | 20    | 4     | 4     | 3     | 3     | 3     | 4     | 4     |   |
| 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 1     | 13    | 3     | 4     | 3     | 4     | 3     | 4     | 3     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 2     |       | 3     | 4     | 4     | 4     | 4     | 3     | 4     |   |
| 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 2     |       | 3     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 1     | 10    | 3     | 3     | 4     | 4     | 3     | 4     | 3     |   |
| 5     | 4     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 2     |       | 5     | 5     | 4     | 4     | 5     | 4     | 4     |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 2     |       | 3     | 4     | 4     | 3     | 4     | 4     | 3     |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 2     |       | 3     | 4     | 4     | 4     | 3     | 3     | 4     |   |
| 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 4     | 5     | 3     | 2     |       | 4     | 5     | 4     | 3     | 4     | 5     | 4     |   |
| 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 2     |       | 3     | 4     | 3     | 4     | 4     | 3     | 4     |   |
| 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 2     |       | 4     | 5     | 4     | 3     | 4     | 4     | 3     |   |
| 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 2     |       | 4     | 3     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 1     | 21    | 3     | 4     | 4     | 4     | 4     | 3     | 4     |   |
| 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 2     |       | 3     | 4     | 3     | 3     | 4     | 4     | 4     |   |
| 4     | 5     | 3     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     |       | 4     | 4     | 3     | 2     | 4     | 5     | 5     |   |
| 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 2     |       | 3     | 3     | 4     | 4     | 4     | 4     | 4     |   |
| 3     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 3     | 4     | 3     | 5     | 4     | 5     | 4     | 4     | 5     | 3     | 2     |       | 4     | 3     | 4     | 4     | 5     | 4     | 4     |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 1     | 10    | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     |   |
| 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 5     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 5     | 2     |       | 3     | 4     | 5     | 4     | 3     | 4     | 5     |   |
| 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 2     |       | 3     | 4     | 4     | 3     | 4     | 3     | 4     |   |
| 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 5     | 2     |       | 4     | 3     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 1     | 40    | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     |   |
| 4     | 2     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 2     |       | 3     | 4     | 3     | 4     | 2     | 4     | 3     |   |
| 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 1     | 20    | 4     | 4     | 3     | 5     | 4     | 4     | 3     |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 2     |       | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     |   |
| 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 1     | 10    | 4     | 4     | 4     | 5     | 4     | 4     | 4     |   |
| 4     | 3     | 2     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 2     | 3     | 2     | 4     | 2     |       | 4     | 3     | 3     | 4     | 3     | 3     | 4     |   |
| 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 1     | 10    | 4     | 3     | 4     | 4     | 5     | 4     | 5     |   |
| 4     | 3     | 4     | 4     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 2     | 2     |       | 4     | 2     | 4     | 3     | 4     | 4     | 3     |   |
| 2     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 2     | 2     | 2     |       | 4     | 3     | 4     | 3     | 4     | 4     | 4     |   |
| 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 5     | 1     | 20    | 4     | 4     | 3     | 4     | 5     | 4     | 3     |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 5     | 4     | 5     | 5     | 4     | 5     | 3     | 4     | 3     | 5     | 2     |       | 4     | 3     | 5     | 4     | 4     | 5     | 5     |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 1     | 20    | 4     | 3     | 4     | 4     | 3     | 4     | 3     |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 1     | 10    | 3     | 3     | 4     | 4     | 4     | 4     | 3     |   |
| 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 1     | 10    | 4     | 3     | 4     | 4     | 4     | 4     | 3     |   |
| 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 2     |       | 3     | 3     | 3     | 4     | 4     | 4     | 4     |   |
| 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 1     | 10    | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     |   |
| 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 1     | 23    | 4     | 4     | 3     | 3     | 4     | 4     | 4     |   |
| 4     | 5     | 5     | 5     | 3     | 4     | 4     | 3     | 3     | 3     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 1     |       | 4     | 4     | 5     | 5     | 5     | 3     | 3     |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 2     |       | 3     | 4     | 4     | 3     | 4     | 3     | 4     |   |
| 3     | 4     | 4     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 1     | 10    | 4     | 3     | 5     | 4     | 4     | 4     | 5     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 1     | 10    | 3     | 4     | 3     | 4     | 3     | 3     | 4     |   |
| 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 1     | 10    | 4     | 5     | 4     | 4     | 5     | 5     | 4     |   |
| 3     | 4     | 2     | 3     | 4     | 5     | 3     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 3     | 2     |       | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 5     |   |
| 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 1     | 30    | 4     | 3     | 4     | 5     | 4     | 4     | 3     |   |
| 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 2     |       | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 3     |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 1     | 30    | 4     | 3     | 4     | 3     | 5     | 4     | 4     | 3 |
| 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 1     | 40    | 3     | 4     | 4     | 3     | 3     | 4     | 3     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 1     | 10    | 3     | 4     | 3     | 4     | 3     | 3     | 4     |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 1     | 5     |       |       |       |       |       |       |       | 4     | 4 |
| 5     | 5     | 4     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 1     | 9     | 3     | 4     | 4     | 5     | 5     | 3     | 4     |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 1     | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 5     |   |
| 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 2     |       | 2     | 3     | 4     | 3     | 3     | 3     | 3     |   |
| 5     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 3     | 4     | 1     | 12    | 4     | 4     | 4     | 5     | 4     | 4     | 5     |   |
| 5     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 1     | 10    | 4     | 5     | 4     | 5     | 5     | 4     | 5     |   |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 1     | 11    | 4     | 3     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 1     | 7     | 3     | 4     | 3     | 4     | 3     | 3     | 4     |   |
| 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 2     |       | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 1     | 10    | 3     | 4     | 3     | 4     | 3     | 3     | 4     |   |
| 4     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 1     | 4     | 4     | 4     | 4     | 4     | 5     | 3     | 3     | 3     |   |
| 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 1     | 10    | 3     | 1     | 10    | 3     | 4     | 3     | 4     | 3     | 3     | 4 |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 2     |       | 4     | 4     | 3     | 3     | 3     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 3     | 4     | 3     | 1     | 10    | 4     | 3     | 4     | 3     | 4     | 3     | 4     |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 1     | 20    | 3     | 3     | 4     | 3     | 3     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 1     | 15    | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 5     |   |
| 4</   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |

Appendix 2 Database: Company 161 – Company 240

| si261 | si262 | si263 | si264 | si265 | si266 | si267 | si268 | si269 | si270 | si271 | si272 | si273 | si274 | si275 | si276 | si277 | si278 | si279 | si280 | si281 | si282 | si283 | si284 | si285 | si286 | si287 | si288 | si289 | si290 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 25    | 47    | 28    | 60    | 40    | 7500  | 2008  | 7     | 7     |
| 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 55    | 20    | 25    | 40    | 60    | 100   | 2008  | 7     | 17    |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 10    | 50    | 40    | 30    | 70    | 800   | 2004  | 6     | 17    |
| 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 58    | 30    | 12    | 45    | 55    | 30000 | 2012  | 8     | 17    |
| 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 100   | 2009  | 7     | 17    |
| 5     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 5     | 20    | 30    | 50    | 60    | 40    | 10000 | 2007  | 7     | 17    |
| 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 100   | 0     | 0     | 0     | 0     | 500   | 2005  | 6     | 14    |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 60    | 0     | 40    | 0     | 0     | 1000  | 2007  | 7     | 16    |
| 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 55    | 20    | 25    | 70    | 30    |       | 2007  | 7     | 16    |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 1500  | 1978  | 1     | 17    |
| 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 3     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 20    | 40    | 40    | 40    | 60    | 15000 | 1993  | 4     | 14    |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 1000  | 2004  | 6     | 16    |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 35    | 46    | 19    | 66    | 34    | 13000 | 2003  | 6     | 17    |
| 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 2010  | 2011  | 8     | 17    |
| 4     | 5     | 3     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 55    | 30    | 15    | 35    | 65    | 420   | 2008  | 7     | 14    |
| 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 15    | 45    | 40    | 75    | 25    | 30000 | 1965  | 1     | 4     |
| 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 42    | 58    | 0     | 40    | 60    | 1350  | 2006  | 7     | 6     |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 30    | 40    | 30    | 80    | 20    | 20000 | 1985  | 2     | 14    |
| 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 30    | 40    | 30    | 70    | 30    | 1000  | 2007  | 7     | 6     |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 100   | 2005  | 6     | 17    |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 100   | 2004  | 6     | 17    |
| 3     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 50    | 20    | 30    | 30    | 70    | 1011  | 2002  | 6     | 14    |
| 4     | 3     | 2     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 2     | 4     | 4     | 3     | 2     | 3     | 4     | 3     | 100   | 0     | 0     | 0     | 0     | 0     | 200   | 2009  | 7     | 10    |
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 80    | 10    | 10    | 40    | 60    | 400   | 2005  | 6     | 14    |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 35    | 50    | 15    | 55    | 45    | 5000  | 2003  | 6     | 14    |
| 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 50    | 20    | 30    | 40    | 60    | 170   | 2004  | 6     | 16    |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 2     | 3     | 3     | 4     | 60    | 20    | 20    | 50    | 50    | 2000  | 2000  | 5     | 14    |
| 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 50    | 40    | 10    | 50    | 40    | 2001  | 6     | 17    |       |
| 4     | 3     | 4     | 4     | 4     | 3     | 2     | 4     | 4     | 5     | 2     | 4     | 3     | 3     | 4     | 4     | 3     | 2     | 2     | 4     | 3     | 80    | 10    | 10    | 70    | 30    | 2000  | 2005  | 6     | 17    |
| 4     | 3     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 2     | 3     | 3     | 4     | 100   | 0     | 0     | 0     | 0     |       | 2008  | 7     | 17    |       |
| 4     | 5     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 80    | 10    | 10    | 60    | 40    | 1089  | 2004  | 6     | 17    |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 5     | 3     | 4     | 5     | 3     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 5     | 4     | 60    | 40    | 0     | 100   | 0     | 300   | 2010  | 7     | 5     |
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 80    | 10    | 10    | 60    | 40    | 482   | 2005  | 6     | 17    |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 83    | 17    | 0     | 75    | 25    | 200   | 2010  | 7     | 17    |
| 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 70    | 20    | 10    | 70    | 30    | 617   | 2002  | 6     | 14    |
| 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 56    | 30    | 14    | 93    | 7     | 1000  | 2004  | 6     | 17    |
| 4     | 3     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 60    | 20    | 20    | 50    | 50    | 87    | 2002  | 6     | 17    |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 60    | 25    | 15    | 90    | 10    | 2000  | 2010  | 7     | 17    |
| 3     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 20    | 40    | 40    | 40    | 60    | 170   | 2006  | 7     | 17    |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 70    | 30    | 0     | 95    | 5     | 3000  | 2004  | 6     | 17    |
| 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 80    | 10    | 10    | 80    | 20    | 75    | 2002  | 6     | 17    |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 70    | 30    | 0     | 100   | 0     | 1000  | 2009  | 7     | 14    |
| 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 80    | 10    | 10    | 60    | 40    | 2401  | 2005  | 6     | 14    |
| 4     | 3     | 4     | 4     | 5     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 60    | 0     | 40    | 0     | 0     | 480   | 2009  | 7     | 17    |
| 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 80    | 10    | 10    | 80    | 20    | 170   | 2008  | 7     | 17    |
| 4     | 4     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     | 3000  | 2008  | 7     | 17    |       |
| 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 80    | 10    | 10    | 50    | 50    | 433   | 2002  | 6     | 17    |
| 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 50    | 20    | 30    | 40    | 60    | 701   | 2006  | 7     | 17    |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 500   | 2010  | 7     | 10    |
| 5     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 100   | 0     | 0     | 0     | 0     | 105   | 1997  | 5     | 17    |
| 4     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 100   | 0     | 0     | 0     | 0     | 380   | 2000  | 5     | 14    |
| 5     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 100   | 0     | 0     | 0     | 0     | 2500  | 2000  | 5     | 4     |
| 4     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 2     | 2     | 3     | 3     | 3     | 60    | 10    | 30    | 10    | 90    | 1000  | 2012  | 8     | 17    |
| 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 100   | 0     | 0     | 0     | 0     | 103   | 1989  | 3     | 17    |
| 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 100   | 0     | 0     | 0     | 0     | 1002  | 2009  | 7     | 17    |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 50    | 30    | 20    | 60    | 40    | 590   | 2008  | 7     | 17    |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 60    | 30    | 10    | 80    | 20    | 8000  | 2010  | 7     | 12    |
| 3     | 3     | 3     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 100   | 0     | 0     | 0     | 0     | 780   | 2001  | 6     | 6     |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 5     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 100   | 2010  | 7     | 17    |
| 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 295   | 2007  | 7     | 17    |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 56    | 24    | 20    | 65    | 35    | 2000  | 2012  | 8     | 17    |
| 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     |       |       |       |       |       |       |       |       |       |       |

Appendix 2 Database: Company 161 – Company 240

| si291 | si292           | si293       | si294 | si295 | si296 | si297 | si298 | si299 | si300 | si301 | si302 | si303 | si304 | si305 | si306 | si307 | si308 | si309 | si310           |
|-------|-----------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|
| 12    | France          | 3000000000  | 0     | 1     | 0     |       |       | 1     | 2     |       | 1     |       | 1     | 1     | 1     |       |       |       | Chinese         |
| 20    | UK              | 50000000    | 0     | 1     | 0     |       |       | 1     | 2     |       | 1     |       | 1     | 1     | 1     |       |       |       | Chinese         |
| 20    | Germany         |             | 0     | 1     | 0     |       |       | 1     | 1     |       | 1     |       | 1     |       | 1     |       |       |       | Chinese         |
| 20    | UK              | 5000000000  | 1     | 0     | 0     |       |       | 1     | 1     | 1     |       | 1     | 1     |       |       |       |       |       | Chinese         |
| 20    | Singapore       | 1000000     | 1     | 0     | 0     |       | 1     |       | 1     |       |       | 1     | 1     | 1     |       |       |       |       | Singaporean     |
| 13    | America         | 318000000   | 0     | 1     | 0     |       |       | 1     | 2     |       |       | 1     |       | 1     |       |       |       |       | Chinese         |
| 15    | America         | 1000000     | 1     | 0     | 0     | 1     |       |       | 1     |       | 1     |       | 1     |       | 1     |       |       |       | Chinese         |
| 5     | Antigua Barbuda | 47520000    | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       | Antigua Barbuda |
| 5     | Singapore       | 10000000    | 1     | 0     | 0     |       |       | 1     | 1     | 1     |       |       | 1     |       | 1     |       |       |       | Chinese         |
| 20    | Australia       | 3300000000  | 1     | 0     | 0     | 1     |       |       | 2     |       |       | 1     | 1     |       | 1     |       |       |       | Australian      |
| 14    | America         | 130000000   | 1     | 0     | 0     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       |       | Chinese         |
| 5     | Spain           | 1000000000  | 0     | 1     | 0     |       | 1     |       | 2     |       |       | 1     | 1     | 1     |       |       |       |       | Spanish         |
| 20    | America         | 2000000000  | 0     | 1     | 0     |       |       | 1     | 1     |       | 1     |       | 1     |       |       |       | 1     |       | Chinese         |
| 20    | Singapore       | 316800      | 0     | 1     | 0     |       | 1     |       | 1     | 1     |       | 1     | 1     |       |       |       |       |       | Chinese         |
| 15    | Singapore       | 50000000    | 1     | 0     | 0     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       | German          |
| 6     | Japan           | 20000000000 | 0     | 1     | 0     |       |       | 1     | 1     |       | 1     |       | 1     |       |       | 1     |       |       | Chinese         |
| 11    | India           | 25000000    | 1     | 0     | 0     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       |       | Chinese         |
| 15    | Netherlands     | 10000000000 | 0     | 1     | 0     |       |       | 1     | 1     |       | 1     | 1     | 1     | 1     |       |       |       |       | Chinese         |
| 11    | Japan           | 300000000   | 1     | 0     | 0     | 1     |       |       | 2     | 1     |       | 1     | 1     | 1     | 1     |       |       |       | Chinese         |
| 20    | South Korea     | 6000000     | 0     | 0     | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       |       |       | 1     |       | Chinese         |
| 20    | Japan           | 10000000    | 0     | 0     | 1     |       | 1     |       | 2     |       |       | 1     |       | 1     |       |       |       |       | Chinese         |
| 15    | Sweden          | 200000000   | 0     | 1     | 0     |       |       | 1     | 2     | 1     | 1     | 1     | 1     |       |       |       |       |       | Swedish         |
| 9     | Paraguay        | 5000000     | 0     | 1     | 0     |       | 1     |       | 1     |       |       | 1     |       |       | 1     |       | 1     |       | Paraguay        |
| 15    | India           | 433000000   | 1     | 0     | 0     | 1     |       |       | 1     |       | 1     |       | 1     | 1     |       |       |       |       | Indian          |
| 14    | Italy           | 8900000000  | 0     | 0     | 1     |       |       | 1     | 1     |       |       | 1     | 1     |       | 1     |       |       |       | Chinese         |
| 5     | Australia       | 823000000   | 1     | 0     | 0     | 1     |       |       | 2     | 1     | 1     | 1     | 1     | 1     |       |       |       |       | Australian      |
| 15    | Malaysia        | 500000000   | 0     | 0     | 1     |       |       | 1     | 1     |       | 1     |       |       | 1     |       | 1     |       |       | Malaysian       |
| 20    | Spain           | 203000000   | 0     | 1     | 0     | 1     |       |       | 1     | 1     |       | 1     | 1     |       |       |       |       |       | Spanish         |
| 20    | Japan           | 2000000000  | 0     | 1     | 0     |       |       | 1     | 1     | 1     | 1     |       |       |       | 1     |       |       | 1     | Japanese        |
| 20    | Singapore       | 4300000000  | 0     | 0     | 1     |       | 1     |       | 2     |       | 1     |       |       | 1     | 1     |       |       |       | Singaporean     |
| 20    | Japan           | 2587000000  | 0     | 1     | 0     | 1     |       |       | 1     |       | 1     |       |       | 1     |       |       |       |       | Japanese        |
| 13    | Malaysia        | 80000000    | 0     | 1     | 0     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       | Chinese         |
| 20    | South Korea     | 825000000   | 1     | 0     | 0     | 1     |       |       | 1     |       | 1     |       | 1     |       | 1     |       |       |       | South Korean    |
| 20    | Thailand        | 3600000     | 0     | 0     | 1     |       |       | 1     | 1     |       | 1     |       | 1     |       | 1     | 1     |       |       | Chinese         |
| 14    | Russia          | 3658000000  | 1     | 0     | 0     |       |       | 1     | 1     |       |       |       |       | 1     | 1     |       | 1     |       | Chinese         |
| 20    | UK              | 50000000    | 1     | 0     | 0     |       | 1     |       |       | 1     |       | 1     | 1     | 1     |       |       |       |       | British         |
| 20    | Sweden          | 803000000   | 1     | 0     | 0     | 1     |       |       | 1     | 1     |       |       | 1     | 1     |       |       |       |       | Swedish         |
| 20    | Vietnam         | 9559950000  | 0     | 1     | 0     |       |       | 1     | 1     | 1     |       | 1     | 1     |       |       |       |       |       | Chinese         |
| 20    | Italy           | 270000000   | 1     | 0     | 0     |       |       | 1     | 2     | 1     | 1     | 1     |       |       |       | 1     | 1     |       | Italian         |
| 20    | America         | 336290000   | 0     | 1     | 0     |       |       | 1     | 2     |       | 1     |       | 1     |       | 1     |       |       |       | Chinese         |
| 20    | Sweden          | 480000000   | 1     | 0     | 0     |       | 1     |       | 1     | 1     |       |       | 1     | 1     |       |       |       |       | Swedish         |
| 14    | Russia          | 500000000   | 0     | 0     | 1     | 1     |       |       | 1     | 1     |       |       | 1     |       |       |       |       |       | Russian         |
| 14    | Malaysia        | 2677000000  | 0     | 1     | 0     | 1     |       |       | 2     | 1     |       |       | 1     | 1     |       |       |       |       | Chinese         |
| 20    | Belgium         | 4000000     | 1     | 0     | 0     |       |       | 1     | 1     | 1     |       |       |       |       | 1     |       |       |       | Chinese         |
| 20    | Germany         | 212000000   | 0     | 1     | 0     |       |       | 1     | 2     |       | 1     | 1     | 1     |       |       |       |       |       | German          |
| 20    | Singapore       | 2400000     | 0     | 1     | 0     |       | 1     |       | 2     | 1     | 1     |       |       |       | 1     |       |       |       | Chinese         |
| 20    | America         | 788000000   | 0     | 1     | 0     |       |       | 1     | 1     | 1     | 1     |       |       |       | 1     |       |       |       | Chinese         |
| 20    | Iran            | 310000000   | 0     | 1     | 0     |       |       | 1     | 2     | 1     |       | 1     |       |       | 1     |       |       |       | Iranian         |
| 9     | Japan           | 4000000     | 1     | 0     | 0     |       | 1     |       | 1     |       | 1     | 1     |       |       |       |       |       |       | Chinese         |
| 20    | Australia       | 3800000     | 1     | 0     | 0     | 1     |       |       | 1     | 1     | 1     | 1     |       |       |       |       |       |       | Chinese         |
| 14    | UAE             | 1000000000  | 1     | 0     | 0     |       | 1     |       | 1     | 1     |       |       |       | 1     | 1     |       |       | 1     | Chinese         |
| 6     | Chile           | 78000000    | 1     | 0     | 0     |       | 1     |       | 1     |       |       |       | 1     | 1     |       | 1     |       |       | Chinese         |
| 20    | Russia          | 330000000   | 1     | 0     | 0     |       |       | 1     | 1     | 1     |       | 1     |       | 1     |       |       |       |       | Chinese         |
| 20    | Cuba            | 16000000    | 0     | 1     | 0     |       | 1     |       | 1     | 1     | 1     |       |       | 1     |       | 1     |       |       | Chinese         |
| 20    | Germany         | 12500000    | 0     | 1     | 0     |       | 1     |       | 2     |       |       |       | 1     |       |       |       |       | 1     | Chinese         |
| 20    | Zambia          | 3300000000  | 0     | 1     | 0     |       |       | 1     | 1     |       | 1     |       | 1     |       | 1     |       |       | 1     | Chinese         |
| 6     | South Africa    | 1000000000  | 1     | 0     | 0     |       |       | 1     | 2     | 1     |       |       |       | 1     | 1     |       |       |       | South African   |
| 11    | Philippines     | 800000000   | 0     | 1     | 0     |       | 1     |       | 1     | 1     | 1     | 1     |       | 1     |       |       |       |       | Chinese         |
| 20    | Thailand        | 10500000    | 1     | 0     | 0     | 1     |       |       | 1     | 1     | 1     | 1     |       |       |       |       |       |       | Chinese         |
| 20    | America         | 20000000    | 0     | 1     | 0     |       | 1     |       | 1     | 1     | 1     |       |       | 1     | 1     | 1     |       |       | Chinese         |
| 20    | Ukraine         | 100000000   | 0     | 1     | 0     |       |       | 1     | 2     |       | 1     |       | 1     | 1     |       |       |       |       | Ukrainian       |
| 20    | Spain           | 600000000   | 1     | 0     | 0     |       |       | 1     | 2     |       |       | 1     |       | 1     | 1     |       |       | 1     | Chinese         |
| 20    | Liberia         | 1000000000  | 1     | 0     | 0     |       |       | 1     | 1     |       |       | 1     | 1     |       |       |       |       |       | Liberian        |
| 20    | America         | 500000000   | 0     | 0     | 1     |       |       | 1     | 1     | 1     |       | 1     | 1     |       | 1     |       |       |       | Chinese         |
| 20    | Germany         | 2000000000  | 0     | 0     | 1     |       |       | 1     | 1     |       | 1     |       | 1     |       |       |       | 1     |       | German          |
| 20    | Nigeria         | 10000000    | 0     | 1     | 0     |       | 1     |       | 2     |       |       | 1     | 1     | 1     | 1     |       |       |       | Chinese         |
| 16    | Vietnam         | 1200000     | 1     | 0     | 0     | 1     |       |       | 1     | 1     |       | 1     |       | 1     | 1     | 1     |       |       | Chinese         |
| 16    | Brazil          | 4300000000  | 1     | 0     | 0     | 1     |       |       | 1     |       |       | 1     | 1     | 1     | 1     |       |       |       | Chinese         |
| 20    | Germany         | 2060000000  | 0     | 1     | 0     |       |       | 1     | 1     |       | 1     |       | 1     |       | 1     |       |       |       | Chinese         |
| 20    | France          | 33600000000 | 0     | 0     | 1     |       |       | 1     | 1     |       |       |       | 1     | 1     | 1     |       |       |       | Chinese         |
| 20    | America         | 20800000000 | 0     | 0     | 1     |       |       | 1     | 1     |       | 1     | 1     | 1     | 1     | 1     |       |       | 1     | Chinese         |
| 20    | UK              | 4000000     | 1     | 0     | 0     |       | 1     |       | 2     |       | 1     |       |       | 1     |       | 1     |       |       | Chinese         |
| 20    | France          | 4100000000  | 1     | 0     | 0     | 1     |       |       | 1     |       |       | 1     | 1     | 1     |       |       |       |       | Chinese         |
| 17    | South Korea     | 5000000     | 0     | 0     | 1     |       | 1     |       | 2     |       |       | 1     | 1     | 1     |       |       |       |       | South Korean    |
| 20    | Australia       | 500000000   | 0     | 1     | 0     | 1     |       |       | 1     |       |       | 1     |       |       | 1     |       |       | 1     | Chinese         |
| 20    | Japan           | 200000000   | 0     | 0     | 1     | 1     |       |       | 2     |       | 1     |       |       | 1     | 1     |       |       |       | Japanese        |
| 20    | America         | 600000000   | 1     | 0     | 0     |       |       | 1     | 2     |       |       |       | 1     | 1     |       |       |       |       | Chinese         |
| 20    | Japan           | 5300000000  | 0     | 1     | 0     |       |       | 1     | 1     |       | 1     | 1     | 1     | 1     | 1     |       |       |       | Chinese         |
| 11    | Malaysia        | 20500000000 | 0     | 1     | 0     | 1     |       |       | 1     |       | 1     |       |       | 1     |       |       |       | 1     | Chinese         |
| 16    | Australia       | 900000000   | 0     | 0     | 1     |       |       | 1     | 1     |       |       |       |       |       |       |       |       |       | Chinese         |

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| si312 | si313 | si314 | si315 | si316 | si317 | si318 | si319           | si320 | si321           | si322 | si323       | si324 | si325  | si326 | si327 | si328 | si329 | si330 |
|-------|-------|-------|-------|-------|-------|-------|-----------------|-------|-----------------|-------|-------------|-------|--------|-------|-------|-------|-------|-------|
| 2     | 7     | 6     | 4     | 4     | 4     | 3     | France          | 3     | France          | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 3     | 4     | 7     | 8     | 2     | 12    | 1     | UK              | 1     | UK              | 0     |             | 2     | fluent | 4     | 2     | 2     | 2     | 1     |
| 1     | 7     | 6     | 8     | 8     | 7     | 8     | Germany         | 8     | Germany         | 1     | Germany     | 1     | basic  | 2     | 2     | 1     | 1     | 1     |
| 2     | 4     | 6     | 1     | 1     | 1     | 1     | UK              | 1     | UK              | 0     |             | 2     | basic  | 2     | 1     | 2     | 1     | 2     |
| 3     | 5     | 6     | 3     | 3     | 1     | 3     | Singapore       | 3     | Singapore       | 0     |             | 2     | fluent | 4     | 2     | 1     | 1     | 2     |
| 2     | 8     | 5     | 3     | 3     | 3     | 2     | Mexico          | 3     | Mexico          | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 2     | 4     | 6     | 12    | 7     | 5     | 7     | America         | 7     | America         | 0     |             | 2     | fluent | 4     | 1     | 2     | 1     | 1     |
| 3     | 6     | 6     | 8     | 2     | 6     | 2     | Antigua Barbuda | 2     | Antigua Barbuda | 0     |             | 2     | basic  | 2     | 1     | 2     | 1     | 1     |
| 2     | 6     | 6     | 2     | 2     | 6     | 4     | Singapore       | 4     | Singapore       | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 3     | 5     | 7     | 10    | 5     | 8     | 2     | Australia       | 2     | Australia       | 0     |             | 2     | fluent | 4     | 2     | 1     | 1     | 1     |
| 2     | 7     | 5     | 3     | 3     | 3     | 3     | Germany         | 3     | Germany         | 0     |             | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 3     | 6     | 6     | 8     | 2     | 14    | 18    | Spain           | 22    | Spain           | 1     | Spain       | 1     | fluent | 4     | 1     | 2     | 1     | 1     |
| 2     | 10    | 7     | 25    | 12    | 9     | 6     | America         | 6     | America         | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 3     | 6     | 5     | 1     | 1     | 1     | 1     | Singapore       | 1     | Singapore       | 0     |             | 2     | fluent | 4     | 2     | 2     | 1     | 1     |
| 2     | 8     | 6     | 7     | 7     | 3     | 12    | Singapore       | 12    | Singapore       | 1     | Germany     | 1     | fluent | 4     | 1     | 1     | 1     | 1     |
| 1     | 6     | 6     | 47    | 45    | 25    | 30    | Japan           | 30    | Japan           | 1     | Japan       | 1     | fluent | 4     | 2     | 2     | 2     | 2     |
| 2     | 7     | 5     | 6     | 6     | 8     | 6     | India           | 6     | India           | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 1     | 7     | 6     | 27    | 25    | 25    | 20    | Netherlands     | 20    | Netherlands     | 1     | Netherlands | 1     | fluent | 4     | 1     | 1     | 2     | 2     |
| 2     | 8     | 4     | 8     | 7     | 6     | 3     | Japan           | 4     | Japan           | 0     |             | 2     | basic  | 2     | 1     | 2     | 2     | 1     |
| 3     | 7     | 7     | 10    | 1     | 15    | 1     | South Korea     | 1     | South Korea     | 0     |             | 2     | basic  | 2     | 1     | 2     | 1     | 1     |
| 2     | 6     | 7     | 8     | 8     | 18    | 8     | Japan           | 8     | Japan           | 0     |             | 2     | basic  | 2     | 2     | 2     | 1     | 2     |
| 3     | 5     | 6     | 4     | 4     | 3     |       |                 |       |                 | 0     |             | 2     | fluent | 4     | 1     | 2     | 1     | 1     |
| 2     | 4     | 5     | 3     | 3     | 4     |       |                 |       |                 | 1     | Paraguay    | 1     | fluent | 4     | 1     | 1     | 1     | 2     |
| 2     | 4     | 5     | 3     | 2     | 3     |       |                 |       |                 | 1     | India       | 1     | fluent | 4     | 1     | 2     | 1     | 1     |
| 2     | 7     | 6     | 9     | 7     | 7     | 4     | Italy           | 4     | Italy           | 0     |             | 2     | fluent | 4     | 1     | 1     | 2     | 2     |
| 3     | 4     | 5     | 3     | 2     | 3     |       |                 |       |                 | 1     | Australia   | 1     | fluent | 4     | 1     | 2     | 1     | 1     |
| 2     | 7     | 5     | 11    | 11    | 10    |       |                 |       |                 | 1     | Malaysia    | 1     |        |       | 2     | 1     | 1     | 2     |
| 2     | 5     | 6     | 4     | 3     | 2     |       |                 |       |                 | 1     | Spain       | 1     | basic  | 2     | 1     | 2     | 2     | 1     |
| 2     | 5     | 5     | 8     | 8     | 8     |       |                 |       |                 | 1     | Japan       | 1     |        |       | 1     | 1     | 1     | 2     |
| 3     | 4     | 6     | 8     | 3     | 5     | 1     | Singapore       | 1     | Singapore       | 0     |             | 2     | fluent | 4     | 2     | 2     | 1     | 1     |
| 3     | 4     | 5     | 4     | 3     | 2     |       |                 |       |                 | 1     | Japan       | 1     | fluent | 4     | 1     | 2     | 2     | 1     |
| 2     | 8     | 7     | 13    | 2     | 4     | 2     | Malaysia        | 2     | Malaysia        | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 3     | 4     | 5     | 3     | 2     | 1     |       |                 |       |                 | 1     | South Korea | 1     | basic  | 2     | 1     | 2     | 2     | 1     |
| 2     | 4     | 5     | 1     | 1     | 1     | 1     | Thailand        | 1     | Thailand        | 0     |             | 2     | basic  | 2     | 1     | 1     | 2     | 2     |
| 3     | 4     | 5     | 4     | 4     | 2     | 4     | Russia          | 4     | Russia          | 0     |             | 2     | basic  | 2     | 1     | 2     | 1     | 1     |
| 2     | 10    | 6     | 8     | 8     | 8     | 5     | UK              | 5     | UK              | 0     |             | 2     | fluent | 4     | 2     | 2     | 2     | 1     |
| 3     | 3     | 5     | 2     | 2     | 1     |       |                 |       |                 | 1     | Sweden      | 1     | basic  | 2     | 1     | 2     | 1     | 1     |
| 2     | 8     | 5     | 2     | 2     | 2     | 2     | Vietnam         | 2     | Vietnam         | 0     |             | 2     | fluent | 4     | 2     | 2     | 1     | 1     |
| 3     | 4     | 5     | 3     | 3     | 2     |       |                 |       |                 | 1     | Italy       | 1     | fluent | 4     | 1     | 1     | 2     | 2     |
| 2     | 7     | 5     | 8     | 8     | 8     | 5     | America         | 5     | America         | 0     |             | 2     | basic  | 2     | 2     | 1     | 2     | 1     |
| 3     | 4     | 5     | 3     | 2     | 3     |       |                 |       |                 | 1     | Sweden      | 1     | fluent | 4     | 1     | 2     | 1     | 2     |
| 3     | 4     | 6     | 7     | 2     | 3     | 7     | Russia          | 10    | Russia          | 1     | Russia      | 1     |        |       | 2     | 2     | 2     | 2     |
| 3     | 5     | 6     | 7     | 7     | 2     | 7     | Malaysia        | 7     | Malaysia        | 0     |             | 2     |        |       | 1     | 2     | 1     | 2     |
| 2     | 7     | 6     | 13    | 2     | 10    | 2     | Belgium         | 2     | Belgium         | 0     |             | 2     | fluent | 4     | 2     | 2     | 1     | 2     |
| 3     | 3     | 5     | 4     | 3     | 2     |       |                 |       |                 | 1     | Germany     | 1     |        |       | 1     | 2     | 1     | 2     |
| 2     | 9     | 6     | 7     | 2     | 7     | 1     | Singapore       | 1     | Singapore       | 0     |             | 2     | basic  | 2     | 1     | 1     | 1     | 2     |
| 3     | 4     | 5     | 2     | 2     | 1     | 2     | America         | 2     | America         | 0     |             | 2     |        |       | 1     | 2     | 1     | 2     |
| 3     | 5     | 5     | 3     | 3     | 2     |       |                 |       |                 | 1     | Iran        | 1     |        |       | 1     | 1     | 2     | 2     |
| 3     | 5     | 6     | 7     | 1     | 7     | 2     | Japan           | 2     | Japan           | 0     |             | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 3     | 6     | 4     | 10    | 6     | 12    | 15    | New Zealand     | 15    | New Zealand     | 1     | New Zealand | 1     | fluent | 4     | 2     | 2     | 1     | 1     |
| 3     | 7     | 6     | 1     | 1     | 3     | 1     | UAE             | 5     | America         | 0     |             | 2     | fluent | 4     | 1     | 2     | 1     | 2     |
| 3     | 9     | 5     | 10    | 3     | 10    | 3     | Chile           | 3     | Chile           | 0     |             | 2     | fluent | 4     | 2     | 1     | 1     | 2     |
| 2     | 6     | 6     | 10    | 1     | 8     | 1     | Russia          | 1     | Russia          | 0     |             | 2     | basic  | 2     | 2     | 1     | 1     | 2     |
| 3     | 6     | 5     | 15    | 10    | 15    | 15    | Cuba            | 15    | Cuba            | 0     |             | 2     | basic  | 2     | 2     | 2     | 2     | 2     |
| 1     | 6     | 7     | 2     | 1     | 2     | 20    | Germany         | 40    | Germany         | 0     |             | 2     | fluent | 4     | 2     | 1     | 1     | 2     |
| 2     | 7     | 7     | 4     | 4     | 4     | 3     | Zambia          | 3     | Zambia          | 1     | Zambia      | 1     | fluent | 4     | 1     | 2     | 1     | 1     |
| 3     | 4     | 5     | 10    | 2     | 2     | 2     | South Africa    | 2     | South Africa    | 0     |             | 2     |        |       | 1     | 1     | 1     | 1     |
| 3     | 6     | 5     | 10    | 2     | 10    | 10    | Philippines     | 10    | Philippines     | 0     |             | 2     | basic  | 2     | 2     | 1     | 2     | 2     |
| 3     | 5     | 5     | 7     | 2     | 2     | 2     | Thailand        | 2     | Thailand        | 0     |             | 2     |        |       | 1     | 1     | 1     | 1     |
| 3     | 5     | 5     | 4     | 1     | 4     | 1     | America         | 1     | America         | 0     |             | 2     | fluent | 4     | 2     | 1     | 1     | 2     |
| 3     | 4     | 5     | 8     | 1     | 4     | 1     | Ukraine         | 1     | Ukraine         | 0     |             | 2     |        |       | 1     | 1     | 1     | 1     |
| 1     | 6     | 6     | 6     | 5     | 5     | 5     | Spain           | 5     | Spain           | 0     |             | 2     | fluent | 4     | 2     | 2     | 1     | 2     |
| 3     | 5     | 6     | 2     | 2     | 1     | 2     | Liberia         | 2     | Liberia         | 0     |             | 2     |        |       | 2     | 1     | 1     | 2     |
| 1     | 6     | 6     | 4     | 4     | 4     | 3.5   | America         | 3.5   | America         | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 3     | 5     | 6     | 10    | 2     | 2     | 10    | Germany         | 14    | Germany         | 1     | Germany     | 1     |        |       | 1     | 1     | 2     | 1     |
| 1     | 5     | 6     | 1     | 1     | 1     | 1     | Nigeria         | 1     | Nigeria         | 0     |             | 2     | fluent | 4     | 1     | 1     | 2     | 1     |
| 3     | 6     | 6     | 5     | 3     | 5     | 5     | Vietnam         | 5     | Vietnam         | 0     |             | 2     | basic  | 2     | 2     | 1     | 2     | 2     |
| 1     | 6     | 6     | 10    | 10    | 10    | 10    | Brazil          | 10    | Brazil          | 0     |             | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 1     | 7     | 6     | 8     | 8     | 7     | 8     | Germany         | 8     | Germany         | 1     | Germany     | 1     | fluent | 4     | 2     | 1     | 1     | 1     |
| 2     | 9     | 6     | 4     | 4     | 4     | 3     | France          | 3     | France          | 0     |             | 2     | fluent | 4     | 1     | 2     | 1     | 2     |
| 2     | 7     | 7     | 10    | 10    | 10    | 10    | America         | 10    | America         | 1     | America     | 1     | fluent | 4     | 1     | 1     | 1     | 2     |
| 2     | 8     | 6     | 10    | 2     | 5     | 1     | UK              | 1     | UK              | 0     |             | 2     | fluent | 4     | 2     | 2     | 1     | 1     |
| 2     | 6     | 6     | 25    | 25    | 25    | 20    | France          | 20    | France          | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 2     | 6     | 6     | 6     | 5     | 5     |       |                 |       |                 | 0     |             | 2     | fluent | 4     | 1     | 1     | 2     | 1     |
| 3     | 6     | 6     | 5     | 3     | 2     | 3     | Australia       | 2     | Australia       | 0     |             | 2     | fluent | 4     | 2     | 1     | 2     | 1     |
| 3     | 4     | 5     | 5     | 2     | 2     | 5     | Japan           | 9     | Japan           | 1     | Japan       | 1     | basic  | 2     | 2     | 2     | 1     | 1     |
| 3     | 5     | 6     | 5     | 2     | 3     | 3     | America         | 3     | America         | 0     |             | 2     | fluent | 4     | 2     | 1     | 2     | 1     |
| 1     | 10    | 6     | 10    | 10    | 10    | 5     | Japan           | 5     | Japan           | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 1     | 6     | 6     | 25    | 25    | 25    | 25    | Malaysia        | 25    | Malaysia        | 0     |             | 2     | fluent | 4     | 2     | 1     | 2     | 1     |
| 3     | 5     | 6     | 8     | 3     | 5     | 8     | Australia       | 14    | Australia       | 1     | Australia   | 1     | fluent | 4     | 1     | 2     | 1     | 2     |



Appendix 2 Database: Company 161 – Company 240

| si354 | si355 | si356 | si357 | si358 | si359 | si360 | si361 | si362 | si363 | si364 | si365 | si366 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 1     |
| 2     | 2     | 2     | 2     | 2     | 1     | 1     | 2     | 2     | 2     | 1     | 2     | 2     |
| 1     | 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 2     | 1     | 1     |
| 1     | 1     | 1     | 2     | 1     | 1     | 2     | 1     | 1     | 1     | 2     | 1     | 1     |
| 1     | 1     | 2     | 2     | 2     | 1     | 1     | 1     | 2     | 2     | 2     | 2     | 2     |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     |
| 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 2     | 1     | 1     | 1     |
| 1     | 2     | 2     | 1     | 1     | 1     | 2     | 2     | 1     | 1     | 1     | 2     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     |
| 1     | 1     | 2     | 1     | 1     | 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 2     | 2     | 1     | 1     |
| 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 2     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 2     | 2     | 1     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 2     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     |
| 2     | 1     | 1     | 1     | 1     | 1     | 2     | 2     | 2     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 2     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 2     | 2     | 1     |
| 2     | 2     | 1     | 2     | 2     | 1     | 1     | 1     | 2     | 2     | 1     | 1     | 1     |
| 1     | 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 2     | 1     | 1     | 2     | 2     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 1     |
| 2     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 2     | 1     | 1     | 2     |
| 2     | 1     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     |
| 2     | 2     | 1     | 2     | 2     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 2     |
| 1     | 2     | 1     | 2     | 2     | 1     | 2     | 2     | 1     | 1     | 2     | 1     | 2     |
| 2     | 2     | 2     | 2     | 2     | 2     | 2     | 1     | 2     | 2     | 1     | 1     | 1     |
| 1     | 2     | 1     | 2     | 2     | 1     | 2     | 2     | 1     | 1     | 2     | 1     | 2     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     |
| 1     | 2     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 2     | 1     | 1     |
| 2     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 2     | 2     | 1     | 2     | 2     | 1     |
| 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 2     | 2     | 1     | 2     |
| 1     | 1     | 1     | 2     | 2     | 2     | 1     | 1     | 1     | 2     | 2     | 1     | 1     |
| 1     | 2     | 2     | 2     | 1     | 2     | 2     | 2     | 1     | 2     | 2     | 1     | 1     |
| 1     | 2     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 2     |
| 2     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 2     | 1     | 2     | 2     |
| 2     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 2     | 1     | 2     | 2     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     |
| 2     | 2     | 1     | 1     | 2     | 2     | 2     | 1     | 2     | 1     | 2     | 2     | 2     |
| 1     | 2     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 2     | 2     | 1     | 1     | 2     | 1     | 1     | 1     | 2     | 2     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 2     | 2     | 1     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 2     | 2     | 1     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 2     |
| 2     | 2     | 1     | 2     | 2     | 1     | 1     | 1     | 2     | 2     | 1     | 1     | 1     |
| 2     | 2     | 1     | 2     | 2     | 2     | 1     | 2     | 1     | 2     | 2     | 2     | 2     |
| 2     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 2     | 1     | 1     | 1     |
| 2     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 2     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 2     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 2     | 2     | 2     |
| 1     | 2     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 1     | 2     | 2     | 2     |
| 1     | 2     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 1     | 2     | 2     | 2     |
| 2     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 2     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 2     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 2     | 2     | 2     |
| 1     | 2     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 1     | 2     | 1     | 2     |

Appendix 2 Database: Company 241 – Company 320

| ID  | hi1 | hi2 | hi3 | hi4 | hi5 | hi6 | hi7 | hi8 | hi9 | hi10 | hi11 | hi12 | hi13 | hi14 | hi15 | hi16 | hi17 | hi18 | hi19 | hi20 | hi21 | hi22 | hi23 | hi24 | hi25 | hi26 | hi27 | hi28 | hi29 | hi30 |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
| 241 | 3   | 4   | 3   | 4   | 4   | 3   | 4   | 3   | 4   | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 3 |
| 242 | 3   | 4   | 3   | 4   | 3   | 2   | 4   | 3   | 2   | 4    | 4    | 3    | 2    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 2    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 2    | 3 |
| 243 | 4   | 3   | 4   | 5   | 4   | 4   | 3   | 2   | 3   | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 5    | 3    | 3    | 2    | 3    | 2    | 3    |   |
| 244 | 3   | 2   | 1   | 3   | 2   | 1   | 5   | 3   | 2   | 4    | 3    | 2    | 2    | 4    | 3    | 3    | 3    | 2    | 3    | 3    | 2    | 2    | 2    | 3    | 2    | 3    | 2    | 3    | 2    | 3    |   |
| 245 | 4   | 3   | 4   | 5   | 4   | 3   | 4   | 4   | 3   | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 3    | 5    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 2    | 2    |   |
| 246 | 4   | 3   | 4   | 2   | 3   | 4   | 3   | 4   | 3   | 3    | 4    | 2    | 3    | 4    | 3    | 4    | 3    | 3    | 2    | 4    | 3    | 2    | 4    | 4    | 2    | 3    | 4    | 3    | 2    | 2    |   |
| 247 | 5   | 4   | 3   | 4   | 3   | 3   | 4   | 4   | 5   | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 2    |   |
| 248 | 4   | 5   | 3   | 4   | 5   | 4   | 5   | 4   | 3   | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 5    | 4    | 4    | 4    | 3    | 4    | 5    | 4    | 4    | 2    | 3    |   |
| 249 | 3   | 3   | 3   | 4   | 4   | 3   | 5   | 4   | 3   | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 2    |   |
| 250 | 4   | 5   | 4   | 3   | 3   | 4   | 4   | 4   | 5   | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 2    |   |
| 251 | 4   | 3   | 3   | 4   | 3   | 2   | 4   | 4   | 3   | 4    | 3    | 3    | 4    | 2    | 3    | 4    | 5    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 2    | 2    |   |
| 252 | 4   | 3   | 5   | 4   | 3   | 4   | 4   | 4   | 3   | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 5    | 4    | 4    | 3    | 4    | 3    | 2    |   |
| 253 | 4   | 3   | 4   | 3   | 4   | 3   | 4   | 4   | 3   | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 2    | 2    |   |
| 254 | 4   | 3   | 4   | 5   | 4   | 3   | 4   | 4   | 5   | 4    | 3    | 4    | 4    | 5    | 4    | 5    | 4    | 3    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 2    | 2    |   |
| 255 | 5   | 4   | 3   | 4   | 5   | 4   | 5   | 4   | 3   | 4    | 3    | 5    | 4    | 4    | 4    | 5    | 5    | 4    | 5    | 5    | 5    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 2    | 2    |   |
| 256 | 4   | 4   | 3   | 4   | 5   | 4   | 4   | 4   | 3   | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 3    | 4    | 4    | 5    | 2    |   |
| 257 | 3   | 3   | 4   | 4   | 5   | 5   | 4   | 4   | 5   | 4    | 5    | 3    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 1    |   |
| 258 | 4   | 4   | 4   | 3   | 4   | 5   | 4   | 4   | 3   | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 1    | 2    |   |
| 259 | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 4   | 3   | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 2    |   |
| 260 | 4   | 3   | 5   | 4   | 3   | 4   | 3   | 4   | 3   | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 5    | 2    | 2    |   |
| 261 | 3   | 4   | 3   | 5   | 4   | 5   | 4   | 4   | 5   | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 5    | 4    | 2    | 2    |   |
| 262 | 4   | 4   | 3   | 4   | 5   | 4   | 3   | 4   | 4   | 3    | 4    | 5    | 4    | 5    | 4    | 5    | 5    | 4    | 4    | 3    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 2    | 1    |   |
| 263 | 4   | 5   | 4   | 5   | 4   | 3   | 4   | 5   | 4   | 3    | 4    | 4    | 5    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 4    | 1    | 2    |   |
| 264 | 4   | 4   | 5   | 4   | 4   | 4   | 5   | 4   | 4   | 5    | 4    | 5    | 4    | 5    | 5    | 5    | 5    | 4    | 4    | 5    | 4    | 5    | 5    | 5    | 5    | 4    | 4    | 5    | 4    | 1    |   |
| 265 | 3   | 4   | 3   | 4   | 3   | 4   | 3   | 4   | 4   | 5    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 1    |   |
| 266 | 5   | 4   | 3   | 4   | 3   | 5   | 4   | 5   | 5   | 4    | 3    | 4    | 5    | 3    | 3    | 5    | 5    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 3    | 5    | 4    | 4    | 3    | 1    |   |
| 267 | 3   | 3   | 2   | 3   | 3   | 3   | 3   | 3   | 3   | 3    | 3    | 2    | 2    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 2    |   |
| 268 | 4   | 3   | 4   | 4   | 5   | 5   | 4   | 3   | 4   | 3    | 4    | 5    | 4    | 5    | 4    | 5    | 5    | 4    | 4    | 3    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 4    | 1    | 2    |   |
| 269 | 3   | 2   | 2   | 3   | 3   | 4   | 4   | 3   | 3   | 2    | 4    | 4    | 5    | 4    | 2    | 4    | 2    | 3    | 4    | 3    | 3    | 4    | 2    | 3    | 4    | 3    | 4    | 4    | 2    | 3    |   |
| 270 | 2   | 3   | 4   | 1   | 2   | 3   | 4   | 1   | 2   | 3    | 2    | 4    | 3    | 5    | 1    | 3    | 1    | 1    | 2    | 3    | 4    | 5    | 2    | 1    | 3    | 2    | 4    | 3    | 1    | 4    |   |
| 271 | 5   | 4   | 4   | 3   | 4   | 4   | 3   | 4   | 5   | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 5    | 2    | 2    |   |
| 272 | 4   | 5   | 4   | 3   | 3   | 2   | 3   | 3   | 3   | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 2    | 2    | 3    | 3    | 4    | 3    | 3    |   |
| 273 | 4   | 3   | 4   | 4   | 3   | 4   | 3   | 4   | 4   | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 5    | 4    | 3    | 5    | 4    | 3    | 5    | 4    | 3    | 4    | 4    | 5    | 3    | 1    |   |
| 274 | 3   | 4   | 5   | 4   | 3   | 4   | 5   | 4   | 5   | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 2    | 2    |   |
| 275 | 4   | 5   | 4   | 4   | 5   | 4   | 5   | 4   | 5   | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 5    | 2    | 2    |   |
| 276 | 1   | 2   | 1   | 3   | 2   | 4   | 5   | 2   | 3   | 4    | 2    | 5    | 4    | 3    | 3    | 4    | 2    | 4    | 3    | 4    | 3    | 3    | 2    | 3    | 4    | 3    | 4    | 3    | 2    | 3    |   |
| 277 | 4   | 5   | 4   | 4   | 5   | 4   | 4   | 5   | 4   | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 5    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 2    | 2    |   |
| 278 | 1   | 2   | 3   | 4   | 3   | 4   | 1   | 2   | 2   | 3    | 3    | 2    | 2    | 3    | 2    | 3    | 2    | 2    | 3    | 3    | 2    | 2    | 2    | 3    | 4    | 2    | 3    | 4    | 3    | 4    |   |
| 279 | 3   | 3   | 3   | 3   | 4   | 4   | 4   | 4   | 3   | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 2    | 3    |   |
| 280 | 1   | 2   | 3   | 2   | 4   | 4   | 1   | 2   | 2   | 3    | 4    | 3    | 4    | 2    | 3    | 1    | 1    | 2    | 3    | 2    | 4    | 2    | 3    | 4    | 3    | 2    | 2    | 2    | 2    | 3    |   |
| 281 | 4   | 3   | 4   | 4   | 3   | 4   | 4   | 4   | 3   | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 2    | 2    |   |
| 282 | 4   | 3   | 4   | 5   | 4   | 3   | 3   | 4   | 3   | 4    | 4    | 5    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 5    | 5    | 4    | 3    | 4    | 2    | 3    | 2    | 4    |   |
| 283 | 4   | 5   | 4   | 4   | 3   | 5   | 4   | 3   | 4   | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 1    | 2    |   |
| 284 | 4   | 4   | 3   | 4   | 3   | 4   | 3   | 4   | 3   | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    |   |
| 285 | 4   | 5   | 4   | 3   | 4   | 3   | 3   | 4   | 4   | 5    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 1    |   |
| 286 | 4   | 3   | 4   | 3   | 4   | 4   | 4   | 3   | 3   | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    |   |
| 287 | 3   | 4   | 3   | 4   | 4   | 3   | 4   | 4   | 3   | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    |   |
| 288 | 3   | 4   | 3   | 4   | 4   | 3   | 4   | 3   | 4   | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 2    | 3    |   |
| 289 | 3   | 3   | 3   | 4   | 3   | 4   | 3   | 4   | 3   | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 4    |   |
| 290 | 4   | 4   | 3   | 4   | 3   | 4   | 3   | 4   | 4   | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 2    | 3    |   |
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| 292 | 4   | 3   | 3   | 4   | 3   | 4   | 3   | 4   | 3   | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 2    | 2    |   |
| 293 | 4   | 3   | 4   | 3   | 4   | 3   | 3   | 3   | 3   | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 2    |   |
| 294 | 4   | 3   | 4   | 3   | 3   | 5   | 4   | 3   | 4   | 4    | 3    | 5    | 4    | 4    | 5    | 5    | 5    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 1    | 1    |   |
| 295 | 3   | 3   | 3   | 4   | 4   | 4   | 3   | 4   | 3   | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 3    |   |
| 296 | 4   | 5   | 5   | 4   | 3   | 3   | 4   | 4   | 3   | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 5    | 2    | 2    |   |
| 297 | 5   | 5   | 4   | 5   | 5   | 5   | 4   | 5   | 5   | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 5    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 5    | 2    | 1    |   |
| 298 | 4   | 4   | 5   | 4   | 3   | 4   | 4   | 5   | 4   | 4    | 5    | 3    | 4    | 3    | 4    | 5    | 4    | 5    | 4    | 4    | 3    | 4    | 5    | 5    | 4    | 5    | 3    | 5    | 2    | 5    |   |
| 299 | 4   | 3   | 4   | 3   | 4   | 3   | 4   | 3   | 4   | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    |   |
| 300 | 4   | 5   | 4   | 3   | 4   | 4   | 3   | 4   | 4   | 5    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 5    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 3    | 1    |   |
| 301 | 4   | 4   | 5   | 5   | 4   | 4   | 3   | 3   | 3   | 4    | 4    | 5    | 5    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 5    | 4    | 4    | 3    | 3    | 3    |   |
| 302 | 4   | 4   | 5   | 5   | 4   | 3   | 3   | 4   | 4   | 5    | 5    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 5    | 5    | 4    | 3    | 3    | 3    | 4    | 4    | 5    | 5    | 2    | 2    |   |
| 303 | 5   | 4   | 3   | 4   | 5   | 4   | 3   | 4   | 5   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |

Appendix 2 Database: Company 241 – Company 320

| hi31 | hi32 | hi33 | hi34 | hi35 | hi36 | hi37 | hi38 | hi39 | hi40 | hi41 | hi42 | hi43 | hi44 | hi45 | hi46 | hi47 | hi48 | hi49 | hi50 | hi51 | hi52 | hi53 | hi54 | hi55 | hi56 | hi57 | hi58 | hi59 | hi60 |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
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| 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    |   |
| 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    |   |
| 4    | 3    | 3    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    |   |
| 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    |   |
| 3    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    |   |
| 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 4    |   |
| 4    | 4    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 3    | 5    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 4    |   |
| 4    | 4    | 5    | 4    | 5    | 3    | 4    | 3    | 5    | 5    | 4    | 5    | 5    | 4    | 4    | 5    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 5    | 3    | 4    | 3    |   |
| 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    |   |
| 4    | 5    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 3    | 4    | 5    | 4    | 4    | 4    |   |
| 3    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 4    |   |
| 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 3    | 3    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 4    | 3    |   |
| 5    | 3    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 5    | 3    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 5    | 3    | 4    | 4    | 4    | 4    | 3    | 5    | 4    | 4    | 3    | 4    |   |
| 3    | 4    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 3    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 5    | 4    |   |
| 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 5    | 4 |
| 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 2    | 3    | 4    | 3    | 2    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 3    |   |
| 4    | 5    | 3    | 4    | 5    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 5    | 5    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 5    | 4    | 5    | 5    | 4    |      |      |      |   |





Appendix 2 Database: Company 241 – Company 320

| hi91 | hi92 | hi93 | hi94 | hi95 | hi96 | hi97 | hi98 | hi99 | hi100 | hi101 | hi102 | hi103 | hi104 | hi105 | hi106 | hi107 | hi108 | hi109 | hi110 | hi111 | hi112 | hi113 | hi114 | hi115 | hi116 | hi117 | hi118 | hi119 | hi120 |   |
|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 2    | 3    | 2    | 3    | 3    | 4    | 4    | 3    | 3    | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4 |
| 2    | 3    | 2    | 4    | 4    | 3    | 4    | 3    | 2    | 2     | 4     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3 |
| 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     |   |
| 3    | 2    | 3    | 2    | 3    | 2    | 3    | 3    | 2    | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 2     |   |
| 4    | 4    | 4    | 4    | 3    | 4    | 5    | 4    | 5    | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 2     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     |   |
| 4    | 3    | 4    | 3    | 4    | 4    | 3    | 2    | 4    | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 5     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     |   |
| 3    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 3     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     |   |
| 4    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 3     | 2     | 2     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     |   |
| 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     |   |
| 5    | 4    | 3    | 4    | 3    | 4    | 5    | 4    | 3    | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     |   |
| 4    | 5    | 5    | 5    | 4    | 4    | 4    | 3    | 3    | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     |   |
| 4    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 3     |   |
| 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     |   |
| 4    | 5    | 4    | 4    | 3    | 4    | 3    | 4    | 5    | 3     | 3     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     |   |
| 4    | 5    | 4    | 4    | 3    | 5    | 4    | 4    | 5    | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 5     | 5     | 1     | 1     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     |   |
| 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 3     |   |
| 3    | 5    | 3    | 4    | 3    | 5    | 3    | 4    | 5    | 3     | 5     | 3     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 3     | 3     | 4     | 4     |   |
| 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 5     |   |
| 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 3    | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     |   |
| 4    | 5    | 4    | 5    | 5    | 4    | 4    | 4    | 5    | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     |   |
| 4    | 4    | 5    | 3    | 4    | 5    | 4    | 3    | 4    | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 3     | 3     |   |
| 4    | 5    | 3    | 4    | 3    | 4    | 5    | 4    | 5    | 3     | 5     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 3     |   |
| 4    | 5    | 4    | 4    | 3    | 3    | 4    | 5    | 4    | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 2     | 2     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     |   |
| 4    | 4    | 5    | 5    | 4    | 5    | 4    | 5    | 5    | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 2     | 2     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     |   |
| 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     |   |
| 4    | 5    | 4    | 4    | 5    | 4    | 5    | 3    | 4    | 3     | 5     | 5     | 4     | 3     | 4     | 5     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 5     | 4     |   |
| 4    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     |   |
| 4    | 3    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 5     |   |
| 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 5     | 3     | 4     | 3     | 4     |   |
| 4    | 3    | 1    | 1    | 3    | 3    | 4    | 2    | 3    | 3     | 3     | 1     | 3     | 4     | 3     | 2     | 3     | 4     | 2     | 2     | 3     | 4     | 2     | 3     | 4     | 1     | 3     | 4     | 2     | 3     |   |
| 4    | 5    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 3     |   |
| 3    | 3    | 2    | 3    | 3    | 2    | 3    | 4    | 3    | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 4     |   |
| 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     |   |
| 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 5     | 4     | 4     | 4     |   |
| 4    | 4    | 5    | 4    | 3    | 5    | 4    | 4    | 5    | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     |   |
| 4    | 3    | 4    | 3    | 3    | 4    | 5    | 4    | 3    | 4     | 3     | 5     | 3     | 4     | 4     | 4     | 5     | 2     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     |   |
| 5    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     |   |
| 3    | 4    | 4    | 3    | 3    | 2    | 2    | 4    | 4    | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 1     | 1     | 2     | 2     | 2     | 2     | 2     | 2     | 3     | 3     |   |
| 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     |   |
| 4    | 3    | 4    | 2    | 3    | 4    | 3    | 3    | 2    | 3     | 4     | 4     | 2     | 4     | 2     | 3     | 2     | 4     | 3     | 1     | 2     | 3     | 2     | 3     | 4     | 4     | 3     | 2     | 2     | 3     |   |
| 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     |   |
| 4    | 2    | 4    | 4    | 3    | 4    | 2    | 5    | 3    | 4     | 3     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     |   |
| 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 5     |   |
| 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3     | 4     | 3     | 5     | 3     | 4     | 4     | 4     | 5     | 2     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     |   |
| 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     |   |
| 4    | 4    | 5    | 5    | 4    | 4    | 4    | 3    | 4    | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     |   |
| 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     |   |
| 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     |   |
| 4    | 3    | 2    | 3    | 4    | 4    | 3    | 3    | 4    | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     |   |
| 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     |   |
| 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     |   |
| 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     |   |
| 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     |   |
| 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 5     | 5     | 4     | 4     | 3     | 4     |   |
| 4    | 3    | 4    | 4    | 3    | 5    | 4    | 3    | 3    | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     |   |
| 4    | 4    | 5    | 4    | 5    | 4    | 4    | 3    | 4    | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     |   |
| 4    | 5    | 5    | 4    | 5    | 5    | 4    | 5    | 5    | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 3     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 4     | 3     |   |
| 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     |   |
| 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     |   |
| 5    | 3    | 4    | 4    | 5    | 3    | 4    | 4    | 4    | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 3     |   |
| 4    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 5     | 4     |   |
| 3    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 3     | 4     |   |
| 4    | 3    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 3     | 1     | 2     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 5     |   |
| 4    | 5    | 5    | 4    | 3    | 3    | 4    | 4    | 5    | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 3     |   |
| 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     |       |       |       |   |

Appendix 2 Database: Company 241 – Company 320

| hi121 | hi122 | hi123 | hi124 | hi125 | hi126 | hi127 | hi128 | hi129 | hi130 | hi131 | hi132 | hi133 | hi134 | hi135 | hi136 | hi137 | hi138 | hi139 | hi140 | hi141 | hi142 | hi143 | hi144 | hi145 | hi146 | hi147 | hi148 | hi149 | hi150 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 4     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 4     | 2     | 3     | 4     | 2     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 2     | 2     | 2     | 3     | 4     | 4     | 3 |
| 2     | 4     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 2     | 3     | 3     | 2     | 2     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 2     | 2     | 2     | 4     | 3     | 4     | 4 |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 2     | 3     | 2     | 4     | 3     | 2     | 3     | 2     | 3     | 4     | 3     | 4     | 4     | 2     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 3     |   |
| 2     | 2     | 2     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     |   |
| 5     | 4     | 4     | 3     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     |   |
| 3     | 2     | 4     | 4     | 3     | 3     | 4     | 2     | 4     | 3     | 2     | 2     | 3     | 4     | 2     | 2     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 2     | 4     | 3     | 4     | 4     | 3     | 3     |   |
| 4     | 4     | 4     | 4     | 3     | 4     | 5     | 2     | 3     | 2     | 4     | 3     | 2     | 4     | 2     | 3     | 4     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 2     | 4     | 4     | 3     | 4     |   |
| 4     | 3     | 4     | 4     | 5     | 4     | 3     | 2     | 5     | 2     | 4     | 3     | 2     | 5     | 2     | 3     | 4     | 3     | 4     | 5     | 1     | 5     | 4     | 3     | 3     | 2     | 4     | 3     | 4     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 2     | 3     | 4     | 3     | 4     | 2     | 4     | 4     |   |
| 4     | 3     | 4     | 4     | 3     | 3     | 4     | 2     | 5     | 2     | 4     | 3     | 2     | 3     | 2     | 2     | 5     | 4     | 4     | 5     | 2     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 1     | 4     | 5     | 4     | 4     | 1     | 4     | 5     | 4     | 3     |   |
| 4     | 4     | 4     | 3     | 5     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 1     | 4     | 2     | 3     | 4     | 3     | 4     | 5     | 2     | 5     | 4     | 3     | 4     | 3     | 4     | 1     | 5     | 4     |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     |   |
| 5     | 4     | 3     | 4     | 5     | 3     | 4     | 3     | 4     | 2     | 4     | 5     | 3     | 4     | 3     | 2     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 3     | 2     | 5     | 4     | 3     | 4     |   |
| 4     | 4     | 5     | 4     | 3     | 4     | 4     | 2     | 5     | 2     | 4     | 5     | 2     | 5     | 2     | 5     | 4     | 4     | 5     | 4     | 2     | 5     | 4     | 3     | 5     | 2     | 5     | 4     | 3     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 4     | 3     | 2     | 5     | 2     | 4     | 4     | 2     | 3     | 2     | 2     | 4     | 4     | 5     | 4     | 2     | 4     | 4     | 3     | 4     | 2     | 4     | 4     | 4     | 3     |   |
| 5     | 4     | 4     | 4     | 5     | 5     | 4     | 1     | 4     | 2     | 3     | 5     | 1     | 4     | 1     | 1     | 3     | 3     | 4     | 4     | 2     | 5     | 5     | 4     | 4     | 2     | 4     | 5     | 5     | 3     |   |
| 2     | 4     | 4     | 5     | 4     | 4     | 5     | 2     | 4     | 1     | 4     | 5     | 2     | 4     | 1     | 2     | 4     | 5     | 4     | 5     | 2     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 3     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 2     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 2     | 4     | 3     |   |
| 4     | 5     | 4     | 4     | 4     | 5     | 3     | 2     | 4     | 2     | 4     | 5     | 2     | 4     | 3     | 2     | 5     | 4     | 5     | 4     | 1     | 5     | 4     | 4     | 5     | 2     | 5     | 4     | 4     | 5     |   |
| 4     | 4     | 5     | 4     | 3     | 4     | 4     | 1     | 4     | 2     | 5     | 4     | 3     | 3     | 2     | 2     | 4     | 5     | 4     | 4     | 1     | 4     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     |   |
| 4     | 3     | 4     | 5     | 4     | 3     | 4     | 1     | 4     | 1     | 5     | 5     | 2     | 3     | 2     | 3     | 4     | 4     | 5     | 3     | 2     | 3     | 4     | 5     | 4     | 3     | 5     | 4     | 3     | 5     |   |
| 3     | 4     | 5     | 4     | 5     | 3     | 4     | 1     | 4     | 2     | 4     | 5     | 2     | 3     | 2     | 5     | 4     | 4     | 5     | 2     | 4     | 5     | 4     | 5     | 2     | 4     | 5     | 4     | 5     | 3     |   |
| 3     | 4     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 2     | 3     | 4     | 2     | 4     | 1     | 2     | 4     | 5     | 4     | 5     | 1     | 4     | 4     | 5     | 4     | 2     | 4     | 5     | 4     | 5     |   |
| 4     | 5     | 4     | 4     | 3     | 4     | 3     | 2     | 3     | 2     | 3     | 4     | 2     | 5     | 2     | 2     | 3     | 4     | 4     | 3     | 2     | 4     | 5     | 4     | 3     | 2     | 4     | 4     | 3     | 4     |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 3     | 2     | 5     | 3     | 4     | 3     | 2     | 5     | 2     | 3     | 4     | 5     | 4     | 5     | 2     | 3     | 4     | 5     | 4     | 5     | 4     | 1     | 4     | 5     |   |
| 2     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 4     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 2     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 5     | 2     | 4     | 4     | 3     | 4     | 1     | 2     | 4     | 3     | 4     | 4     | 1     | 4     | 5     | 4     | 5     | 2     | 4     | 5     | 4     | 5     |   |
| 3     | 4     | 3     | 3     | 3     | 4     | 3     | 2     | 4     | 2     | 4     | 4     | 2     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     |   |
| 1     | 4     | 5     | 1     | 2     | 3     | 4     | 1     | 1     | 3     | 1     | 2     | 3     | 4     | 4     | 5     | 4     | 3     | 5     | 5     | 3     | 4     | 2     | 3     | 2     | 2     | 2     | 2     | 4     | 3     |   |
| 4     | 4     | 5     | 4     | 5     | 4     | 4     | 2     | 5     | 2     | 4     | 5     | 2     | 4     | 2     | 2     | 4     | 5     | 4     | 4     | 2     | 4     | 5     | 4     | 4     | 4     | 2     | 4     | 4     | 5     |   |
| 3     | 3     | 3     | 2     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 2     | 3     | 3     | 3     | 4     | 2     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 2     | 3     |   |
| 5     | 4     | 5     | 4     | 5     | 4     | 5     | 2     | 4     | 5     | 2     | 4     | 5     | 2     | 1     | 4     | 5     | 4     | 5     | 2     | 5     | 4     | 5     | 2     | 5     | 4     | 4     | 1     | 4     | 5     |   |
| 5     | 4     | 5     | 5     | 4     | 5     | 4     | 1     | 4     | 1     | 5     | 4     | 1     | 4     | 1     | 2     | 4     | 5     | 5     | 4     | 1     | 4     | 4     | 5     | 4     | 1     | 5     | 4     | 4     | 5     |   |
| 4     | 5     | 4     | 5     | 4     | 4     | 5     | 2     | 4     | 1     | 5     | 4     | 1     | 4     | 2     | 3     | 4     | 5     | 4     | 5     | 2     | 5     | 4     | 5     | 4     | 1     | 4     | 5     | 4     | 5     |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 4     | 4     | 2     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     |   |
| 5     | 4     | 5     | 4     | 5     | 4     | 2     | 5     | 2     | 4     | 5     | 2     | 4     | 5     | 2     | 1     | 4     | 4     | 5     | 4     | 2     | 5     | 4     | 4     | 5     | 2     | 5     | 4     | 5     | 4     |   |
| 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 2     | 2     | 3     | 4     | 2     | 4     | 3     | 3     | 3     | 2     | 2     | 4     | 2     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     |   |
| 3     | 3     | 4     | 3     | 4     | 4     | 4     | 2     | 4     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 3     | 1     | 5     | 3     | 2     | 4     | 3     | 4     | 4     | 5     | 1     | 3     | 1     | 4     | 4     | 3     | 2     | 3     | 2     | 4     | 4     | 3     | 4     | 3     | 2     | 1     | 2     | 4     | 3     | 3     |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 2     | 3     | 2     | 2     | 3     | 4     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 4     |   |
| 4     | 3     | 2     | 5     | 4     | 3     | 4     | 3     | 2     | 3     | 5     | 4     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 2     | 3     | 4     | 2     | 2     |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 2     | 4     | 5     | 3     | 4     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 1     | 3     | 1     | 4     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 2     | 1     | 2     | 4     |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 2     | 3     | 2     | 2     | 3     | 4     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 4     |   |
| 4     | 3     | 2     | 5     | 4     | 3     | 4     | 3     | 2     | 3     | 5     | 4     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 2     | 3     | 4     | 2     | 5     |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 2     | 4     | 5     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 3     | 1     | 5     | 3     | 2     | 4     | 3     | 4     | 4     | 5     | 1     | 3     | 1     | 4     | 4     | 3     | 2     | 3     | 2     | 4     | 4     | 3     | 4     | 3     | 2     | 1     | 2     | 3     | 4     | 3     |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 2     | 3     | 2     | 2     | 3     | 4     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 4     |   |
| 4     | 3     | 2     | 5     | 4     | 3     | 4     | 3     | 2     | 3     | 5     | 4     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 2     | 3     | 4     | 2     | 5     |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 2     | 4     | 5     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     |   |
| 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 2     | 3     | 2     | 2     | 3     | 4     | 4     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 3     | 4     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 2     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     |   |
| 4     | 3     | 4     | 4     | 4     | 5     | 4     | 2     | 4     | 2     | 3     | 3     | 2     | 4     | 2     | 3     | 4     | 4     | 5     | 4     | 2     | 5     | 4     | 4     | 3     | 2     | 4     | 5     | 5     | 5     |   |
| 4     | 5     | 5     | 4     | 4     | 3     | 4     | 1     | 4     | 2     | 3     | 4     | 2     | 3     | 2     | 3     | 4     | 4     | 5     | 4     | 2     | 3     | 4     | 4     | 5     | 2     | 3     | 4     | 4     | 3     |   |
| 3     | 4     | 5     | 5     | 4     | 4     | 3     | 1     | 4     | 2     | 4     | 4     | 1     | 3     | 2     | 1     | 4     | 5     | 5     | 4     | 1     | 4     | 5     | 3     | 5     | 2     | 1     | 4     | 4     | 5     |   |
| 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4     |   |
| 3     | 5     | 4     | 5     | 4     | 4     | 5     | 2     | 5     | 2     | 4     | 4     | 1     | 5     | 2     | 2     | 5     | 4     | 5     | 3     | 1     | 4     | 3     | 4     | 4     |       |       |       |       |       |   |



Appendix 2 Database: Company 241 – Company 320

| hi181 | hi182 | hi183 | hi184 | hi185 | hi186 | hi187 | hi188 | hi189 | hi190 | hi191 | hi192 | hi193 | hi194 | hi195 | hi196 | hi197 | hi198 | hi199 | hi200 | hi201 | hi202 | hi203 | hi204 | hi205 | hi206 | hi207 | hi208 | hi209 | hi210 |   |   |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     |   |   |   |
| 4     | 3     | 4     | 3     | 2     | 4     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 2     | 2     | 4     | 5     | 3     | 2     | 4     | 4     | 3     | 4     | 4     | 2 |   |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     |   |   |   |
| 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 2     | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 3     |   |   |   |
| 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 3 |   |   |
| 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 5     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 4     |   |   |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     |   |   |   |
| 4     | 3     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3 |   |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3 |   |   |
| 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4 |   |   |
| 3     | 3     | 3     | 4     | 4     | 2     | 2     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4 |   |   |
| 4     | 3     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 4 |   |   |
| 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2 | 4 |   |
| 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 5 |   |   |
| 5     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5 |   |   |
| 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3 |   |   |
| 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 3     | 4     | 4     | 5     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 3 |   |   |
| 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4 | 3 |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 3 |   |   |
| 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4 |   |   |
| 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 3 | 4 |   |
| 4     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 5     | 5     | 4     | 5 |   |   |
| 4     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5 |   |   |
| 4     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 5 |   |   |
| 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3 |   |   |
| 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 5     | 3     | 4     | 5     | 3     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 3     | 5     | 3     | 4     | 5     | 4     | 3     | 4     | 5 | 4 |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3 |   |   |
| 4     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4 |   |   |
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3 | 3 |   |
| 1     | 2     | 2     | 4     | 3     | 1     | 2     | 2     | 3     | 3     | 4     | 4     | 3     | 1     | 2     | 3     | 1     | 2     | 3     | 2     | 4     | 5     | 1     | 2     | 3     | 4     | 5     | 4     | 5     | 1     | 2 |   |   |
| 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4 |   |   |
| 3     | 4     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 4 |   |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4 |   |   |
| 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 5 | 4 |   |
| 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5 | 4 |   |
| 2     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 3 | 4 |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 5 | 4 |   |
| 1     | 2     | 3     | 2     | 4     | 3     | 2     | 2     | 3     | 2     | 3     | 4     | 5     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 2     | 1     | 5 | 1 | 2 |
| 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 |   |   |
| 1     | 2     | 3     | 4     | 2     | 2     | 3     | 2     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 1     | 2     | 3     | 4     | 3     | 2     | 2     | 1     | 3     | 2     | 4     | 3     | 4     | 3     | 4     | 2 | 3 |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4 | 3 |   |
| 5     | 4     | 3     | 2     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 2     | 5     | 4     | 3     | 2     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 2     | 5     | 4     | 4 |   |   |
| 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 3     | 3     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3 | 4 |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 | 4 |   |
| 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 3     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5 | 4 |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3 | 4 |   |
| 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4 | 3 |   |
| 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3 | 4 |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4 | 3 |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4 | 3 |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4 | 3 |   |
| 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5 | 4 |   |
| 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4 | 4 |   |
| 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 3     | 4     | 5     | 5     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4 | 4 |   |
| 4     | 5     | 5     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 5 | 5 |   |
| 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5 | 5 |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3 | 4 |   |
| 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 5     | 5 | 5 |   |
| 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 4 | 5 |   |
| 4     | 3     | 4     | 5     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 4 | 3 |   |
| 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 5 | 4 |   |
| 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 3 | 4 |   |

Appendix 2 Database: Company 241 – Company 320

| hi211 | hi212 | hi213 | hi214 | hi215 | hi216 | hi217 | hi218 | hi219 | hi220 | hi221 | hi222 | hi223 | hi224 | hi225 | hi226 | hi227 | hi228 | hi229 | hi230 | hi231 | hi232 | hi233 | hi234 | hi235 | hi236 | hi237 | hi238 | hi239 | hi240 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 4     |   |
| 2     | 2     | 2     | 4     | 2     | 4     | 2     | 2     | 2     | 3     | 4     | 4     | 2     | 2     | 2     | 3     | 5     | 2     | 2     | 2     | 2     | 2     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4 |
| 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     |   |
| 2     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 2     | 3     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 3     | 3     | 3     | 2     | 3     | 4     | 2     |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 3     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 5     | 4     | 4     | 3     | 4     |   |
| 5     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 2     | 3     | 4     | 4     | 3     | 2     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     |   |
| 3     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     |   |
| 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     |   |
| 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     |   |
| 4     | 3     | 4     | 3     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     |   |
| 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     |   |
| 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     |   |
| 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     |   |
| 3     | 4     | 5     | 3     | 4     | 4     | 3     | 3     | 5     | 3     | 5     | 4     | 5     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 3     | 3     | 4     | 5     | 3     | 4     | 5     | 4     |   |
| 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     |   |
| 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     |   |
| 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     |   |
| 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     |   |
| 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 5     | 3     | 4     | 5     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 5     |   |
| 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     |   |
| 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     |   |
| 5     | 4     | 3     | 3     | 4     | 4     | 5     | 3     | 3     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     |   |
| 3     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 3     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 3     | 4     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 5     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 3     | 4     | 3     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     |   |
| 3     | 2     | 3     | 4     | 1     | 2     | 3     | 3     | 2     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 2     | 4     | 1     | 3     | 4     | 3     | 1     | 3     | 1     | 1     | 3     | 5     | 2     | 3     |   |
| 4     | 5     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 5     |   |
| 3     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     |   |
| 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 4     |   |
| 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     |   |
| 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 5     | 4     | 4     |   |
| 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     |   |
| 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 4     | 2     | 4     | 1     | 1     | 3     | 3     | 4     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 2     | 2     | 3     | 4     | 2     | 2     | 3     | 2     | 2     | 3     | 2     | 3     | 3     | 2     |   |
| 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     |   |
| 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     |   |
| 5     | 4     | 3     | 4     | 3     | 4     | 5     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     |   |
| 4     | 3     | 4     | 5     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     |   |
| 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     |   |
| 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     |   |
| 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     |   |
| 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     |   |
| 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     |   |
| 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     |   |
| 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     |   |
| 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     |   |
| 5     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     |   |
| 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 3     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     |   |
| 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 3     | 4     | 3     | 3     | 4     | 5     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 5     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 5     |   |
| 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     |   |
| 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     |   |
| 5     | 4     | 4     | 3     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 5     |   |
| 5     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     |       |       |       |       |   |

Appendix 2 Database: Company 241 – Company 320

| hi241 | hi242 | hi243 | hi244 | hi245 | hi246 | hi247 | hi248 | hi249 | hi250 | hi251 | hi252 | hi253 | hi254 | hi255 | hi256 | hi257 | hi258 | hi259 | hi260 | hi261 | hi262 | hi263 | hi264 | hi265 | hi266 | hi267 | hi269 | hi270 |    |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 2     |       | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 100   | 0     | 0  |
| 4     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 2     |       | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 2     | 3     | 40    | 20    | 40    |    |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 1     | 20    | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     |       |       |       |       | 0     | 0     | 100   |    |
| 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 1     | 40    | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 60    | 35    | 5     |       |    |
| 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 1     | 10    | 4     | 4     | 2     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 5     | 4     | 4     | 100   | 0     | 0     |    |
| 3     | 4     | 3     | 4     | 2     | 4     | 3     | 2     | 3     | 4     |       |       | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 40    | 30    | 30    |    |
| 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 2     |       | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 100   | 0     | 0     |    |
| 3     | 5     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 1     | 18    | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 3     | 4     | 50    | 10    | 40    |    |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 1     | 18    | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 100   | 0     | 0     |    |
| 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 1     | 20    | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 40    | 20    | 40    |    |
| 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 1     | 12    | 3     | 2     | 3     | 3     | 3     | 4     | 4     | 2     | 3     | 4     | 4     | 3     | 3     | 100   | 0     | 0     |       |    |
| 3     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 1     | 13    | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 60    | 10    | 30    |    |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 1     | 15    | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 3     | 4     | 82.67 | 0     | 0     |    |
| 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 1     | 15    | 3     | 4     | 5     | 4     | 3     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 20    | 20    | 60    |    |
| 4     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 1     | 30    | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 100   | 0     | 0     |    |
| 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 1     | 35    | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 20    | 10    | 70    |    |
| 4     | 5     | 3     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 1     | 9     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 20    | 20    | 60    |       |    |
| 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 1     | 20    | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 40    | 20    | 40    |    |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 1     | 15    | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 71.1  | 0     | 0     |    |
| 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 1     | 28    | 4     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 0     | 0     | 100   |    |
| 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 1     | 20    | 4     | 5     | 3     | 4     | 4     | 4     | 3     | 5     | 4     | 5     | 3     | 4     | 5     | 4     | 50    | 20    | 30    |    |
| 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 1     | 20    | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 60    | 30    | 10    |    |
| 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 1     | 15    | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 40    | 20    | 40    |    |
| 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 1     | 25    | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 0     | 0     | 100   |    |
| 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 1     | 10    | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 50    | 20    | 30    |    |
| 5     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 1     | 24    | 4     | 5     | 4     | 5     | 3     | 4     | 5     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 30    | 35    | 15    |    |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 1     | 5     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 50    | 25    | 25    |    |
| 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 1     | 25    | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 67.29 | 14.73 | 17.98 |    |
| 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 1     | 50    | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 20    | 30    | 50    |    |
| 2     | 3     | 4     | 3     | 4     | 2     | 5     | 1     | 2     | 3     | 1     | 10    | 1     | 3     | 4     | 2     | 3     | 1     | 2     | 1     | 3     | 2     | 1     | 3     | 2     | 4     | 60    | 10    | 30    |    |
| 4     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 1     | 30    | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 100   | 0     | 0     |    |
| 4     | 3     | 3     | 2     | 3     | 3     | 4     | 4     | 4     | 3     | 1     | 30    | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 10    | 30    | 60    |       |    |
| 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 1     | 10    | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 40    | 20    | 50    |    |
| 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 1     | 25    | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 84.85 | 0     | 15.15 |    |
| 5     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 1     | 10    | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 20    | 10    | 70    |    |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 1     | 12    | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 30    | 45    | 25    |    |
| 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 1     | 8     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 40    | 20    | 40 |
| 3     | 2     | 4     | 3     | 4     | 4     | 2     | 3     | 4     | 5     | 2     |       | 2     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 30    | 30    | 40    |    |
| 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 1     | 10    | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 100   | 0     | 0     |    |
| 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 1     | 15    | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 50    | 10    | 40    |    |
| 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 1     | 10    | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 100   | 0     | 0     |    |
| 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4     | 1     | 12    | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 100   | 0     | 0     |    |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 1     | 30    | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 40    | 30    | 30 |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 1     | 10    | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 100   | 0     | 0  |
| 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 1     | 28    | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 60    | 20    | 20    |    |
| 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 1     | 10    | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 100   | 0     | 0     |    |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 2     |       | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 100   | 0     | 0     |    |
| 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 2     |       | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 30    | 0     | 70    |    |
| 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 2     |       | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 69    | 0     | 31    |    |
| 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 2     |       |       | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 100   | 0     | 0  |
| 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 1     | 7     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 100   | 0     | 0     |    |
| 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 2     |       | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 31    | 0     | 69    |    |
| 3     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 1     | 18    | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 55    | 30    | 15    |    |
| 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 1     | 9     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 69.7  | 0     | 0     |    |
| 5     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 2     |       | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 0     | 0     | 100   |       |    |
| 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 1     | 26    | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 100   | 0     | 0     |    |
| 4     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 4     | 2     |       | 5     | 4     | 4     | 5     | 3     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 100   | 0     | 0  |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 1     | 10    | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 0     | 0     | 100   |    |
| 4     | 4     | 4     | 3     | 5     | 5     | 4     | 4     | 3     | 4     | 1     | 22    | 4     | 4     | 3     | 4     | 5     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 100   | 0     | 0     |    |
| 5     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 1     | 20    | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 0     | 20    | 80 |
| 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 1     | 23    | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 66.54 | 0     | 33.46 |    |
| 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 3     | 1     | 20    | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 100   | 0     | 0     |    |
| 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 1     | 18    | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 68    | 22    | 10    |    |
| 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 1     | 30    | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 100   | 0     | 0  |
| 4     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 1     | 9     | 3     | 5     | 4     | 5     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 100   | 0     | 0     |    |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 1     | 22    | 3     | 3     | 4     | 3     | 3     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 60    |       |       |    |

Appendix 2 Database: Company 241 – Company 320

| hi271 | hi272  | hi273 | hi274 | hi275 | hi276 | hi277        | hi278 | hi279        | hi280  | hi281 | hi282 | hi283 | hi284 | hi285        | hi286        | hi287 | hi288 | hi289 | hi290 |
|-------|--------|-------|-------|-------|-------|--------------|-------|--------------|--------|-------|-------|-------|-------|--------------|--------------|-------|-------|-------|-------|
| 0     | 11081  | 8     | 1992  | 17    | 13    | 12678000000  | 11    | 49672000000  |        |       |       | 1998  | 5     | Germany      | 57643000000  | 5714  | 72    | 65    | 35    |
| 0     | 150000 | 9     | 1995  | 14    | 16    | 40735000000  | 11    | 39690000000  | 15     |       |       | 2003  | 6     | America      | 50200000000  | 85    | 85    | 15    | 12    |
| 0     | 34000  | 9     | 1997  | 17    | 13    | 61230000000  | 7     | 38070000000  | 40     | 60    |       | 1998  | 5     | Canada       |              | 5000  | 85    | 90    | 10    |
| 0     | 35000  | 9     | 1998  | 14    | 16    | 75000000000  | 8     | 40000000000  | 30     |       |       | 2012  | 8     | South Korea  | 20000000     | 500   | 80    | 80    | 20    |
| 0     | 12900  | 8     | 1995  | 17    | 20    | 75000000000  | 8     | 35000000000  | 40     | 43.5  | 25    | 2005  | 6     | Vietnam      | 4500000000   | 7500  | 65    | 25    | 55    |
| 0     | 200000 | 9     | 1994  | 17    | 20    | 110320000000 | 11    | 100340000000 | 12     |       |       | 2004  | 6     | Japan        | 2000000000   | 70000 | 80    | 80    | 20    |
| 0     | 20424  | 8     | 1980  | 14    | 16    | 26000000000  | 3     | 27000000000  | 60     | 0.5   | 0.5   | 1995  | 4     | Slovakia     | 157000000    | 1200  | 45    | 50    | 50    |
| 0     | 6524   | 7     | 1999  | 17    | 20    |              | 1     | 50000000000  | 43.9   |       |       | 2004  | 6     | America      | 9040000000   | 320   | 80    | 80    | 20    |
| 0     | 8773   | 7     | 2003  | 17    | 20    | 5000000000   | 1     | 13000000000  | 26.8   | 7.5   | 30    | 2011  | 8     | Indonesia    | 1500000000   | 2250  | 25    | 55    | 45    |
| 0     | 16387  | 8     | 1999  | 17    | 13    | 30496000000  | 4     | 30424000000  | 192.5  |       |       | 2002  | 6     | Japan        | 50338000000  | 4033  | 70    | 70    | 30    |
| 0     | 7200   | 7     | 1994  | 17    | 20    | 3000000000   | 1     | 18000000000  | 14.3   | 312.3 |       | 2007  | 7     | Vietnam      | 5000000000   | 2400  | 68    | 12    | 28    |
| 0     | 7141   | 7     | 1996  | 17    | 20    | 59279000000  | 11    | 45689000000  | 22.2   | 25    | 23    | 2008  | 7     | America      | 42190000000  | 1319  | 80    | 80    | 20    |
| 17.33 | 12000  | 8     | 2000  | 17    | 13    | 31400000000  | 4     | 3281063832   | 25     | 35    | 35    | 2008  | 7     | South Korea  | 3000000000   | 3000  | 90    | 90    | 10    |
| 0     | 2686   | 6     | 1911  | 4     | 7     | 59750000000  | 6     | 50120000000  |        |       |       | 2002  | 6     | North Korea  | 9520000000   | 120   | 90    | 90    | 10    |
| 0     | 10923  | 8     | 2001  | 17    | 13    | 30000000000  | 4     | 10000000000  | 0.77   | 0.1   |       | 2008  | 7     | America      | 12000000000  | 1000  | 35    | 35    | 65    |
| 0     | 16273  | 8     | 1985  | 17    | 20    | 117630000000 | 11    | 102580000000 |        |       |       | 2007  | 7     | Denmark      | 21020000000  | 2190  | 80    | 80    | 20    |
| 0     | 2959   | 6     | 1993  | 17    | 20    | 71553000000  | 11    | 188760000000 |        |       |       | 2001  | 6     | Singapore    | 10390000000  | 1468  | 80    | 80    | 20    |
| 0     | 3776   | 6     | 1992  | 14    | 16    | 71260000000  | 8     | 82270000000  | 8.3    |       |       | 2001  | 6     | Japan        | 20890000000  | 1230  | 80    | 80    | 20    |
| 28.9  | 65000  | 9     | 1958  | 1     | 2     | 50000000000  | 6     | 61240000000  | 3      | 19.5  |       | 2003  | 6     | Philippines  | 10000000000  | 278   | 90    | 7     | 3     |
| 0     | 27033  | 9     | 1999  | 14    | 16    | 26000000000  | 3     | 38000000000  | -347.6 | -3.6  | -5.3  | 2000  | 5     | America      | 10000000000  | 10800 | 95    | 88    | 12    |
| 0     | 6955   | 7     | 1998  | 17    | 20    | 69960000000  | 7     | 51680000000  | 145.9  |       |       | 2006  | 7     | Japan        | 21960000000  | 500   | 70    | 70    | 30    |
| 0     | 45000  | 9     | 1987  | 14    | 16    | 112340000000 | 11    | 96430000000  | 1.67   | 14.74 | 13.6  | 2002  | 6     | Singapore    | 3000000000   |       | 65    | 55    | 50    |
| 0     | 5802   | 7     | 1998  | 7     | 12    | 64620000000  | 7     | 61220000000  | 2.6    |       |       | 2006  | 7     | UK           | 50000000000  | 300   | 80    | 80    | 20    |
| 0     | 7600   | 7     | 2004  | 14    | 16    | 12000000000  | 2     | 17000000000  | 2.95   | 8.1   | 5.7   | 2008  | 7     | India        | 4500000000   | 4000  | 98    | 98    | 2     |
| 0     | 15601  | 8     | 1987  | 17    | 20    | 105670000000 | 11    | 80430000000  | 59.9   |       |       | 2005  | 6     | Italy        | 10110000000  | 2014  | 80    | 80    | 20    |
| 0     | 4000   | 6     | 1952  | 16    | 5     | 29200000000  | 3     | 25740000000  | 80     | 45    |       | 2003  | 6     | Nigeria      | 8000000000   | 15000 | 70    | 60    | 40    |
| 0     | 465    | 4     | 1998  | 17    | 20    | 32960000000  | 4     | 50980000000  |        |       |       | 2007  | 7     | Singapore    | 12110000000  | 423   | 90    | 90    | 10    |
| 0     | 120000 | 9     | 1916  | 17    | 20    | 161540000000 | 11    | 143530000000 | -3.63  | 22.9  |       | 2002  | 6     | Italy        | 86000000000  | 360   | 60    | 30    | 30    |
| 0     | 98676  | 9     | 1980  | 14    | 16    | 420540000000 | 11    | 703230000000 |        |       |       | 2000  | 5     | Germany      | 46230000000  | 15000 | 70    | 70    | 30    |
| 0     | 2785   | 6     | 1985  | 14    | 16    | 85640000000  | 9     | 53880000000  |        |       |       | 2006  | 7     | Australia    | 9800000000   | 20    | 90    | 90    | 10    |
| 0     | 4894   | 6     | 1997  | 16    | 5     | 71000000000  | 8     | 27000000000  | -182.7 | -4.1  | -1.5  | 2010  | 7     | Vietnam      | 4800000000   | 1985  | 90    | 94    | 6     |
| 0     | 6200   | 7     | 1996  | 17    | 20    | 64000000000  | 7     | 1.039E+11    | -9.8   |       |       | 1999  | 5     | Singapore    | 50000000000  | 250   | 65    | 54    | 46    |
| 0     | 29361  | 9     | 2005  | 14    | 17    | 513790000000 | 11    | 456880000000 |        |       |       | 2007  | 7     | Japan        | 68890000000  | 9561  | 80    | 80    | 20    |
| 0     | 6764   | 7     | 1999  | 17    | 13    | 45000000000  | 5     | 27000000000  | -4.9   | 1.3   | 2     | 2008  | 7     | Vietnam      | 16000000000  | 1000  | 97    | 98    | 2     |
| 0     | 4065   | 6     | 2002  | 17    | 20    | 33500000000  | 4     | 51220000000  | 4.8    |       |       | 2008  | 7     | Japan        | 20200000000  | 2100  | 90    | 90    | 10    |
| 0     | 40000  | 9     | 1996  | 14    | 17    | 47000000000  | 5     | 20000000000  | 3.1    |       |       | 2000  | 5     | Kenya        | 15000000000  | 6000  | 60    | 63    | 37    |
| 0     | 10062  | 8     | 1999  | 4     | 7     | 255880000000 | 11    | 95000000000  | 17.1   |       |       | 2004  | 6     | Japan        | 12110000000  | 2402  | 90    | 90    | 10    |
| 0     | 17307  | 8     | 1994  | 17    | 20    | 210350000000 | 11    | 1.20756E+11  | 16     |       |       | 2006  | 7     | UK           | 90550000000  | 300   | 80    | 80    | 20    |
| 0     | 13801  | 8     | 1969  | 17    | 20    | 20000000000  | 3     | 35000000000  | 39     |       |       | 1999  | 5     | South Africa | 30000000000  | 2820  | 81    | 45    | 54    |
| 0     | 2075   | 6     | 2001  | 17    | 20    | 169670000000 | 11    | 100000000000 | 15     |       |       | 2004  | 6     | Japan        | 150000000000 | 15401 | 80    | 80    | 20    |
| 0     | 34020  | 9     | 1994  | 17    | 20    | 50000000000  | 6     | 28170000000  | 6.9    | 93.5  |       | 2011  | 8     | Australia    | 50000000000  | 160   | 77    | 8     | 15    |
| 0     | 130000 | 9     | 2006  | 17    | 19    | 1.34E+11     | 11    | 158000000000 |        |       |       | 2008  | 7     | Australia    | 20000000000  | 15000 | 95    | 90.5  | 9.5   |
| 0     | 17328  | 8     | 1991  | 17    | 20    | 68590000000  | 7     | 30380000000  | 48     |       |       | 2003  | 6     | India        | 10080000000  | 3002  | 80    | 80    | 20    |
| 0     | 8000   | 7     | 1976  | 14    | 16    | 159000000000 | 11    | 220000000000 |        |       |       | 1985  | 2     | America      | 75000000000  | 1500  | 95.5  | 90    | 10    |
| 0     | 8020   | 7     | 1958  | 17    | 19    | 74970000000  | 8     | 101600000000 | 81.2   |       |       | 2006  | 7     | America      | 50000000000  | 400   | 80    | 80    | 20    |
| 0     | 2051   | 6     | 2005  | 17    | 20    | 180000000000 | 11    | 62000000000  |        |       |       | 2005  | 6     | Japan        | 67000000000  | 980   | 89    | 69    | 31    |
| 0     | 11512  | 8     | 1998  | 17    | 20    | 12780000000  | 2     | 56000000000  |        |       |       | 1999  | 5     | America      | 61000000000  | 5000  | 80    | 68    | 32    |
| 0     | 27370  | 9     | 2005  | 17    | 13    | 3.50661E+11  | 11    | 1.21254E+11  |        |       |       | 2007  | 7     | Australia    | 564050000000 | 16042 | 70    | 72    | 28    |
| 0     | 8230   | 7     | 2002  | 14    | 17    | 38420000000  | 4     | 53000000000  | 177.5  | 28.7  |       | 2004  | 6     | Germany      | 20000000000  | 31    | 78    | 16.2  | 5.8   |
| 0     | 4300   | 6     | 1520  | 17    | 20    | 26000000000  | 3     | 49300000000  | 16.1   | 17.9  |       | 2006  | 7     | Brazil       | 15000000000  | 27    | 90    | 45    | 15    |
| 0     | 5460   | 7     | 1993  | 10    | 8     | 72000000000  | 1     | 32000000000  |        |       |       | 2001  | 6     | UK           | 45000000000  | 2500  | 85    | 75    | 25    |
| 0     | 11000  | 8     | 1907  | 12    | 20    | 30000000000  | 4     | 51300000000  | 14.4   | 39.88 |       | 1999  | 5     | Switzerland  | 50000000     | 47    | 95    | 30    | 11.7  |
| 0     | 3750   | 6     | 2009  | 10    | 9     | 37380000000  | 4     | 56900000000  | 12.6   | 7.8   |       | 2011  | 8     | Turkey       | 10000000000  | 20    | 95    | 70    | 17    |
| 0     | 130000 | 9     | 2008  | 17    | 20    | 147620000000 | 11    | 317460000000 | 120    | 35    |       | 2007  | 7     | Thailand     | 95000000000  | 14000 | 85    | 60    | 40    |
| 30.3  | 3580   | 6     | 1973  | 17    | 20    | 37900000000  | 1     | 20000000000  | 17.8   | 24.6  |       | 1999  | 5     | Italy        | 16000000000  | 31    | 75    | 38    | 29    |
| 0     | 40000  | 9     | 1975  | 17    | 19    | 269840000000 | 11    | 329360000000 | 14.5   | 8.62  | 12    | 2002  | 6     | Australia    | 80000000000  | 6000  | 70    | 70    | 30    |
| 0     | 92000  | 9     | 1959  | 17    | 19    |              | 1     |              | 2.63   | 10.56 | 42    | 2001  | 6     | India        | 38000000000  | 3500  | 40    | 40    | 50    |
| 0     | 56800  | 9     | 1958  | 17    | 19    |              | 1     |              | 3.46   | 9.78  | 4.73  | 1999  | 5     | Singapore    | 110000000000 | 5700  | 70    | 70    | 30    |
| 0     | 1300   | 6     | 1984  | 14    | 15    | 15000000000  | 2     | 21000000000  |        |       |       | 2001  | 6     | America      | 10000000000  | 500   | 90    | 90    | 10    |
| 0     | 120000 | 9     | 1988  | 17    | 19    | 54510000000  | 6     | 61210000000  | 6.84   | 28.32 | 32.1  | 2010  | 7     | Malaysia     | 21000000000  | 10000 | 65    | 55    | 45    |
| 0     | 60000  | 9     | 1994  | 14    | 14    | 99430000000  | 10    | 80600000000  | 19.39  | 33.13 | 15    | 2002  | 6     | Qatar        | 88000000000  | 18000 | 60    | 60    | 30    |
| 0     | 89000  | 9     | 2008  | 17    | 19    | 245230000000 | 11    | 197300000000 | 2.65   | 8.45  | 26.4  | 2001  | 6     | Niger        | 10000000000  | 101   | 60    | 92    | 8     |
| 0     | 6326   | 7     | 2000  | 17    | 20    | 20000000000  | 3     | 70000000000  | 26.7   | 3.7   |       | 2006  | 7     | Laos         | 73200000000  | 1300  | 50    | 50    | 50    |
| 0     | 28000  | 9     | 2000  | 17    | 19    | 79770000000  | 8     | 64490000000  | 12.76  | 14.51 | 14    | 2005  | 6     | Indonesia    | 50000000000  | 2000  | 60    | 60    | 40    |
| 0     | 3218   | 6     | 1992  | 14    | 16    | 10000000000  | 2     | 11000000000  | 2.2    | 128.6 |       | 1994  | 4     | Japan        | 19000000000  | 1500  | 9     | 96    | 4     |
| 0     | 24324  | 8     | 1998  | 16    | 5     | 100000000000 | 11    | 1.26E+11     |        |       |       | 2000  | 5     | Singapore    |              |       | 90    | 30    | 30    |
| 0     | 35000  | 9     | 1978  | 14    | 17    | 531550000000 | 11    | 690160000000 | 9.59   | 27.93 | 26.2  | 1980  | 1     | South Korea  | 40000000000  | 28000 | 60    | 50    | 45    |
| 0     | 4728   | 6     | 1992  | 14    | 17    | 20000000000  | 1     | 23000000000  | -4.1   | -1.9  |       | 2005  | 6     | UAE          | 40000000000  | 800   | 75    | 75    | 25    |
| 0     | 30000  | 9     | 1972  | 14    | 15    | 207900000000 | 3     | 242800000000 | 4.66   | 15.28 | 27.1  | 2003  | 6     | Singapore    | 30000000000  | 4800  | 60    | 40    | 30    |
| 0     | 127    | 3     | 1993  | 17    | 20    | 50000000000  | 6     | 45000000000  |        |       |       | 1998  | 5     | Laos         | 68000000000  | 56    | 95    | 98    | 2     |
| 0     | 45     |       |       |       |       |              |       |              |        |       |       |       |       |              |              |       |       |       |       |



Appendix 2 Database: Company 241 – Company 320

| hi291 | hi292 | hi293 | hi294 | hi295 | hi296 | hi298 | hi299 | hi300 | hi301 | hi302 | hi303 | hi304 | hi305 | hi306 | hi307 | hi308 | hi309        | hi311 | hi312 | hi313 | hi314 | hi315 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|-------|-------|-------|-------|-------|
| 6.5   | 1     |       |       | 1     |       |       | 1     |       |       | 1     | 1     | 1     | 1     |       |       |       | Chinese      | 1     | 1     | 8     | 6     | 20    |
|       |       |       | 1     |       | 1     |       | 1     |       | 1     |       |       |       |       | 1     | 1     |       | America      | 1     | 1     | 7     | 6     | 9     |
| 50    |       |       | 1     |       | 1     |       | 1     |       |       |       | 1     |       |       | 1     |       |       | Chinese      | 1     | 1     | 7     | 6     | 12    |
| 5     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Chinese      | 1     | 1     | 8     | 6     | 20    |
| 0.9   | 1     |       |       | 1     |       |       | 2     | 1     |       | 1     |       |       |       | 1     |       |       | Chinese      | 1     | 1     | 7     | 5     | 12    |
| 11    | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       |       | 1     | 1     | 1     |       | Japanese     | 1     | 1     | 8     | 6     | 30    |
| 35    | 1     |       |       | 1     |       |       | 2     |       |       |       |       |       |       |       |       |       | Slovakian    | 1     | 1     | 8     | 6     | 17    |
| 4     | 1     |       |       |       | 1     |       | 1     |       |       | 1     |       |       |       |       | 1     |       | Chinese      | 1     | 1     | 8     | 7     | 8     |
| 55    |       | 1     |       |       | 1     |       | 1     |       |       | 1     |       |       | 1     | 1     |       |       | Chinese      | 1     | 1     | 7     | 6     | 6     |
| 10    | 1     |       |       | 1     |       |       | 1     | 1     |       |       | 1     | 1     |       |       | 1     |       | Chinese      |       | 2     | 4     | 5     | 6     |
| 15    | 1     | 1     |       |       | 1     |       | 2     | 1     |       |       |       |       | 1     | 1     |       |       | Chinese      | 1     | 2     | 7     | 6     | 15    |
| 5     | 1     |       |       |       | 1     |       | 1     |       |       |       | 1     |       |       | 1     |       |       | Chinese      | 1     | 3     | 4     | 5     | 3     |
| 15    |       | 1     |       |       | 1     |       | 1     |       | 1     | 1     | 1     |       |       |       |       |       | South Korean | 1     | 1     | 7     | 6     | 12    |
| 3     | 1     |       |       |       | 1     |       | 2     |       |       | 1     |       |       | 1     |       | 1     |       | Chinese      | 1     | 1     | 7     | 5     | 18    |
| 0.6   | 1     |       |       | 1     |       |       | 1     |       | 1     |       |       |       | 1     |       | 1     |       | Chinese      | 1     | 2     | 7     | 6     | 10    |
| 10    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Danish       | 1     | 1     | 6     | 6     | 17    |
| 15    | 1     |       |       | 1     |       |       |       |       | 1     | 1     | 1     | 1     |       |       |       |       | Chinese      | 2     | 3     | 4     | 5     | 8     |
| 10    |       | 1     | 1     |       | 1     |       | 1     |       | 1     | 1     | 1     | 1     |       |       | 1     |       | Japanese     | 1     | 2     | 5     | 5     | 8     |
| 16.2  | 1     |       |       |       |       |       |       |       |       | 1     |       |       |       |       | 1     |       | Chinese      | 1     | 3     | 5     | 5     | 8     |
|       | 1     |       |       | 1     |       |       | 1     |       |       | 1     | 1     |       |       |       | 1     |       | Chinese      | 1     | 3     | 7     | 5     | 10    |
| 5     |       |       | 1     |       | 1     |       | 2     |       |       |       | 1     | 1     |       |       | 1     |       | Chinese      | 1     | 1     | 7     | 6     | 10    |
| 20    | 1     | 1     |       | 1     | 1     |       | 1     | 1     | 1     | 1     |       |       | 1     | 1     | 1     |       | Chinese      | 1     | 1     | 9     | 5     | 26    |
| 3     | 1     |       |       |       | 1     |       | 1     |       |       | 1     |       |       |       |       | 1     |       | Chinese      | 1     | 2     | 5     | 6     | 5     |
|       | 1     |       |       |       | 1     |       | 1     | 1     |       |       |       | 1     | 1     |       |       |       | Chinese      | 1     | 3     | 8     | 7     | 15    |
| 15    | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       |       |       |       |       | 1     | Chinese      | 1     | 2     | 5     | 5     | 5     |
| 24    | 1     | 1     |       | 1     | 1     |       | 1     | 1     | 1     |       | 1     | 1     |       |       | 1     |       | Chinese      | 1     | 2     | 7     | 6     | 18    |
| 21    |       | 1     |       |       | 1     |       | 2     |       |       | 1     | 1     |       |       |       |       |       | Chinese      | 2     | 3     | 4     | 6     | 3     |
| 32    | 1     |       | 1     | 1     | 1     |       | 1     |       | 1     |       | 1     | 1     | 1     |       |       |       | Chinese      | 1     | 2     | 9     | 7     | 6     |
| 10    | 1     |       |       |       | 1     |       |       |       | 1     |       |       |       |       | 1     |       |       | Chinese      | 2     | 2     | 5     | 5     | 8     |
| 20    | 1     |       |       |       | 1     |       | 1     |       |       | 1     |       | 1     | 1     |       |       |       | Australian   | 1     | 2     | 4     | 5     | 2     |
|       | 1     |       |       | 1     |       |       | 2     |       | 1     | 1     |       |       |       |       | 1     |       | Chinese      | 1     | 3     | 7     | 5     | 4     |
| 36    |       |       |       |       |       |       | 1     |       |       |       |       |       |       |       |       |       | American     | 1     | 3     | 5     | 5     | 20    |
| 12    | 1     |       |       |       | 1     |       | 1     | 1     |       |       | 1     | 1     |       |       | 1     |       | Japanese     | 1     | 1     | 9     | 6     | 7     |
|       |       | 1     |       |       | 1     |       | 2     |       | 1     | 1     |       |       |       |       | 1     |       | Chinese      | 1     | 3     | 7     | 6     | 10    |
| 10    | 1     |       |       |       | 1     |       | 2     | 1     |       |       | 1     |       |       | 1     |       |       | Chinese      | 1     | 3     | 5     | 5     | 4     |
| 25    | 1     |       |       |       | 1     |       | 1     |       |       | 1     |       |       |       |       |       |       | Chinese      | 1     | 2     | 7     | 6     | 32    |
| 15    |       | 1     |       |       | 1     |       | 2     |       | 1     | 1     | 1     | 1     | 1     |       |       |       | Chinese      | 1     | 3     | 5     | 5     | 5     |
| 10    |       | 1     |       | 1     |       |       | 1     | 1     |       |       |       | 1     |       |       |       |       | British      | 1     | 1     | 9     | 6     | 18    |
|       |       | 1     |       |       | 1     |       | 1     |       |       |       | 1     | 1     |       |       |       |       | Mozambiquan  | 1     | 3     | 7     | 5     | 20    |
| 13    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Japanese     | 1     | 1     | 8     | 6     | 8     |
| 4.7   | 1     |       |       | 1     |       |       | 1     | 1     | 1     |       |       | 1     | 1     |       | 1     |       | Chinese      | 1     | 3     | 5     | 5     | 13    |
|       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Chinese      | 1     | 3     | 7     | 5     | 5     |
| 3     | 1     |       |       | 1     |       |       | 1     | 1     | 1     |       |       |       | 1     | 1     |       |       | Chinese      | 1     | 1     | 9     | 7     | 20    |
|       | 1     |       |       |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       |       |       | American     | 1     | 1     | 8     | 6     | 26    |
| 10    |       | 1     |       |       | 1     |       | 2     |       |       |       |       |       | 1     | 1     | 1     |       | American     | 1     | 1     | 8     | 6     | 10    |
| 5.6   |       | 1     |       |       | 1     |       | 2     |       | 1     | 1     |       |       |       | 1     |       |       | Chinese      | 1     | 1     | 9     | 6     | 7     |
| 6.7   | 1     |       |       |       | 1     |       | 1     |       |       | 1     |       | 1     | 1     |       |       |       | Chinese      | 1     | 1     | 7     | 7     | 13    |
| 6.5   | 1     |       |       | 1     |       |       | 1     |       |       |       | 1     |       | 1     |       | 1     |       | Chinese      | 1     | 1     | 8     | 6     | 6     |
| 7.9   | 1     |       |       |       | 1     |       | 1     |       | 1     |       |       | 1     |       |       | 1     |       | Chinese      | 1     | 3     | 4     | 5     | 7     |
| 7.7   | 1     |       |       |       | 1     |       | 1     |       | 1     |       |       |       | 1     |       | 1     |       | Chinese      | 1     | 3     | 6     | 5     | 7     |
| 5     | 1     |       |       |       | 1     |       | 1     |       |       | 1     |       |       | 1     |       |       |       | Chinese      | 1     | 1     | 7     | 7     | 30    |
| 11.9  | 1     |       |       | 1     |       |       | 1     |       | 1     |       |       | 1     | 1     |       |       |       | Chinese      | 1     | 3     | 5     | 5     | 12    |
| 3.8   | 1     |       |       |       | 1     |       | 2     |       | 1     |       | 1     |       |       |       | 1     |       | Chinese      | 1     | 2     | 7     | 4     | 15    |
| 25    |       | 1     |       | 1     |       |       | 2     | 1     | 1     | 1     | 1     | 1     |       |       |       |       | Chinese      | 1     | 1     | 9     | 6     | 4     |
| 11.5  | 1     |       |       | 1     |       |       | 2     | 1     |       |       |       | 1     |       |       | 1     |       | Chinese      | 1     | 2     | 7     | 7     | 12    |
| 25    | 1     | 1     |       |       | 1     |       | 2     | 1     | 1     | 1     |       | 1     | 1     | 1     |       |       | Chinese      | 1     | 1     | 10    | 3     | 35    |
| 36    | 1     | 1     | 1     | 1     |       |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     |       | Chinese      | 1     | 1     | 9     | 7     | 7     |
| 7.27  |       | 1     |       |       | 1     |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     |       | Chinese      | 1     | 1     | 7     | 6     | 22    |
|       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Chinese      | 1     | 2     | 5     | 6     | 15    |
| 22    | 1     | 1     |       |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |       | Chinese      | 1     | 1     | 7     | 6     | 20    |
| 30    | 1     | 1     |       | 1     | 1     |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |       | Chinese      | 1     | 1     | 9     | 5     | 18    |
|       |       | 1     |       |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       |       |       | Chinese      | 1     | 3     | 7     | 5     | 5     |
| 8     | 1     |       |       |       | 1     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese      | 1     | 3     | 7     | 5     | 11    |
| 20    | 1     | 1     | 1     |       | 1     |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       | Chinese      | 1     | 1     | 7     | 6     | 12    |
| 20    | 1     |       |       |       | 1     |       | 1     | 1     |       |       | 1     |       |       |       |       |       | Chinese      | 1     | 3     | 7     | 5     | 5     |
| 20    | 1     |       |       |       |       |       | 2     |       |       | 1     |       |       | 1     |       |       |       | Singaporean  | 1     | 1     | 8     | 6     | 14    |
| 24    |       | 1     | 1     | 1     |       |       | 1     | 1     | 1     | 1     | 1     |       |       |       |       |       | Chinese      | 1     | 1     | 10    | 5     | 35    |
| -0.7  | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       |       | 1     | 1     |       |       | Chinese      | 1     | 1     | 5     | 7     | 15    |
| 23.5  | 1     |       | 1     |       | 1     |       | 2     | 1     | 1     | 1     | 1     |       | 1     |       |       |       | Singaporean  | 1     | 1     | 8     | 5     | 4     |
|       | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       |       |       |       |       |       | Chinese      | 1     | 1     | 7     | 6     | 15    |
|       | 1     |       |       |       | 1     |       | 1     | 1     |       |       | 1     |       |       |       |       |       | Chinese      | 1     | 1     | 7     | 6     | 15    |
|       | 1     |       |       |       | 1     |       | 1     | 1     |       |       | 1     |       |       | 1     |       |       | Chinese      | 1     | 1     | 7     | 6     | 20    |
| 18    |       | 1     |       |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     |       |       | 1     |       | Chinese      | 1     | 1     | 10    | 6     | 36    |
| 28    | 1     | 1     |       |       | 1     |       | 2     | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese      | 1     | 1     | 8     | 7     | 17    |
| 2.8   |       | 1     |       |       | 1     |       | 1     | 1     |       |       | 1     |       |       | 1     |       |       | Chinese      | 1     | 1     | 7     | 6     | 10    |
| 3.4   |       | 1     |       |       | 1     |       | 1     |       |       | 1     | 1     | 1     |       |       |       |       | Chinese      | 1     | 1     | 7     | 5     | 22    |
|       | 1     |       |       |       | 1     |       | 2     |       |       | 1     | 1     | 1     |       |       |       |       | Chinese      | 2     | 3     | 6     | 6     | 8     |
| 25    | 1     |       |       |       | 1     |       | 1     | 1     | 1     |       |       | 1     | 1     | 1     |       |       | Chinese      | 1     | 3     | 7     | 5     | 9     |
|       | 1     |       |       |       | 1     |       |       |       | 1     |       |       |       |       |       | 1     |       | Chinese      | 1     | 3     | 7     | 5     | 10    |
| 22.6  |       | 1     | 1     | 1     |       |       | 1     | 1     | 1     | 1     | 1     |       | 1     |       |       |       | Chinese      | 1     | 1     | 9     | 6     | 4     |

Appendix 2 Database: Company 241 – Company 320

| hi316 | hi317 | hi318 | hi319     | hi320 | hi321 | hi322     | hi323 | hi324 | hi325   | hi326 | hi327  | hi329 | hi330 | hi331 | hi332 | hi333 | hi334 | hi335 |
|-------|-------|-------|-----------|-------|-------|-----------|-------|-------|---------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 18    | 10    |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 2     | 1     | 1     | 1     | 2     |
| 9     | 9     |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 1     | 2     | 2     | 1     | 2     | 1     | 2     |
| 12    | 12    |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 2     | 2     | 1     | 2     | 2     | 2     | 2     |
| 10    | 7     |       |           | 2     | 6     | Japan     | 1     | 1     | Japan   | 1     | fluent | 1     | 1     | 2     | 2     | 1     | 2     | 2     |
| 6     | 6     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 30    | 8     |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 1     | 2     | 1     | 1     | 2     | 1     | 1     |
| 11    | 12    |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 2     | 1     | 1     |
| 8     | 2     |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 1     | 1     | 1     | 2     | 2     | 1     | 1     |
| 6     | 4     |       |           | 2     |       |           | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 2     |
| 6     | 2     |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 1     | 1     | 2     | 2     | 1     | 1     | 1     |
| 15    | 5     | 1     | Vietnam   | 1     | 5     | Canada    | 1     | 1     | Canada  | 1     | fluent | 1     | 1     | 1     | 2     | 1     | 1     | 2     |
| 3     | 2     |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 2     | 3     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 2     | 2     | 2     | 2     | 2     | 2     | 1     |
| 12    | 8     |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 1     | 1     | 1     | 2     | 1     | 1     | 2     |
| 1     | 8     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 2     | 2     | 2     | 1     | 1     | 1     | 1     |
| 6     | 3     |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 2     | 1     | 2     | 2     | 1     | 2     | 1     |
| 7     | 7     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 2     | 1     | 1     | 2     |
| 7     | 8     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 2     | 1     | 1     | 1     | 2     | 1     |
| 3     | 2     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 2     | 1     | 2     | 2     | 1     | 2     | 2     |
| 10    | 10    |       |           | 2     |       |           | 2     | 0     |         | 2     | fluent | 2     | 2     | 1     | 1     | 1     | 1     | 1     |
| 10    | 4     |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 2     | 2     | 2     | 2     | 2     | 2     | 1     |
| 20    | 10    |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 2     | 1     |
| 4     | 5     |       |           | 2     |       |           | 2     | 1     | UK      | 1     |        | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 10    | 15    | 10    | America   | 1     | 10    | America   | 1     | 1     | America | 1     | fluent | 2     | 2     | 2     | 2     | 2     | 2     | 2     |
| 5     | 2     |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 16    | 14    |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 3     | 2     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 2     | 2     | 2     | 2     | 1     | 1     |
| 3     | 3     | 4     | UK        | 1     | 4     | UK        | 1     | 0     |         | 2     |        | 1     | 1     | 1     | 1     | 1     | 1     | 2     |
| 4     | 3     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 2     | 1     | 2     | 2     | 1     | 2     |
| 1     | 2     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 2     | 1     | 2     | 2     | 1     | 1     |
| 3     | 4     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 2     | 2     | 2     | 2     | 2     | 2     | 1     |
| 20    | 11    | 5     | America   | 1     |       |           | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 7     | 6     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 2     | 1     | 2     | 1     | 2     | 1     | 2     |
| 2     | 8     |       |           | 2     |       |           | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 2     | 2     |
| 3     | 3     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 4     | 30    |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 2     | 1     | 1     | 2     | 1     | 2     | 1     |
| 3     | 3     |       |           | 2     |       |           | 2     | 0     |         | 2     | fluent | 1     | 2     | 1     | 2     | 2     | 1     | 2     |
| 18    | 7     |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 1     | 1     | 1     | 1     | 2     | 2     | 1     |
| 15    | 10    |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 2     | 2     | 2     | 2     |
| 8     | 8     |       |           | 2     |       |           | 2     | 0     |         | 2     | fluent | 1     | 1     | 2     | 1     | 2     | 2     | 1     |
| 3     | 2     | 0.5   | India     | 1     | 0.5   | India     | 1     | 0     |         | 2     | fluent | 2     | 1     | 2     | 2     | 2     | 1     | 2     |
| 4     | 4     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 2     | 2     | 2     | 1     | 1     |
| 20    | 5     |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 2     | 1     | 2     | 1     | 1     | 1     | 1     |
| 7     | 15    | 7     | Japan     | 1     | 5     | Japan     | 1     | 1     | Japan   | 1     | fluent | 1     | 1     | 2     | 2     | 2     | 1     | 1     |
| 10    | 10    |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 2     | 2     | 1     | 2     | 1     | 1     | 1     |
| 6     | 6     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 2     | 1     | 2     | 1     | 2     | 2     | 1     |
| 10    | 10    |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 2     | 1     | 1     | 1     | 2     | 1     |
| 6     | 5     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 2     | 1     | 1     | 2     | 1     | 1     |
| 2     | 3     |       |           | 2     |       |           | 2     | 0     |         | 2     | fluent | 2     | 1     | 2     | 1     | 2     | 1     | 1     |
| 4     | 7     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 2     | 1     | 2     | 2     | 1     | 2     | 2     |
| 25    | 11    |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 2     | 1     | 2     | 2     | 2     | 2     | 2     |
| 5     | 4     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 2     | 1     | 2     | 1     | 2     | 2     | 1     |
| 8     | 5     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 2     | 1     | 2     | 2     | 1     | 2     | 1     |
| 4     | 3     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 8     | 3     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 2     | 1     | 2     | 1     | 2     | 2     | 1     |
| 18    | 15    |       |           | 2     |       |           | 2     | 0     |         | 2     | poor   | 1     | 1     | 1     | 1     | 2     | 1     | 1     |
| 3     | 3     |       |           | 2     |       |           | 2     | 0     |         | 2     |        | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 6     | 14    |       |           | 2     |       |           | 2     | 0     |         | 2     | fluent | 2     | 1     | 1     | 1     | 1     | 1     | 1     |
| 5     | 15    |       |           | 2     | 5     | America   | 1     | 1     | America | 1     | fluent | 1     | 1     | 1     | 1     | 2     | 2     | 2     |
| 10    | 8     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 15    | 15    |       |           | 2     |       |           | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 2     | 1     | 1     |
| 2     | 5     | 5     | Niger     | 1     | 5     | Niger     | 1     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 3     | 6     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 2     | 1     | 2     | 1     | 1     | 1     |
| 10    | 7     |       |           | 2     |       |           | 2     | 0     |         | 2     | fluent | 1     | 1     | 2     | 1     | 1     | 1     | 1     |
| 5     | 5     |       |           | 2     |       |           | 2     | 0     |         | 2     | fluent | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 1     | 2     |       |           | 2     |       |           | 2     | 0     |         | 2     | fluent | 1     | 2     | 1     | 2     | 2     | 2     | 1     |
| 26    | 15    |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 12    | 10    |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 2     | 2     | 1     | 2     |
| 3     | 3     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 2     | 1     | 1     | 2     | 1     | 1     |
| 5     | 15    |       |           | 2     |       |           | 2     | 0     |         | 2     | fluent | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 10    | 15    |       |           | 2     |       |           | 2     | 0     |         | 2     | fluent | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 20    | 10    | 5     | America   | 1     | 5     | America   | 1     | 0     |         | 2     | fluent | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 27    | 16    |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 10    | 10    |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 2     | 1     | 1     | 1     | 1     | 1     |
| 10    | 8     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 1     | 2     | 2     | 2     | 1     |
| 20    | 10    |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 2     | 2     | 1     | 1     | 1     | 2     | 2     |
| 2     | 8     |       |           | 2     |       |           | 2     | 0     |         | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 2     |
| 2     | 9     |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 2     | 1     | 1     | 2     | 2     | 1     | 1     |
| 8     | 10    |       |           | 2     |       |           | 2     | 0     |         | 2     | basic  | 1     | 1     | 2     | 2     | 1     | 1     | 1     |
| 3     | 3     | 4     | Australia | 1     | 4     | Australia | 1     | 0     |         | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |







Appendix 2 Database: Company 241 – Company 320

| si51 | si52 | si53 | si54 | si55 | si56 | si57 | si58 | si59 | si60 | si61 | si62 | si63 | si64 | si65 | si66 | si67 | si68 | si69 | si70 | si71 | si72 | si73 | si74 | si75 | si76 | si77 | si78 | si79 | si80 |   |   |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|---|---|
| 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4 |   |   |
| 4    | 3    | 4    | 4    | 3    | 2    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 2    | 4    | 4    | 2    | 4    | 4    | 3 | 4 |   |
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| 3    | 3    | 3    | 3    | 2    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 2    | 3    | 3    | 4    | 3    | 2    | 3    | 3    | 3    | 3    | 2    | 3    | 3    | 4    | 3    | 4    | 3    | 4 |   |   |
| 4    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4 |   |   |
| 3    | 4    | 2    | 3    | 4    | 2    | 2    | 3    | 4    | 3    | 3    | 2    | 3    | 2    | 3    | 3    | 3    | 2    | 4    | 3    | 3    | 2    | 3    | 4    | 4    | 2    | 4    | 3    | 4    | 2    | 4 |   |   |
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| 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 5 | 4 |   |
| 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3 | 4 |   |
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| 4    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 3    | 4    | 5    | 4    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 4 | 3 |   |
| 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4 | 3 |   |
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| 5    | 4    | 5    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 4    | 3    | 4    | 5 | 4 |   |
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| 3    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 3    | 5 | 4 |   |
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| 2    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 2    | 2    | 3    | 3    | 2    | 3    | 2 | 3 |   |
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| 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3 | 4 |   |
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| 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3 | 4 |   |
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| 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 5    | 4    | 4    | 3    | 5    | 4    | 4    | 3    | 5    | 4    | 4    | 5    | 4    | 5 | 4 |   |
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| 4    | 3    | 4    | 5    | 4    | 4    | 4    | 3    | 4    | 5    | 4    | 5    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4 | 5 |   |
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| 5    | 5    | 4    | 5    | 4    | 5    | 5    | 5    | 5    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4 | 3 | 4 |
| 2    | 3    | 4    | 3    | 4    | 4    | 3    | 2    | 3    | 3    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 2 | 4 |   |
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| 4    | 5    | 3    | 2    | 3    | 4    | 2    | 3    | 4    | 3    | 2    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3 | 3 |   |
| 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 4 | 3 |   |
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| 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4 | 3 | 4 |
| 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3 | 4 |   |
| 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3 | 4 |   |
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| 4    | 4    | 3    | 4    | 4    | 5    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 3    | 3    | 4    | 3 | 2 |   |
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| 5    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4 | 3 | 4 |
| 4    | 3    | 4    | 4    | 3    | 5    | 5    | 4    | 3    | 4    | 4    | 3    | 5    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 3    | 4    | 4    | 3    | 5 | 4 |   |
| 4    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 3 | 3 |   |
| 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 3 | 4 |   |
| 4    | 3    | 4    | 4    | 5    | 5    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 5    | 4    | 4    | 3 | 4 |   |
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| 5    | 4    | 3    | 5    | 4    | 5    | 3    | 4    | 5    | 4    | 4    | 5    | 5    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 3    | 3    | 3    | 4    | 5    | 5    | 4    | 5    | 4    | 5    | 4 | 5 | 4 |
| 3    | 3    | 5    | 4    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |   |   |

Appendix 2 Database: Company 241 – Company 320

| si81 | si82 | si83 | si84 | si85 | si86 | si87 | si88 | si89 | si90 | si91 | si92 | si93 | si94 | si95 | si96 | si97 | si98 | si99 | si100 | si101 | si102 | si103 | si104 | si105 | si106 | si107 | si108 | si109 | si110 |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4 |
| 3    | 4    | 2    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4     | 2     | 4     | 3     | 4     | 4     | 2     | 4     | 3     | 4     | 4     | 3 |
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| 3    | 4    | 3    | 4    | 3    | 2    | 4    | 3    | 4    | 3    | 2    | 4    | 3    | 3    | 2    | 3    | 2    | 2    | 3    | 4     | 3     | 4     | 2     | 4     | 3     | 4     | 2     | 2     | 4     | 2     |   |
| 4    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 3     | 3     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 4     | 4     |   |
| 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     |   |
| 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 5    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     |   |
| 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     |   |
| 4    | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     |   |
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| 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     |   |
| 5    | 4    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 1     |   |
| 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 2     |   |
| 4    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4     | 3     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 3     |   |
| 5    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     |   |
| 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     |   |
| 4    | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 2     |   |
| 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     |   |
| 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 2     |   |
| 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     |   |
| 3    | 4    | 4    | 4    | 5    | 3    | 3    | 5    | 4    | 3    | 4    | 4    | 3    | 5    | 5    | 4    | 3    | 4    | 5    | 3     | 4     | 5     | 3     | 4     | 5     | 3     | 5     | 4     | 3     | 4     |   |
| 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 2    | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 2     |   |
| 3    | 4    | 4    | 4    | 3    | 5    | 4    | 5    | 4    | 5    | 3    | 4    | 5    | 4    | 3    | 4    | 5    | 5    | 4    | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     |   |
| 4    | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     |   |
| 2    | 4    | 5    | 1    | 2    | 3    | 2    | 4    | 3    | 2    | 3    | 1    | 4    | 1    | 3    | 2    | 4    | 2    | 5    | 4     | 2     | 3     | 2     | 4     | 2     | 1     | 1     | 4     | 5     | 2     |   |
| 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     |   |
| 3    | 3    | 2    | 2    | 3    | 3    | 2    | 3    | 3    | 2    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 3     |   |
| 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 3     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     |   |
| 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     |   |
| 4    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 5    | 4    | 5    | 4    | 5    | 4    | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 5     |   |
| 3    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 2    | 3    | 3    | 3    | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     |   |
| 3    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     |   |
| 3    | 4    | 3    | 4    | 4    | 5    | 3    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 3    | 5    | 3    | 4    | 5    | 3     | 4     | 5     | 3     | 3     | 4     | 5     | 5     | 4     | 3     | 5     |   |
| 2    | 2    | 5    | 2    | 3    | 5    | 2    | 3    | 2    | 3    | 2    | 2    | 2    | 4    | 4    | 3    | 3    | 4    | 2    | 3     | 4     | 2     | 3     | 2     | 3     | 2     | 4     | 4     | 4     | 2     |   |
| 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     |   |
| 4    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 5    | 5    | 4    | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     |   |
| 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     |   |
| 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 2     |   |
| 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     |   |
| 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     |   |
| 4    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     |   |
| 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     |   |
| 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     |   |
| 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     |   |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 4     |   |
| 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     |   |
| 3    | 3    | 3    | 3    | 3    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     |   |
| 4    | 5    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 5     | 5     |   |
| 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 2     |   |
| 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     |   |
| 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 3    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 5    | 4    | 5    | 4    | 4    | 5    | 3    | 4    | 4    | 3    | 5    | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 5     |   |
| 4    | 4    | 3    | 3    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 3    | 5    | 4    | 3    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     |   |
| 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 3    | 4    | 3    | 4    | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     |       |   |

Appendix 2 Database: Company 241 – Company 320

| si111 | si112 | si113 | si114 | si115 | si116 | si117 | si118 | si119 | si120 | si121 | si122 | si123 | si124 | si125 | si126 | si127 | si128 | si129 | si130 | si131 | si132 | si133 | si134 | si135 | si136 | si137 | si138 | si139 | si140 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 2     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     |   |
| 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 2     | 4     | 3     | 4     | 4     | 3     | 2     | 2     | 4     | 4     | 3     | 3     | 4     | 2     | 4     | 3     | 3     | 4     |   |
| 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     |   |
| 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 2     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 3     | 2     | 3     |   |
| 5     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 3     | 3     | 3     | 3     | 4     | 2     | 3     | 2     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 2     | 4     | 5     | 3     |       |   |
| 3     | 4     | 3     | 2     | 3     | 4     | 3     | 3     | 5     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 4     | 2     | 4     | 4     | 4     | 3     | 4     | 2     | 2     | 2     | 4     |   |
| 4     | 5     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 4     | 1     | 4     | 3     | 4     | 5     | 2     | 4     | 5     |   |
| 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     |   |
| 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 2     | 4     | 5     | 2     | 3     | 4     | 4     | 4     | 2     | 3     | 4 |
| 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 |
| 3     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 2     | 4     | 2     | 4     | 5     | 2     | 5     | 4     | 4     | 4     | 2     | 5     | 4     |   |
| 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 |
| 4     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 2     | 4     | 1     | 3     | 4     | 1     | 4     | 3     | 4     | 3     | 2     | 5     | 4     |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4 |
| 2     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 4     | 1     | 4     | 3     | 2     | 5     | 4     | 5     | 4     | 1     | 4     | 5     |   |
| 2     | 1     | 2     | 2     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 2     | 4     | 2     | 4     | 3     | 3     | 3     | 4     | 5     | 2     | 2     | 4     | 3     | 4     |   |
| 4     | 5     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 2     | 3     | 4     | 1     | 4     | 5     | 4     | 4     | 2     | 3     | 3     |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 2     | 4     | 2     | 4     | 4     | 2     | 4     | 5     | 4     | 4     | 2     | 5     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 2     | 4     | 2     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 2     | 3     | 4     |   |
| 3     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 2     | 5     | 1     | 4     | 5     | 2     | 5     | 4     | 3     | 4     | 1     | 4     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 2     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 2     | 5     | 2     | 5     | 4     | 2     | 3     | 4     | 3     | 5     | 2     | 5     | 4     |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4 |
| 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 2     | 4     | 2     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 3     |   |
| 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 |
| 3     | 3     | 4     | 5     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 2     | 3     | 2     | 4     | 3     | 1     | 4     | 3     | 4     | 4     | 2     | 3     | 4     |   |
| 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 3     |   |
| 4     | 3     | 2     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 3     | 4     | 2     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 2     | 5     | 3     |   |
| 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 2     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 2     | 4     | 3     |   |
| 3     | 1     | 4     | 3     | 4     | 2     | 3     | 1     | 2     | 3     | 4     | 3     | 1     | 2     | 3     | 1     | 3     | 2     | 2     | 3     | 3     | 2     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 2     | 3     | 4     |   |
| 3     | 2     | 2     | 3     | 2     | 3     | 2     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 4     |   |
| 3     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 2     | 5     | 2     | 4     | 5     | 2     | 3     | 4     | 5     | 4     | 1     | 4     | 5     |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4     | 2     | 3     | 4     |   |
| 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 1     | 4     | 1     | 5     | 4     | 1     | 4     | 5     | 4     | 5     | 2     | 5     | 4     |   |
| 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 2     | 3     | 3     | 3     | 3     | 2     | 4     | 5     | 4     | 3     | 3     | 3     | 4     |   |
| 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 3     | 4     | 4     | 3     | 2     | 4     | 3     | 5     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 4     |   |
| 3     | 3     | 2     | 3     | 2     | 2     | 3     | 3     | 2     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 2     | 2     | 4     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 3     |   |
| 3     | 2     | 2     | 2     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     |   |
| 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 2     | 3     | 3     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 2     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     |   |
| 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     |   |
| 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4 |
| 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     |   |
| 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 2     | 4     | 2     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 2     | 4     | 4     |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 3     |   |
| 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     |   |
| 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 2     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 3     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     |   |
| 4     | 5     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 5     | 4     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 4     |   |
| 3     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 1     | 5     | 4     | 4     | 4     | 2     | 4     | 5     |   |
| 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 1     | 4     | 1     | 5     | 5     | 2     | 5     | 4     | 5     | 5     | 1     | 4     | 5     |       |   |
| 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 5     | 2     | 3     | 3     | 5     | 5     | 1     | 4     | 3     | 4     | 3     | 1     | 4     | 5     |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     |   |
| 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 3     | 5     | 1     | 4     | 4     | 3     | 5     | 4     | 5     | 5     | 2     | 5     | 5     |   |
| 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 1     | 4     | 2     | 4     | 4     | 1     | 5     | 4     | 4     | 4     | 2     | 4     | 3     |   |
| 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 2     | 4     | 2     | 4     | 4     | 1     | 5     | 4     | 3     | 3     | 2     | 4     | 5     |   |
| 2     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 1     | 4     | 2     | 4     | 5     | 3     | 4     | 4     | 4     | 3     | 2     | 3     | 4     |   |
| 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 1     | 4     | 2     | 4     | 4     | 1     | 5     | 4     | 4     | 3     | 3     | 4     | 4     |   |
| 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 2     | 3     | 2     | 4     | 5     | 2     | 3     | 3     | 4     | 4     | 2     | 5     | 4     |   |
| 5     | 4     | 3     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 1     | 3     | 1     | 4     | 3     | 1     | 4     | 5     | 4     | 3     | 2     | 3     | 4     |   |
| 5     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 2     | 5     | 2     | 4     |       |       |       |       |       |       |       |       |       |   |



Appendix 2 Database: Company 241 – Company 320

| si141 | si142 | si143 | si144 | si145 | si146 | si147 | si148 | si149 | si150 | si151 | si152 | si153 | si154 | si155 | si156 | si157 | si158 | si159 | si160 | si161 | si162 | si163 | si164 | si165 | si166 | si167 | si168 | si169 | si170 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 3     | 4     | 2     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 9.7   | 6.7   | 8.4   | 5.6   | 3     | 4     | 4     | 3     |   |
| 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     |       |       |       |       | 4     | 4     | 3     | 2     |   |
| 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 10    | 25    | 20    | 15    | 3     | 4     | 3     | 4     |   |
| 2     | 3     | 2     | 3     | 2     | 2     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 2     | 3     | 3     |       |       |       |       | 3     | 2     | 3     | 3     |   |
| 4     | 4     | 2     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 16    | 30    | 25    | 18    | 4     | 5     | 3     | 4     |   |
| 3     | 4     | 3     | 4     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 4     | 4     | 2     | 3     | 4     | 4     | 2     | 3     | 4     |       |       |       |       | 4     | 3     | 3     | 4     |   |
| 4     | 3     | 2     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 8     | 25    | 15    | 25    | 4     | 5     | 4     | 3     |   |
| 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 10    | 25    | 15    | 10    | 3     | 4     | 3     | 4     |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 10    | 30    | 20    | 20    | 4     | 3     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 10    | 20    | 15    | 15    | 4     | 3     | 4     | 3     |   |
| 4     | 5     | 2     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 7     | 20    | 10    | 15    | 5     | 4     | 4     | 5     |   |
| 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 8     | 15    | 20    | 10    | 3     | 4     | 3     | 4     |   |
| 3     | 4     | 1     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 5     | 4     | 4     | 12    | 30    | 25    | 20    | 4     | 5     | 4     | 3     |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 8     | 10    | 20    | 10    | 3     | 4     | 3     | 4     |   |
| 5     | 4     | 2     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 15    | 30    | 20    | 25    | 4     | 5     | 4     | 4     |   |
| 4     | 5     | 2     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 30    | 35    | 30    | 30    | 4     | 5     | 4     | 4 |
| 4     | 5     | 2     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     |       |       |       |       | 4     | 3     | 4     | 5     |   |
| 4     | 5     | 2     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 10    | 20    | 20    | 5     | 4     | 5     | 4     | 5     |   |
| 3     | 3     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 27.3  | 17.9  | 13.2  | 5.7   | 4     | 3     | 3     | 4     |   |
| 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 20    | 18    | 20    | 15    | 4     | 4     | 5     | 4     |   |
| 3     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 10    | 15    | 20    | 15    | 3     | 4     | 3     | 4     |   |
| 3     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 4     | 3     | 18    | 30    | 32    | 17    | 5     | 4     | 5     | 4     |   |
| 4     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 10    | 20    | 25    | 15    | 3     | 4     | 3     | 4 |
| 4     | 3     | 2     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 20    | 18    | 20    | 15    | 3     | 4     | 3     | 4     |   |
| 4     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 8     | 15    | 20    | 10    | 3     | 4     | 3     | 4     |   |
| 5     | 3     | 2     | 4     | 5     | 3     | 4     | 5     | 5     | 3     | 4     | 3     | 5     | 4     | 4     | 4     | 5     | 3     | 4     | 3     | 5     | 4     | 15    | 25    | 25    | 16    | 4     | 3     | 5     | 4     |   |
| 2     | 3     | 3     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     |       |       |       |       | 3     | 3     | 2     | 2     |   |
| 4     | 3     | 2     | 4     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 7.4   | 6.9   | 10.2  | 4.4   | 4     | 3     | 4     | 5     |   |
| 3     | 4     | 2     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     |       |       |       |       | 4     | 4     | 3     | 4     |   |
| 2     | 5     | 3     | 1     | 2     | 3     | 4     | 3     | 2     | 4     | 2     | 3     | 4     | 2     | 4     | 1     | 2     | 3     | 4     | 2     | 3     | 4     |       |       |       |       | 1     | 2     | 3     | 4     |   |
| 4     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 15    | 20    | 18    | 15    | 4     | 3     | 4     | 5     |   |
| 4     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 2     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 2     |       |       |       |       | 2     | 2     | 3     | 4     |   |
| 4     | 5     | 2     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 10    | 20    | 15    | 7.6   | 4     | 5     | 4     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 18    | 15    | 15    | 10    | 3     | 4     | 4     | 3     |   |
| 5     | 4     | 1     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 12    | 8     | 15    | 7.8   | 5     | 4     | 3     | 4     |   |
| 5     | 4     | 2     | 2     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     |       |       |       |       | 3     | 3     | 4     | 4     |   |
| 4     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 4     | 5     | 4     | 5     |       |       |       | 5     | 4     | 5     | 5     |   |
| 3     | 2     | 1     | 2     | 3     | 4     | 2     | 2     | 3     | 2     | 2     | 3     | 3     | 2     | 4     | 1     | 1     | 2     | 3     | 3     | 2     | 3     |       |       |       |       | 2     | 2     | 2     | 3     |   |
| 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     |       |       |       |       | 3     | 3     | 4     | 4     |   |
| 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     |       |       |       |       | 3     | 3     | 4     | 3     |   |
| 3     | 3     | 2     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 2     | 59    | 7     | 0.6   | 3     | 4     | 3     | 3     |   |
| 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 8     | 15    | 20    | 15    | 3     | 4     | 4     | 3     |   |
| 3     | 4     | 2     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 10    | 15    | 25    | 15    | 3     | 4     | 4     | 3     |   |
| 4     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 8     | 10    | 15    | 10    | 3     | 4     | 4     | 3     |   |
| 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 10    | 15    | 25    | 15    | 3     | 4     | 3     | 4     |   |
| 4     | 3     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 7.5   | 9.2   | 5.6   | 8.7   | 4     | 3     | 4     | 3     |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 10    | 5     | 6     | 12    | 3     | 4     | 4     | 3 |
| 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 10    | 6     | 12    | 15    | 4     | 4     | 4     | 3     |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 9.7   | 3.9   | 8.7   | 6.9   | 4     | 3     | 3     | 3     |   |
| 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 2.7   | 15.2  | 3.9   | 13.1  | 3     | 4     | 3     | 4     |   |
| 3     | 4     | 2     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 5.6   | 3.2   | 7.8   | 9.6   | 3     | 3     | 3     | 4     |   |
| 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 12.1  | 7.8   | 3.6   | 11    | 4     | 3     | 4     | 3     |   |
| 3     | 4     | 2     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 18.7  | 37.1  | 3.9   | 9.6   | 4     | 3     | 4     | 4     |   |
| 3     | 3     | 2     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 5     | 3     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 17    | 28    | 30    | 18    | 3     | 3     | 4     | 5     |   |
| 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3.7   | 29.2  | 13.2  | 9.9   | 3     | 4     | 4     | 4     |   |
| 5     | 4     | 2     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 20    | 20    | 16    | 16    | 3     | 3     | 4     | 4     |   |
| 5     | 4     | 1     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 6.8   | 5.4   | 6.5   | 4.8   | 4     | 5     | 4     | 4     |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 4.23  | 5.66  | 2.45  | 10.5  | 5     | 4     | 5     | 4     |   |
| 4     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 8     | 15    | 25    | 15    | 3     | 4     | 3     | 4     |   |
| 4     | 5     | 3     | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 3     | 4     | 4     | 20    | 30    | 30    | 18    | 5     | 4     | 4     | 4     |   |
| 3     | 4     | 2     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 23    | 21    | 20    | 20    | 3     | 3     | 4     | 4     |   |
| 5     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 42    | 36    | 30    | 25    | 3     | 3     | 4     | 4     |   |
| 3     | 4     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 25    | 30    | 20    | 20    | 4     | 3     | 4     | 5     |   |
| 5     | 5     | 2     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 22    | 20    | 18    | 18    | 3     | 3     | 4     | 4     |   |

Appendix 2 Database: Company 241 – Company 320

| si171 | si172 | si173 | si174 | si175 | si176 | si177 | si178 | si179 | si180 | si181 | si182 | si183 | si184 | si185 | si186 | si187 | si188 | si189 | si190 | si191 | si192 | si193 | si194 | si195 | si196 | si197 | si198 | si199 | si200 |   |   |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3 |   |   |
| 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4 |   |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     |   |   |   |
| 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 4 |   |   |
| 4     | 5     | 3     | 4     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 5 |   |   |
| 4     | 2     | 3     | 4     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 2     | 3     | 2     | 4     | 4     | 3     | 4     | 3     |   |   |   |
| 4     | 5     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 4 |   |   |
| 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3 |   |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3 |   |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 |   |   |
| 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3 |   |   |
| 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 |   |   |
| 4     | 5     | 3     | 3     | 4     | 5     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 3     | 4     | 5     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 5 | 4 |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 | 4 |   |
| 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 5 |   |   |
| 3     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 3 | 4 |   |
| 4     | 5     | 3     | 5     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 3     | 5     | 4     | 4     | 4     | 4     | 5     | 3     | 4 |   |   |
| 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4 |   |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4 | 3 |   |
| 3     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4 | 5 |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4 | 4 |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4 | 4 |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4 | 3 |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4 | 3 |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4 | 3 |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4 | 3 |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4 | 3 |   |
| 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 5 | 4 |   |
| 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 3 |   |   |
| 4     | 5     | 4     | 5     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 5     | 5     | 3     |   |   |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4 |   |   |
| 3     | 2     | 1     | 4     | 2     | 3     | 2     | 5     | 2     | 1     | 2     | 4     | 2     | 3     | 4     | 2     | 2     | 4     | 3     | 5     | 3     | 4     | 5     | 2     | 4     | 2     | 1     | 2     | 3     | 2     | 2 |   |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4 | 3 |   |
| 3     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 2     | 3     | 4     | 4     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4 |   |   |
| 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4 | 4 |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4 | 3 |   |
| 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 4     | 5     | 4 | 3 |   |
| 3     | 4     | 5     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3 | 4 |   |
| 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4 | 4 |   |
| 3     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 4     | 3     | 4     | 2     | 3     | 4     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3 | 4 |   |
| 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 3 | 3 |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 2     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3 | 3 |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4 | 3 |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4 | 3 |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4 | 3 |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 2     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4 | 3 |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4 | 3 |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4 | 3 |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4 | 3 |   |
| 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3 | 4 |   |
| 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3 | 4 |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4 | 4 |   |
| 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 | 4 |   |
| 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 | 4 |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 | 4 |   |
| 4     | 3     | 4     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4 | 5 |   |
| 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4 | 4 |   |
| 4     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4 | 3 |   |
| 5     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 5     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4 | 4 |   |
| 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4 | 4 |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4 | 3 | 4 |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     |       |       |       |       |       |       |       |       |       |       |   |   |   |

Appendix 2 Database: Company 241 – Company 320

| si201 | si202 | si203 | si204 | si205 | si206 | si207 | si208 | si209 | si210 | si211 | si212 | si213 | si214 | si215 | si216 | si217 | si218 | si219 | si220 | si221 | si222 | si223 | si224 | si225 | si226 | si227 | si228 | si229 | si230 |   |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4 | 3 |
| 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 5     | 3     | 2     | 4     | 4     | 3     | 5     | 4 |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4 |   |
| 4     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 2     | 4 |   |
| 4     | 4     | 3     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4 |   |
| 4     | 4     | 3     | 2     | 3     | 3     | 2     | 4     | 3     | 3     | 3     | 4     | 4     | 2     | 4     | 4     | 3     | 3     | 2     | 4     | 2     | 4     | 3     | 2     | 4     | 3     | 5     | 2     | 4     | 2     |   |   |
| 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4 |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 2     | 2     | 3     | 3     | 4     | 4     | 3     | 4     | 3 |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3 |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 |   |
| 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 4     | 3     | 3     | 3 |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 3     | 4     | 4 |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4 |   |
| 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4 |   |
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| 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 3     | 5     | 3     | 4     | 5     | 4     | 4     | 4 |   |
| 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4 |   |
| 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4 |   |
| 5     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4 |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 4 |   |
| 4     | 3     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 5     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4 |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3 |   |
| 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 3     | 3 |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 3     | 4     | 4     | 3     | 4 |   |
| 4     | 5     | 4     | 3     | 5     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 5     | 4     | 4     | 3     | 5     | 3     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 5     | 4 |   |
| 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 2 |   |
| 4     | 4     | 3     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 4 |   |
| 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 3     | 4     | 4 |   |
| 4     | 3     | 2     | 4     | 5     | 4     | 2     | 1     | 1     | 2     | 3     | 2     | 4     | 3     | 2     | 4     | 3     | 2     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 5     | 4 |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4 |   |
| 3     | 2     | 3     | 3     | 3     | 3     | 4     | 2     | 2     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 3     | 3 |   |
| 5     | 4     | 4     | 3     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 4 |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4 |   |
| 5     | 4     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5 |   |
| 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 3     | 4 |   |
| 5     | 3     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 3     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 5     | 4     | 3     | 5     | 5     | 4     | 5     | 4     | 5     | 3     | 4 | 4 |
| 4     | 3     | 4     | 5     | 4     | 3     | 4     | 2     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 2     | 2     | 2     | 3     | 3     | 4     | 3     | 3     | 3 |   |
| 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3 |   |
| 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4 |   |
| 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3 |   |
| 4     | 4     | 3     | 5     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 2     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 4 |   |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3 |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4 |   |
| 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4 |   |
| 3     | 4     | 3     | 4     | 3     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 3     | 4     | 2     | 4     | 3     | 4 |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2 |   |
| 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3 |   |
| 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4 |   |
| 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4 |   |
| 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4 |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4 |   |
| 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4 |   |
| 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4 |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4 |   |
| 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4 |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 2     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3 |   |
| 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 3     | 5     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 3     | 4 |   |
| 5     | 4     | 4     | 5     | 5     | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 3 |   |
| 5     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4 |   |
| 5     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 5     | 3     | 3     | 4     | 5     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 4 |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 2     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3 |   |
| 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 3     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4 |   |
| 4     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 5     | 4     | 3     | 4     | 3     | 5     | 3     |       |       |       |       |   |   |

Appendix 2 Database: Company 241 – Company 320

| si231 | si232 | si233 | si234 | si235 | si236 | si237 | si238 | si239 | si240 | si241 | si242 | si243 | si244 | si245 | si246 | si247 | si248 | si249 | si250 | si251 | si252 | si253 | si254 | si255 | si256 | si257 | si258 | si259 | si260 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 2     |       | 3     | 4     | 3     | 4     | 4     | 3     | 4     |   |
| 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 5     | 3     | 4     | 3     | 4     | 3     | 5     | 2     |       | 4     | 3     | 4     | 4     | 3     | 3     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 1     | 15    | 3     | 4     | 3     | 4     | 3     | 3     | 4     |       |   |
| 3     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 2     |       | 3     | 2     | 3     | 3     | 4     | 3     | 3     |       |   |
| 3     | 4     | 4     | 4     | 2     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 2     |       | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 4     |       |   |
| 4     | 3     | 4     | 4     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 2     | 4     | 3     | 4     | 3     | 4     | 4     | 2     | 2     |       | 4     | 2     | 4     | 3     | 4     | 4     | 3     |   |
| 5     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 1     | 20    | 4     | 4     | 3     | 4     | 5     | 4     | 3     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 1     | 10    | 3     | 4     | 3     | 4     | 3     | 3     | 4     |   |
| 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 1     | 20    | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 1     | 8     | 4     | 3     | 3     | 4     | 4     | 3     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 1     | 15    | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 5     |   |
| 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 1     | 8     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4 |
| 3     | 4     | 3     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 5     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 1     | 10    | 3     | 4     | 4     | 5     | 4     | 4     | 5     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 1     | 8     | 3     | 4     | 3     | 4     | 3     | 3     | 4     |   |
| 5     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 1     | 30    | 3     | 4     | 4     | 5     | 4     | 4     | 5     |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 1     | 11    | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     |   |
| 5     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 5     | 5     | 3     | 4     | 4     | 5     | 3     | 5     | 4     | 5     | 4     | 5     | 3     | 2     |       | 3     | 4     | 3     | 5     | 5     | 4     | 3     |   |
| 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 1     | 20    | 4     | 5     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 1     | 15    | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     |   |
| 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 1     | 18    | 4     | 3     | 4     | 4     | 5     | 5     | 4     |   |
| 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 1     | 10    | 3     | 4     | 3     | 4     | 4     | 3     | 4     |   |
| 3     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 4     | 5     | 3     | 1     | 20    | 5     | 4     | 3     | 4     | 5     | 4     | 4     |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 1     | 10    | 3     | 4     | 3     | 4     | 4     | 4     | 4     |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 1     | 10    | 3     | 4     | 3     | 4     | 4     | 4     | 3     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 1     | 10    | 3     | 4     | 3     | 4     | 3     | 3     | 4     |   |
| 5     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 3     | 5     | 4     | 4     | 4     | 5     | 3     | 1     | 21    | 4     | 5     | 3     | 4     | 4     | 4     | 5     |   |
| 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 2     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 2     | 3     | 1     | 5     | 3     | 3     | 3     | 3     | 3     | 2     | 3     |   |
| 3     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 2     |       | 4     | 4     | 3     | 4     | 4     | 4     | 5     |   |
| 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 1     | 50    | 4     | 4     | 4     | 4     | 4     | 3     | 3     |   |
| 3     | 5     | 2     | 3     | 5     | 1     | 3     | 4     | 2     | 2     | 3     | 4     | 5     | 3     | 4     | 2     | 5     | 3     | 1     | 2     | 4     | 1     | 10    | 1     | 3     | 4     | 2     | 3     | 1     | 2     |   |
| 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 1     | 20    | 3     | 4     | 4     | 4     | 3     | 4     | 3     |   |
| 3     | 2     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 2     | 3     | 4     | 3     | 3     | 3     | 2     | 2     | 3     | 1     | 30    | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 1     | 10    | 4     | 3     | 4     | 5     | 4     | 4     | 5     |   |
| 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 1     | 15    | 3     | 4     | 3     | 4     | 4     | 4     | 3 |
| 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 3     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 1     | 10    | 4     | 5     | 4     | 3     | 5     | 5     | 4     |       |   |
| 4     | 3     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 1     | 12    | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 5     | 3     | 5     | 4     | 3     | 5     | 3     | 4     | 3     | 4     | 3     | 4     | 1     | 6     | 3     | 4     | 5     | 3     | 4     | 5     | 4     |   |
| 4     | 4     | 5     | 2     | 3     | 1     | 2     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 2     | 2     | 4     | 4     | 3     | 2     |       | 3     | 2     | 1     | 2     | 3     | 1     | 1     |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 1     | 10    | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     |   |
| 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 1     | 15    | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 1     | 9     | 4     | 4     | 3     | 4     | 3     | 4     | 3     |   |
| 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 1     | 10    | 3     | 4     | 3     | 4     | 4     | 3     | 4     |   |
| 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 1     | 10    | 3     | 4     | 4     | 3     | 4     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 1     | 12    | 3     | 4     | 3     | 4     | 3     | 3     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 1     | 8     | 3     | 4     | 3     | 4     | 4     | 3     | 4     |   |
| 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 1     | 10    | 3     | 4     | 3     | 4     | 3     | 4     | 4     |   |
| 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 2     |       | 3     | 4     | 4     | 3     | 4     | 3     | 4     |   |
| 3     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 1     | 11    | 4     | 3     | 4     | 3     | 4     | 4     | 3     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 2     |       | 4     | 3     | 4     | 3     | 4     | 4     | 3     |   |
| 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 2     |       | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     |   |
| 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 2     |       | 4     | 4     | 3     | 4     | 3     | 4     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 2     |       | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     |   |
| 4     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 5     | 3     | 4     | 3     | 5     | 3     | 5     | 3     | 5     | 4     | 4     | 4     | 2     |       | 4     | 3     | 5     | 4     | 3     | 5     | 5     |   |
| 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 2     |       | 4     | 3     | 4     | 4     | 3     | 4     | 3     |   |
| 3     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 1     | 18    | 3     | 3     | 3     | 3     | 4     | 5     | 4     |   |
| 3     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 1     | 26    | 4     | 5     | 4     | 5     | 4     | 4     | 4     |   |
| 5     | 3     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 5     | 2     |       | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 5     |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 1     | 9     | 3     | 4     | 4     | 3     | 4     | 3     | 4     |   |
| 3     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 5     | 5     | 4     | 3     | 5     | 1     | 22    | 4     | 3     | 4     | 4     | 5     | 5     | 5     |   |
| 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 1     | 20    | 4     | 4     | 5     | 4     | 4     | 3     | 3     |   |
| 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 3     | 4     | 1     | 23    | 4     | 4     | 5     | 5     | 4     | 4     | 4     |   |
| 3     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 1     | 15    | 4     | 3     | 4     | 4     | 5     | 3     | 4     |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 1     | 18    | 3     | 3     | 4     | 4     | 4     | 3     | 4     |   |
| 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 1     | 30    | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     |   |
| 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 5     | 1     | 9     | 4     | 5     | 4     | 5     |       |       |       |   |

Appendix 2 Database: Company 241 – Company 320

| si261 | si262 | si263 | si264 | si265 | si266 | si267 | si268 | si269 | si270 | si271 | si272 | si273 | si274 | si275 | si276 | si277 | si278 | si279 | si280 | si281 | si282 | si283 | si284 | si285 | si286 | si287  | si288 | si289 | si290 |   |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|---|---|
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 54    | 0     | 46    | 0      | 0     | 4301  | 1998  | 5 | 5 |
| 4     | 2     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 2     | 5     | 4     | 3     | 4     | 5     | 3     | 4     | 80    | 10    | 10    | 50    | 50    | 55000  | 2007  | 7     | 14    |   |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 60    | 15    | 25    | 40    | 60    | 500    | 2008  | 7     | 17    |   |   |
| 3     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 2     | 3     | 2     | 3     | 2     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 500    | 2012  | 8     | 14    |   |   |
| 4     | 3     | 3     | 5     | 4     | 4     | 4     | 4     | 2     | 4     | 3     | 4     | 2     | 3     | 2     | 4     | 4     | 5     | 3     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 7500   | 2008  | 7     | 17    |   |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 2     | 4     | 4     | 5     | 2     | 4     | 3     | 3     | 4     | 4     | 3     | 2     | 2     | 4     | 3     | 80    | 10    | 10    | 70    | 30    | 2000   | 2004  | 6     | 17    |   |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 1200   | 1999  | 7     | 14    |   |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 50    | 10    | 40    | 50    | 50    | 320    | 2004  | 6     | 14    |   |   |
| 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 2250   | 2011  | 8     | 17    |   |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 60    | 20    | 20    | 60    | 40    | 4033   | 2002  | 6     | 17    |   |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 100   | 0     | 0     | 0     | 0     | 2400   | 2007  | 7     | 17    |   |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 70    | 10    | 20    | 70    | 30    | 1319   | 2008  | 7     | 17    |   |   |
| 3     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 80    | 20    | 0     | 45    | 55    | 600    | 2009  | 7     | 17    |   |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 60    | 20    | 20    | 70    | 30    | 120    | 2002  | 6     | 4     |   |   |
| 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 60    | 0     | 40    | 0     | 0     | 300    | 2009  | 7     | 17    |   |   |
| 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 50    | 10    | 40    | 60    | 40    | 300    | 2007  | 7     | 17    |   |   |
| 3     | 4     | 4     | 4     | 3     | 3     | 5     | 5     | 4     | 5     | 3     | 5     | 3     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 80    | 10    | 10    | 60    | 40    | 471    | 2002  | 6     | 17    |   |   |
| 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 50    | 40    | 10    | 40    | 60    | 870    | 2004  | 6     | 14    |   |   |
| 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 73    | 27    | 0     | 28.9  | 71.1  | 23     | 2003  | 6     | 1     |   |   |
| 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 100   | 0     | 0     | 0     | 0     | 108    | 2001  | 6     | 14    |   |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 80    | 15    | 5     | 40    | 60    | 500    | 2006  | 7     | 17    |   |   |
| 5     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 3     | 4     | 5     | 65    | 30    | 5     | 95    | 5     | 9500   | 1993  | 4     | 14    |   |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 80    | 15    | 5     | 80    | 20    | 300    | 2006  | 7     | 7     |   |   |
| 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 1020   | 2005  | 6     | 14    |   |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 60    | 20    | 20    | 60    | 40    | 2014   | 2005  | 6     | 17    |   |   |
| 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 5     | 5     | 4     | 5     | 3     | 4     | 5     | 60    | 30    | 10    | 100   | 0     | 15000  | 2007  | 7     | 16    |   |   |
| 3     | 2     | 2     | 3     | 3     | 2     | 2     | 2     | 2     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 80    | 15    | 5     | 70    | 30    | 423    | 2003  | 6     | 17    |   |   |
| 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 60    | 40    | 0     | 0     | 0     | 120000 | 2003  | 6     | 17    |   |   |
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 80    | 5     | 15    | 80    | 20    | 15000  | 2000  | 5     | 14    |   |   |
| 4     | 3     | 2     | 2     | 3     | 2     | 4     | 2     | 1     | 3     | 5     | 2     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 2     | 4     | 70    | 10    | 20    | 50    | 50    | 20     | 2006  | 7     | 14    |   |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 450    | 2010  | 7     | 16    |   |   |
| 2     | 2     | 3     | 2     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 2     | 3     | 2     | 3     | 4     | 40    | 40    | 20    | 0     | 0     | 250    | 2005  | 6     | 17    |   |   |
| 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 40    | 20    | 40    | 40    | 60    | 9561   | 2007  | 7     | 14    |   |   |
| 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 390    | 2008  | 7     | 17    |   |   |
| 5     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 80    | 10    | 10    | 80    | 20    | 2100   | 2008  | 7     | 17    |   |   |
| 3     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 55    | 25    | 20    | 55    | 45    | 500    | 2012  | 8     | 14    |   |   |
| 5     | 3     | 5     | 3     | 4     | 3     | 3     | 5     | 4     | 3     | 4     | 5     | 3     | 5     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 40    | 20    | 40    | 50    | 50    | 1202   | 2004  | 6     | 4     |   |   |
| 3     | 3     | 4     | 3     | 4     | 4     | 2     | 2     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 1     | 3     | 4     | 3     | 2     | 3     | 50    | 20    | 30    | 50    | 50    | 1000   | 2006  | 7     | 17    |   |   |
| 4     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 100   | 0     | 0     | 0     | 0     | 2820   | 1999  | 5     | 17    |   |   |
| 4     | 3     | 3     | 3     | 3     | 4     | 4     | 2     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 70    | 10    | 20    | 60    | 40    | 15401  | 2004  | 6     | 17    |   |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 63    | 37    | 0     | 100   | 0     | 100    | 2011  | 8     | 17    |   |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 150000 | 2008  | 7     | 17    |   |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 80    | 10    | 10    | 50    | 50    | 3000   | 2003  | 6     | 17    |   |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 405    | 2000  | 5     | 14    |   |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 60    | 20    | 20    | 60    | 40    | 400    | 2006  | 7     | 17    |   |   |
| 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 60    | 0     | 40    | 0     | 0     | 200    | 2005  | 6     | 17    |   |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 65    | 0     | 35    | 0     | 0     | 4060   | 1999  | 5     | 17    |   |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 60    | 0     | 40    | 0     | 0     | 8514   | 2007  | 7     | 17    |   |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 73    | 27    | 0     | 0     | 0     | 39     | 2004  | 6     | 14    |   |   |
| 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 70    | 30    | 0     | 100   | 0     | 27     | 2006  | 7     | 17    |   |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 57    | 30    | 13    | 60    | 40    | 1050   | 2000  | 5     | 10    |   |   |
| 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 64    | 36    | 0     | 100   | 0     | 47     | 1999  | 5     | 12    |   |   |
| 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 55    | 45    | 0     | 100   | 0     | 20     | 2011  | 8     | 10    |   |   |
| 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 5     | 4     | 70    | 25    | 5     | 100   | 0     | 90000  | 2007  | 7     | 17    |   |   |
| 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 81    | 19    | 0     | 100   | 0     | 31     | 1999  | 5     | 17    |   |   |
| 3     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 70    | 30    | 0     | 100   | 0     | 1000   | 2002  | 6     | 17    |   |   |
| 5     | 4     | 5     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 5     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 2600   | 2003  | 6     | 17    |   |   |
| 4     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 100   | 0     | 0     | 0     | 0     | 16     | 2002  | 6     | 17    |   |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 105    | 2001  | 6     | 14    |   |   |
| 4     | 3     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 70    | 20    | 10    | 100   | 0     | 210    | 2005  | 6     | 17    |   |   |
| 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 70    | 30    | 0     | 100   | 0     | 950    | 2002  | 6     | 14    |   |   |
| 5     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     |       |       |       |       |       |       |       |       |       |       |       |        |       |       |       |   |   |

Appendix 2 Database: Company 241 – Company 320

| si291 | si292        | si293        | si294 | si295 | si296 | si297 | si298 | si299 | si300 | si301 | si302 | si303 | si304 | si305 | si306 | si307 | si308 | si309 | si310        |
|-------|--------------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|
| 13    | Germany      | 34674000000  | 1     | 0     | 0     | 1     |       |       | 1     |       | 1     | 1     | 1     | 1     |       |       |       |       | Chinese      |
| 16    | America      | 11485000000  | 1     | 0     | 0     |       |       | 1     | 1     |       | 1     |       |       |       | 1     |       |       |       | American     |
| 13    | Canada       | 3500000000   | 1     | 0     | 0     |       |       | 1     | 1     |       | 1     |       |       |       |       | 1     | 1     |       | Canadian     |
| 16    | South Korea  | 20000000     | 0     | 0     | 1     | 1     |       |       | 2     | 1     | 1     | 1     |       | 1     |       |       |       |       | Chinese      |
| 20    | Vietnam      | 45000000     | 1     | 1     | 0     | 1     |       |       | 2     |       |       | 1     |       |       | 1     | 1     |       |       | Chinese      |
| 20    | Japan        | 2000000000   | 1     | 0     | 0     |       |       | 1     | 1     |       | 1     |       |       |       | 1     |       | 1     |       | Japanese     |
| 16    | Slovakia     | 15700000     | 1     | 0     | 0     | 1     |       |       | 1     | 1     |       |       |       |       | 1     | 1     |       |       | Chinese      |
| 20    | America      | 904000000    | 1     | 0     | 0     |       |       | 1     | 1     | 1     |       | 1     | 1     |       |       |       |       |       | American     |
| 20    | Indonesia    | 1500000000   | 1     | 0     | 0     | 1     |       |       | 1     |       |       | 1     |       |       | 1     | 1     |       |       | Chinese      |
| 13    | Japan        | 50338000000  | 1     | 0     | 0     |       |       | 1     | 1     | 1     |       | 1     | 1     |       |       |       |       |       | Japanese     |
| 20    | Vietnam      | 2200000000   | 1     | 1     | 0     |       |       | 1     | 2     | 1     |       | 1     |       |       | 1     | 1     |       |       | Chinese      |
| 20    | America      | 42190000000  | 1     | 0     | 0     |       |       | 1     | 1     |       | 1     |       | 1     | 1     |       |       |       |       | American     |
| 13    | South Korea  |              | 0     | 0     | 1     |       |       | 1     | 2     | 1     |       |       |       |       |       |       | 1     |       | South Korean |
| 7     | North Korea  | 9520000000   | 1     | 0     | 0     | 1     |       |       | 1     | 1     |       | 1     | 1     |       |       |       |       |       | Chinese      |
| 13    | America      | 220000000    | 1     | 0     | 0     |       |       | 1     | 1     |       | 1     |       | 1     | 1     |       |       | 1     |       | Chinese      |
| 20    | Denmark      | 2110000000   | 1     | 0     | 0     |       |       | 1     | 1     |       |       |       |       |       |       |       |       |       | Danish       |
| 20    | Singapore    | 4190000000   | 1     | 0     | 0     |       |       | 1     | 1     | 1     | 1     |       | 1     |       | 1     | 1     |       |       | Chinese      |
| 16    | Japan        | 7080000000   | 1     | 0     | 0     |       |       | 1     | 1     |       | 1     | 1     |       | 1     |       |       |       |       | Japanese     |
| 2     | Philippines  | 10000000000  | 1     | 0     | 0     | 1     |       |       | 1     |       | 1     | 1     |       |       | 1     | 1     |       |       | Chinese      |
| 16    | America      | 89000000     | 1     | 0     | 0     |       | 1     |       | 2     |       | 1     |       |       |       |       |       | 1     |       | Chinese      |
| 20    | Japan        | 21960000000  | 1     | 0     | 0     |       |       | 1     | 1     | 1     |       | 1     | 1     |       |       |       |       |       | Japanese     |
| 16    | Singapore    | 200000000    | 1     | 1     | 0     |       |       | 1     | 1     | 1     | 1     |       | 1     | 1     |       |       |       |       | Chinese      |
| 12    | UK           | 5000000000   | 0     | 1     | 0     |       |       | 1     | 1     |       | 1     | 1     | 1     |       |       |       |       |       | Chinese      |
| 16    | India        | 16000000     | 1     | 0     | 0     | 1     |       |       | 1     |       |       | 1     |       | 1     | 1     | 1     |       |       | Chinese      |
| 20    | Italy        | 10110000000  | 0     | 1     | 0     | 1     |       |       | 1     |       | 1     | 1     | 1     |       |       |       |       |       | Chinese      |
| 5     | Nigeria      | 200000000    | 1     | 1     | 1     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       |       | Chinese      |
| 20    | Singapore    |              | 0     | 1     | 0     | 1     |       |       | 2     |       | 1     | 1     | 1     | 1     |       |       |       |       | Singaporean  |
| 20    | Italy        |              | 0     | 1     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       |       |       | Chinese      |
| 16    | Germany      | 4230000000   | 1     | 0     | 1     | 1     |       |       | 1     | 1     | 1     | 1     | 1     |       |       |       |       |       | German       |
| 16    | Australia    | 9800000000   | 0     | 0     | 1     |       |       | 1     | 1     |       | 1     |       |       |       | 1     |       | 1     |       | Australian   |
| 5     | Vietnam      | 37000000     | 1     | 0     | 0     |       | 1     |       | 2     |       |       | 1     |       |       |       | 1     |       |       | Chinese      |
| 20    | Singapore    | 1800000000   | 1     | 0     | 0     |       |       | 1     | 2     |       |       |       | 1     | 1     |       |       |       |       | Chinese      |
| 17    | Japan        | 68870000000  | 1     | 0     | 0     |       |       | 1     | 1     | 1     | 1     | 1     |       |       | 1     |       |       |       | Japanese     |
| 19    | Vietnam      |              | 1     | 0     | 0     |       | 1     |       | 2     |       |       | 1     |       |       | 1     | 1     |       |       | Chinese      |
| 20    | Japan        | 1080000000   | 1     | 0     | 0     |       |       | 1     | 2     |       | 1     | 1     | 1     |       | 1     |       |       |       | Japanese     |
| 17    | Kenya        | 2000000000   | 0     | 0     | 1     |       |       | 1     | 2     |       |       |       |       |       |       |       | 1     |       | Chinese      |
| 7     | Japan        | 7890000000   | 0     | 0     | 1     | 1     |       |       | 2     | 1     | 1     |       | 1     |       | 1     | 1     |       |       | Chinese      |
| 20    | UK           | 90558000000  | 0     | 1     | 0     | 1     |       |       | 1     |       |       | 1     |       | 1     |       | 1     |       |       | British      |
| 20    | South Africa | 17000000000  | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     | 1     | 1     |       |       |       |       |       | Chinese      |
| 20    | Japan        | 15000000000  | 0     | 1     | 0     |       |       | 1     | 1     |       |       |       |       |       |       |       |       |       | Japanese     |
| 20    | Australia    | 5000000000   | 1     | 0     | 0     | 1     |       |       | 1     | 1     | 1     |       |       | 1     | 1     |       |       |       | Chinese      |
| 19    | Australia    | 2000000000   | 1     | 0     | 0     |       | 1     |       | 1     |       |       |       |       |       |       |       |       |       | Chinese      |
| 20    | India        | 10080000000  | 1     | 0     | 0     |       |       | 1     | 1     | 1     |       |       | 1     |       |       |       |       |       | Indian       |
| 16    | America      | 4595700000   | 1     | 0     | 0     | 1     |       |       | 2     |       | 1     | 1     |       |       | 1     |       |       |       | Chinese      |
| 19    | America      | 5000000000   | 0     | 1     | 0     |       |       | 1     | 1     | 1     |       | 1     | 1     |       |       |       |       |       | American     |
| 20    | Japan        | 40000000000  | 1     | 0     | 1     |       |       | 1     | 1     | 1     | 1     |       | 1     |       | 1     | 1     |       |       | Chinese      |
| 20    | America      | 4300000000   | 1     | 0     | 0     |       |       | 1     | 1     |       |       | 1     |       | 1     | 1     |       |       |       | Chinese      |
| 13    | Australia    | 356000000000 | 1     | 0     | 0     | 1     |       |       | 1     |       |       |       | 1     |       | 1     |       | 1     |       | Chinese      |
| 17    | Germany      | 2000000000   | 1     | 0     | 0     |       |       | 1     | 1     |       | 1     |       |       | 1     |       |       | 1     |       | Chinese      |
| 20    | Brazil       | 1500000000   | 1     | 0     | 0     |       |       | 1     | 1     | 1     | 1     |       |       |       | 1     | 1     | 1     |       | Chinese      |
| 8     | UK           | 40000000000  | 0     | 1     | 0     | 1     |       |       | 1     | 1     |       |       | 1     |       |       | 1     |       |       | Chinese      |
| 20    | Switzerland  | 5000000000   | 1     | 0     | 0     | 1     |       |       | 1     |       | 1     |       |       | 1     | 1     |       |       |       | Chinese      |
| 9     | Turkey       | 1000000000   | 1     | 0     | 0     |       |       | 1     | 2     |       | 1     |       | 1     |       |       | 1     |       |       | Chinese      |
| 20    | Thailand     | 12000000     | 1     | 1     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     |       |       |       | Singaporean  |
| 20    | Italy        | 1600000000   | 1     | 0     | 0     | 1     |       |       | 2     | 1     |       |       | 1     |       |       |       | 1     |       | Chinese      |
| 19    | Australia    | 250000000    | 1     | 0     | 0     |       |       | 1     | 2     | 1     | 1     | 1     | 1     | 1     |       | 1     |       |       | Chinese      |
| 19    | India        | 130000000    | 1     | 1     | 1     | 1     |       |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     |       | Chinese      |
| 19    | Singapore    | 50000000     | 1     | 0     | 0     |       | 1     |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     |       | Chinese      |
| 15    | America      | 89000000     | 0     | 0     | 0     |       | 1     |       | 1     |       |       |       |       |       |       |       |       |       | American     |
| 19    | Malaysia     | 210000       | 1     | 1     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       | Chinese      |
| 14    | Qatar        | 10000000000  | 1     | 1     | 0     | 1     |       |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |       | Chinese      |
| 19    | Niger        |              | 0     | 1     | 1     | 1     |       |       | 2     | 1     | 1     | 1     | 1     | 1     |       |       |       |       | Chinese      |
| 20    | Laos         | 200000000    | 1     | 0     | 0     | 1     |       |       | 2     |       |       | 1     |       |       | 1     | 1     |       |       | Chinese      |
| 19    | Indonesia    | 300000000    | 1     | 1     | 0     |       |       | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |       | Chinese      |
| 16    | Japan        | 4700000000   | 1     | 0     | 0     | 1     |       |       | 1     | 1     |       |       | 1     |       |       |       |       |       | Chinese      |
| 5     | Singapore    | 10000000     | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     |       |       | 1     | 1     |       |       |       | Chinese      |
| 17    | South Korea  | 350000000    | 1     | 1     | 1     | 1     |       |       | 1     | 1     | 1     | 1     |       | 1     | 1     |       |       |       | Chinese      |
| 20    | UAE          | 8000000      | 1     | 0     | 0     |       | 1     |       | 2     |       |       |       |       | 1     | 1     |       |       |       | Chinese      |
| 15    | Singapore    | 50000000     | 1     | 0     | 1     |       |       | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       | Chinese      |
| 20    | Laos         | 680000000    | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     |       |       |       |       |       |       |       | Chinese      |
| 20    | South Korea  | 18000000000  | 1     | 0     | 0     | 1     |       |       | 1     | 1     | 1     |       | 1     |       |       |       |       |       | Chinese      |
| 20    | America      | 15000000000  | 1     | 0     | 0     | 1     |       |       | 1     | 1     |       |       | 1     |       | 1     | 1     |       |       | Chinese      |
| 19    | Australia    | 180000000    | 1     | 1     | 0     |       |       | 1     | 2     | 1     | 1     | 1     | 1     |       | 1     |       |       |       | Chinese      |
| 20    | Australia    | 68000000000  | 1     | 0     | 0     |       |       | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |       | Chinese      |
| 15    | America      | 3900000000   | 1     | 0     | 0     |       |       | 1     | 1     | 1     |       |       | 1     |       |       |       |       |       | Chinese      |
| 14    | Japan        | 500000000    | 0     | 1     | 0     |       |       | 1     | 1     |       |       |       | 1     | 1     | 1     |       |       |       | Chinese      |
| 16    | UAE          | 570000000    | 1     | 0     | 0     |       | 1     |       | 2     |       |       | 1     | 1     |       | 1     |       |       |       | Chinese      |
| 20    | Bangladesh   | 38000000     | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     |       | 1     | 1     | 1     | 1     |       |       | Chinese      |
| 16    | Japan        | 560000000    | 1     | 0     | 0     | 1     |       |       | 2     |       |       | 1     | 1     |       |       |       |       |       | Chinese      |
| 19    | Brazil       | 680000000    | 1     | 1     | 1     |       |       | 1     | 2     | 1     | 1     | 1     |       | 1     | 1     |       |       |       | Chinese      |

Appendix 2 Database: Company 241 – Company 320

| si312 | si313 | si314 | si315 | si316 | si317 | si318 | si319       | si320 | si321       | si322 | si323       | si324 | si325  | si326 | si327 | si328 | si329 | si330 |
|-------|-------|-------|-------|-------|-------|-------|-------------|-------|-------------|-------|-------------|-------|--------|-------|-------|-------|-------|-------|
| 1     | 6     | 6     | 12    | 12    | 10    | 10    | Germany     | 10    | Germany     | 0     |             | 2     | fluent | 4     | 1     | 1     | 2     | 2     |
| 2     | 6     | 6     | 9     | 9     | 9     |       |             |       |             | 1     | America     | 1     | fluent | 4     | 1     | 2     | 2     | 1     |
| 3     | 7     | 6     | 4     | 4     | 4     | 15    | Canada      | 15    | Canada      | 1     | Canada      | 1     |        |       | 1     | 2     | 1     | 2     |
| 2     | 5     | 6     | 10    | 1     | 7     | 1     | South Korea | 1     | South Korea | 0     |             | 2     | basic  | 2     | 2     | 2     | 2     | 2     |
| 3     | 6     | 5     | 10    | 7     | 6     | 12    | Vietnam     | 15    | Vietnam     | 0     |             | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 2     | 5     | 5     | 8     | 8     | 8     |       |             |       |             | 1     | Japan       | 1     |        |       | 1     | 1     | 1     | 2     |
| 1     | 7     | 5     | 15    | 12    | 12    | 20    | Slovakia    | 50    | Slovakia    | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 5     | 6     | 4     | 4     | 3     |       |             |       |             | 1     | America     | 1     |        |       | 1     | 1     | 1     | 1     |
| 1     | 7     | 5     | 1     | 1     | 4     | 5     | America     | 1     | America     | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 3     | 4     | 5     | 3     | 2     | 2     |       |             |       |             | 1     | Japan       | 1     |        |       | 1     | 1     | 1     | 1     |
| 4     | 5     | 5     | 5     | 3     | 5     | 3     | Vietnam     | 3     | Vietnam     | 0     |             | 2     | fluent | 4     | 1     | 1     | 2     | 2     |
| 3     | 5     | 5     | 4     | 4     | 3     |       |             |       |             | 1     | America     | 1     |        |       | 2     | 2     | 2     | 2     |
| 3     | 4     | 5     | 3     | 3     | 3     | 6     | South Korea | 10    | South Korea | 1     | South Korea | 1     | basic  | 2     | 1     | 1     | 1     | 2     |
| 3     | 3     | 5     | 4     | 4     | 2     | 4     | North Korea | 4     | North Korea | 0     |             | 2     |        |       | 1     | 1     | 1     | 1     |
| 3     | 5     | 6     | 8     | 2     | 8     | 2     | America     | 2     | America     | 0     |             | 2     | fluent | 4     | 1     | 1     | 2     | 2     |
| 3     | 3     | 5     | 2     | 2     | 1     |       |             |       |             | 1     | Denmark     | 1     |        |       | 2     | 1     | 1     | 2     |
| 3     | 4     | 5     | 3     | 3     | 2     | 3     | Singapore   | 3     | Singapore   | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 3     | 4     | 5     | 3     | 3     | 2     |       |             |       |             | 1     | Japan       | 1     | basic  | 2     | 1     | 2     | 1     | 1     |
| 3     | 4     | 6     | 8     | 2     | 8     | 2     | Philippines | 2     | Philippines | 0     |             | 2     | fluent | 4     | 2     | 1     | 2     | 2     |
| 3     | 5     | 5     | 5     | 5     | 5     | 5     | America     | 5     | America     | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 3     | 4     | 5     | 4     | 4     | 2     |       |             |       |             | 1     | Japan       | 1     |        |       | 1     | 1     | 1     | 1     |
| 2     | 6     | 6     | 12    | 9     | 10    | 12    | Singapore   | 12    | Singapore   | 0     |             | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 3     | 3     | 6     | 3     | 3     | 3     | 3     | UK          | 3     | UK          | 1     | UK          | 1     |        |       | 1     | 1     | 1     | 1     |
| 3     | 7     | 5     | 1     | 1     | 1     | 1     | India       | 1     | India       | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 3     | 4     | 5     | 3     | 3     | 2     |       |             |       |             | 1     | Italy       | 1     |        |       | 2     | 2     | 1     | 2     |
| 1     | 6     | 5     | 4     | 4     | 14    | 4     | Nigeria     | 4     | Nigeria     | 0     |             | 2     | basic  | 2     | 1     | 1     | 2     | 1     |
| 3     | 4     | 5     | 4     | 3     | 3     |       |             |       |             | 1     | Japan       | 1     |        |       | 1     | 2     | 2     | 2     |
| 1     | 7     | 7     | 7     | 4     | 4     | 3     | Australia   | 3     | Australia   | 0     |             | 2     |        |       | 1     | 2     | 1     | 1     |
| 3     | 4     | 5     | 4     | 3     | 3     | 4     | Germany     | 4     | Germany     | 1     | Germany     | 1     |        |       | 1     | 1     | 1     | 1     |
| 2     | 4     | 5     | 22    | 11    | 22    |       |             |       |             | 1     | Australia   | 1     |        |       | 1     | 1     | 1     | 1     |
| 3     | 7     | 5     | 1     | 1     | 1     | 1     | Vietnam     | 1     | Vietnam     | 0     |             | 2     | basic  | 2     | 2     | 2     | 2     | 2     |
| 1     | 5     | 6     | 10    | 10    | 4     | 12    | Singapore   | 16    | Singapore   | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 5     | 6     | 4     | 4     | 2     |       |             |       |             | 1     | Japan       | 1     | fluent | 4     | 1     | 2     | 1     | 2     |
| 3     | 7     | 5     | 2     | 2     | 2     | 2     | Vietnam     | 2     | Vietnam     | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 3     | 4     | 5     | 3     | 3     | 2     |       |             |       |             | 1     | Japan       | 1     | fluent | 4     | 1     | 2     | 1     | 2     |
| 2     | 7     | 6     | 31    | 1     | 30    | 1     | Kenya       | 1     | Kenya       | 0     |             | 2     |        |       | 1     | 2     | 1     | 1     |
| 3     | 4     | 6     | 3     | 3     | 2     | 3     | Japan       | 3     | Japan       | 0     |             | 2     |        |       | 1     | 1     | 1     | 2     |
| 2     | 5     | 5     | 6     | 6     | 7     |       |             |       |             | 1     | UK          | 1     |        |       | 1     | 2     | 1     | 1     |
| 3     | 5     | 5     | 10    | 10    | 10    | 10    | Mozambique  | 38    | Mozambique  | 0     |             | 2     | fluent | 4     | 1     | 1     | 2     | 2     |
| 2     | 4     | 5     | 8     | 8     | 8     |       |             |       |             | 1     | Japan       | 1     |        |       | 2     | 1     | 1     | 2     |
| 3     | 4     | 5     | 2     | 2     | 2     | 2     | Australia   | 2     | Australia   | 0     |             | 2     | fluent | 4     | 2     | 1     | 2     | 1     |
| 3     | 6     | 5     | 6     | 1     | 4     | 6     | Australia   | 6     | Australia   | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 5     | 5     | 4     | 4     | 3     |       |             |       |             | 1     | India       | 1     |        |       | 1     | 1     | 1     | 1     |
| 3     | 7     | 6     | 8     | 8     | 8     | 8     | America     | 8     | America     | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 3     | 4     | 5     | 3     | 3     | 4     |       |             |       |             | 1     | America     | 1     |        |       | 1     | 1     | 1     | 1     |
| 1     | 7     | 6     | 6     | 6     | 6     | 5     | Japan       | 5     | Japan       | 0     |             | 2     | fluent | 4     | 2     | 1     | 2     | 2     |
| 1     | 5     | 6     | 10    | 10    | 10    | 8     | America     | 8     | America     | 0     |             | 2     | fluent | 4     | 1     | 1     | 2     | 2     |
| 1     | 7     | 6     | 6     | 6     | 5     | 4     | Australia   | 4     | Australia   | 0     |             | 2     | fluent | 4     | 1     | 1     | 2     | 2     |
| 3     | 4     | 5     | 9     | 3     | 3     | 5     | Germany     | 6     | Germany     | 0     |             | 2     | fluent | 4     | 2     | 1     | 2     | 1     |
| 2     | 5     | 6     | 8     | 3     | 7     | 4     | Brazil      | 4     | Brazil      | 0     |             | 2     | fluent | 4     | 2     | 1     | 1     | 1     |
| 1     | 5     | 6     | 11    | 11    | 11    | 5     | UK          | 5     | UK          | 1     | UK          | 1     | fluent | 4     | 2     | 1     | 2     | 2     |
| 3     | 6     | 5     | 10    | 4     | 4     | 5     | Switzerland | 5     | Switzerland | 0     |             | 2     | fluent | 4     | 2     | 1     | 2     | 2     |
| 3     | 4     | 6     | 7     | 5     | 5     | 6     | Turkey      | 6     | Turkey      | 0     |             | 2     | fluent | 4     | 2     | 1     | 2     | 1     |
| 3     | 4     | 5     | 1     | 1     | 1     | 1     | Singapore   | 1     | Singapore   | 0     |             | 2     | fluent | 4     | 1     | 2     | 1     | 2     |
| 2     | 5     | 5     | 7     | 3     | 3     | 3     | Italy       | 3     | Italy       | 0     |             | 2     | fluent | 4     | 2     | 1     | 2     | 1     |
| 2     | 8     | 4     | 10    | 10    | 15    | 10    | Australia   | 10    | Australia   | 0     |             | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 1     | 8     | 7     | 6     | 4.5   | 4.5   | 3     | Japan       | 3     | Japan       | 0     |             | 2     |        |       | 1     | 1     | 1     | 1     |
| 2     | 6     | 6     | 16    | 5     | 12    | 10    | Singapore   | 10    | Singapore   | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 3     | 6     | 5     | 10    | 4     | 10    | 10    | America     | 10    | America     | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 7     | 5     | 5     | 4     | 8     | 5     | Malaysia    | 5     | Malaysia    | 0     |             | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 2     | 7     | 6     | 10    | 15    | 15    | 10    | Qatar       | 10    | Qatar       | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 8     | 7     | 3     | 2     | 2     |       |             |       |             | 0     |             | 2     | fluent | 4     | 1     | 1     | 2     | 2     |
| 3     | 5     | 7     | 8     | 1     | 6     | 3     | Laos        | 3     | Laos        | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 1     | 7     | 6     | 10    | 7     | 7     | 7     | Indonesia   | 7     | Indonesia   | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 3     | 6     | 5     | 10    | 8     | 12    | 10    | Japan       | 10    | Japan       | 0     |             | 2     | fluent | 4     | 1     | 2     | 1     | 2     |
| 3     | 3     | 5     | 2     | 2     | 2     | 2     | Singapore   | 2     | Singapore   | 0     |             | 2     | fluent | 4     | 2     | 1     | 1     | 2     |
| 4     | 7     | 6     | 22    | 18    | 15    | 22    | South Korea | 22    | South Korea | 0     |             | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 2     | 6     | 7     | 10    | 4     | 10    | 1     | UAE         | 1     | UAE         | 0     |             | 2     | fluent | 4     | 2     | 1     | 1     | 1     |
| 1     | 8     | 6     | 3     | 2     | 2     | 3     | Singapore   | 3     | Singapore   | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 3     | 5     | 6     | 5     | 5     | 5     | 5     | Laos        | 5     | Laos        | 0     |             | 2     | fluent | 4     | 1     | 2     | 1     | 2     |
| 3     | 5     | 6     | 3     | 3     | 3     | 3     | South Korea | 3     | South Korea | 0     |             | 2     | fluent | 4     | 1     | 1     | 2     | 2     |
| 1     | 4     | 5     | 10    | 5     | 10    | 10    | America     | 10    | America     | 0     |             | 2     | fluent | 4     | 1     | 2     | 1     | 2     |
| 2     | 7     | 6     | 5     | 5     | 16    | 5     | Australia   | 5     | Australia   | 0     |             | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 2     | 6     | 6     | 2     | 2     | 10    | 2     | Australia   | 2     | Australia   | 0     |             | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 1     | 6     | 6     | 9     | 9     | 8     | 8     | America     | 8     | America     | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 1     | 6     | 5     | 10    | 10    | 10    | 10    | Japan       | 10    | Japan       | 0     |             | 2     | basic  | 2     | 1     | 1     | 1     | 2     |
| 3     | 6     | 5     | 2     | 2     | 2     | 2     | UAE         | 2     | UAE         | 0     |             | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 3     | 6     | 5     | 4     | 1     | 6     | 4     | Bangladesh  | 4     | Bangladesh  | 0     |             | 2     | basic  | 2     | 2     | 2     | 1     | 1     |
| 3     | 6     | 5     | 3     | 1     | 3     | 3     | Japan       | 3     | Japan       | 0     |             | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 1     | 8     | 5     | 5     | 3     | 3     |       |             |       |             | 0     |             | 2     |        |       | 1     | 1     | 2     | 1     |







Appendix 2 Database: Company 321 – Company 354

| ID  | hi1 | hi2 | hi3 | hi4 | hi5 | hi6 | hi7 | hi8 | hi9 | hi10 | hi11 | hi12 | hi13 | hi14 | hi15 | hi16 | hi17 | hi18 | hi19 | hi20 | hi21 | hi22 | hi23 | hi24 | hi25 | hi26 | hi27 | hi28 | hi29 | hi30 |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
| 321 | 4   | 4   | 3   | 5   | 4   | 5   | 5   | 5   | 5   | 4    | 4    | 5    | 3    | 4    | 5    | 5    | 5    | 4    | 4    | 3    | 5    | 5    | 5    | 4    | 4    | 3    | 4    | 5    | 2    | 1    |   |
| 322 | 4   | 5   | 5   | 3   | 3   | 3   | 4   | 4   | 4   | 5    | 5    | 4    | 3    | 3    | 3    | 4    | 4    | 5    | 5    | 5    | 5    | 4    | 3    | 3    | 3    | 4    | 4    | 1    | 1    |      |   |
| 323 | 4   | 4   | 4   | 4   | 5   | 3   | 3   | 4   | 5   | 5    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 2    | 3    |   |
| 324 | 4   | 4   | 4   | 3   | 3   | 3   | 3   | 5   | 4   | 4    | 3    | 3    | 3    | 4    | 5    | 5    | 3    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 3    | 3    | 3    | 3    | 2    | 1    |   |
| 325 | 3   | 4   | 5   | 4   | 5   | 4   | 3   | 3   | 5   | 4    | 3    | 5    | 3    | 5    | 4    | 5    | 5    | 4    | 4    | 5    | 3    | 5    | 4    | 5    | 3    | 5    | 4    | 5    | 2    | 2    |   |
| 326 | 4   | 4   | 3   | 3   | 3   | 4   | 4   | 5   | 5   | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 5    | 5    | 1    | 2    |   |
| 327 | 4   | 3   | 4   | 4   | 3   | 4   | 5   | 3   | 4   | 3    | 4    | 4    | 3    | 4    | 4    | 5    | 5    | 5    | 4    | 5    | 3    | 4    | 4    | 3    | 5    | 4    | 5    | 4    | 1    | 2    |   |
| 328 | 4   | 5   | 4   | 3   | 4   | 5   | 4   | 4   | 3   | 4    | 5    | 3    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 3    | 2    | 1    |   |
| 329 | 4   | 4   | 4   | 5   | 4   | 4   | 4   | 4   | 5   | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 2    |   |
| 330 | 4   | 4   | 4   | 5   | 4   | 5   | 4   | 4   | 4   | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 3    | 2    |   |
| 331 | 4   | 4   | 3   | 4   | 3   | 4   | 5   | 4   | 5   | 5    | 4    | 3    | 4    | 4    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 3    | 3    | 4    | 3    | 4    | 5    | 4    | 3    | 2    |   |
| 332 | 4   | 4   | 3   | 4   | 3   | 4   | 5   | 3   | 4   | 4    | 3    | 5    | 4    | 3    | 4    | 5    | 5    | 4    | 3    | 4    | 3    | 4    | 4    | 5    | 4    | 3    | 4    | 1    | 4    | 4    |   |
| 333 | 4   | 5   | 4   | 3   | 4   | 4   | 3   | 3   | 3   | 4    | 4    | 5    | 4    | 3    | 3    | 3    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 3    | 5    | 4    | 3    | 4    | 2    | 2    |   |
| 334 | 4   | 4   | 3   | 5   | 4   | 3   | 4   | 5   | 5   | 4    | 3    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 3    | 2    | 5    |   |
| 335 | 4   | 5   | 3   | 3   | 4   | 4   | 4   | 4   | 4   | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 5    | 2    | 4    |   |
| 336 | 4   | 3   | 4   | 4   | 5   | 4   | 3   | 4   | 3   | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    |   |
| 337 | 4   | 5   | 4   | 3   | 4   | 4   | 4   | 4   | 5   | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 1    | 2    |   |
| 338 | 3   | 2   | 3   | 2   | 3   | 3   | 2   | 3   | 4   | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 5    | 4    | 5    | 2    | 2 |
| 339 | 4   | 5   | 4   | 5   | 5   | 4   | 5   | 5   | 4   | 5    | 3    | 4    | 4    | 5    | 4    | 5    | 5    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 2    | 2    |   |
| 340 | 4   | 3   | 3   | 4   | 3   | 2   | 4   | 4   | 3   | 2    | 3    | 3    | 3    | 2    | 3    | 2    | 3    | 4    | 2    | 3    | 2    | 3    | 3    | 2    | 2    | 3    | 3    | 2    | 3    | 3    |   |
| 341 | 3   | 4   | 3   | 4   | 3   | 4   | 5   | 4   | 5   | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 5    | 2    | 3    | 3    |   |
| 342 | 4   | 4   | 5   | 5   | 4   | 4   | 4   | 5   | 4   | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 2    | 2 |
| 343 | 3   | 3   | 4   | 4   | 4   | 3   | 3   | 4   | 2   | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 4    | 5    | 5    | 5    | 2    | 2    |   |
| 344 | 5   | 5   | 4   | 5   | 4   | 4   | 5   | 4   | 4   | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 1    | 2    |   |
| 345 | 4   | 5   | 4   | 5   | 5   | 4   | 4   | 5   | 4   | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 2    | 2 |
| 346 | 4   | 5   | 5   | 4   | 5   | 4   | 4   | 3   | 4   | 5    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 5    | 3    | 4    | 5    | 3    | 4    | 5    | 5    | 4    | 5    | 4    | 5    | 3    | 3 |
| 347 | 5   | 4   | 3   | 4   | 3   | 4   | 4   | 5   | 4   | 5    | 5    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 5    | 4    | 5    | 5    | 4    | 4    | 5    | 4    | 3    | 2    |   |
| 348 | 4   | 3   | 4   | 3   | 5   | 4   | 4   | 3   | 4   | 5    | 4    | 3    | 5    | 5    | 4    | 5    | 4    | 3    | 4    | 3    | 5    | 5    | 4    | 4    | 3    | 4    | 3    | 4    | 5    | 3    | 2 |
| 349 | 3   | 4   | 4   | 3   | 3   | 3   | 3   | 4   | 4   | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 3    | 3 |
| 350 | 5   | 4   | 5   | 5   | 4   | 3   | 4   | 5   | 5   | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 5    | 4    | 2    | 2 |
| 351 | 3   | 3   | 3   | 4   | 4   | 5   | 5   | 4   | 3   | 3    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 3    | 5    | 4    | 4    | 4    | 4    | 1    | 1    |   |
| 352 | 3   | 4   | 4   | 4   | 5   | 5   | 5   | 4   | 4   | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 2    | 1    |   |
| 353 | 4   | 3   | 5   | 4   | 5   | 3   | 4   | 3   | 4   | 5    | 5    | 3    | 4    | 4    | 3    | 5    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 1    | 1    |   |
| 354 | 3   | 4   | 3   | 4   | 4   | 2   | 3   | 3   | 4   | 3    | 2    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 2    | 3    | 3    | 2    | 4    | 3    | 2    | 3    | 2    | 3    |   |

| hi31 | hi32 | hi33 | hi34 | hi35 | hi36 | hi37 | hi38 | hi39 | hi40 | hi41 | hi42 | hi43 | hi44 | hi45 | hi46 | hi47 | hi48 | hi49 | hi50 | hi51 | hi52 | hi53 | hi54 | hi55 | hi56 | hi57 | hi58 | hi59 | hi60 |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
| 4    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 5    | 3    | 4    | 4    | 3    | 4    | 5    | 5    | 5    | 4    | 3    | 4    | 4    | 3    | 4    |   |
| 5    | 4    | 4    | 3    | 3    | 3    | 4    | 5    | 4    | 3    | 3    | 3    | 5    | 5    | 5    | 4    | 4    | 3    | 3    | 4    | 5    | 5    | 5    | 4    | 4    | 4    | 3    | 3    | 3    | 3    |   |
| 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 5    | 4    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 5    | 5    | 5    | 3    | 3    |      |   |
| 5    | 5    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 5    | 3    | 3    | 3    | 3    | 3    | 4    | 5    | 5    | 3    | 3    | 3    | 4    | 4    | 5    | 5    | 5    | 4    | 4    |   |
| 5    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 3    | 5    | 4    | 3    | 5    | 4    | 5    | 3    | 4    | 5    | 3    | 4    | 3    | 4    | 5    | 4    | 5    | 4    | 3    | 3    |   |
| 4    | 3    | 3    | 3    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 3    | 3    | 3    | 3    | 4    | 5    | 4    | 4    | 4    | 5    | 5    | 3    | 3    | 3    | 3    | 4    | 4    | 5    |   |
| 5    | 3    | 4    | 4    | 5    | 4    | 3    | 5    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 4    |   |
| 5    | 4    | 3    | 5    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 5    | 4    | 3    | 4    | 5    |   |
| 4    | 3    | 3    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    |   |
| 4    | 5    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4 |
| 4    | 3    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 4 |
| 5    | 3    | 4    | 4    | 3    | 4    | 5    | 5    | 4    | 5    | 5    | 3    | 3    | 4    | 5    | 3    | 4    | 5    | 4    | 3    | 4    | 5    | 3    | 4    | 5    | 3    | 4    | 3    | 4    | 4    | 4 |
| 4    | 3    | 5    | 4    | 5    | 3    | 3    | 4    | 3    | 4    | 4    | 5    | 3    | 3    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4 |
| 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 5    | 3    | 4    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 3    | 5 |
| 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5 |
| 4    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 2    | 4    | 3    | 3    | 3    | 2    | 3    | 4    | 3    | 3    | 4 |
| 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4 |
| 5    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5 |
| 5    | 3    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 3    | 3    | 2    | 3    | 3    | 4    | 3    | 3    | 2    | 2    | 2    | 3    | 3    | 3    | 4    | 3    | 2    |   |
| 3    | 2    | 4    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 3 |
| 4    | 4    | 3    | 5    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 3    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 3    | 4    |   |
| 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4 |
| 4    | 4    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 3    | 3    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 4 |
| 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4 |
| 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4 |
| 4    | 5    | 4    | 5    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 3    | 3    | 4    | 3    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 5    | 4 |
| 5    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 5    | 4    | 3    | 4 |
| 5    | 4    | 4    | 3    | 4    | 5    | 4    | 4    | 4    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |



Appendix 2 Database: Company 321 – Company 354

| hi121 | hi122 | hi123 | hi124 | hi125 | hi126 | hi127 | hi128 | hi129 | hi130 | hi131 | hi132 | hi133 | hi134 | hi135 | hi136 | hi137 | hi138 | hi139 | hi140 | hi141 | hi142 | hi143 | hi144 | hi145 | hi146 | hi147 | hi148 | hi149 | hi150 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3     | 4     | 4     | 4     | 4     | 3     | 5     | 3     | 4     | 2     | 4     | 4     | 1     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 1     | 5     | 4     | 3     | 3     | 2     | 5     | 4     | 4     | 3     |
| 4     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 1     | 5     | 4     | 2     | 4     | 3     | 3     | 3     | 3     | 5     | 5     | 2     | 4     | 4     | 4     | 5     | 1     | 5     | 3     | 3     | 3     |
| 4     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 1     | 4     | 5     | 2     | 4     | 3     | 3     | 3     | 5     | 5     | 4     | 2     | 3     | 3     | 4     | 4     | 2     | 5     | 5     | 5     | 4     |
| 4     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 2     | 3     | 5     | 4     | 4     | 1     | 4     | 5     | 5     | 4     |
| 5     | 4     | 3     | 4     | 5     | 4     | 5     | 3     | 5     | 2     | 4     | 3     | 2     | 5     | 2     | 1     | 5     | 4     | 5     | 5     | 1     | 4     | 3     | 4     | 4     | 1     | 4     | 5     | 4     | 5     |
| 5     | 5     | 3     | 4     | 4     | 3     | 4     | 2     | 4     | 1     | 5     | 5     | 1     | 4     | 2     | 2     | 4     | 5     | 5     | 5     | 2     | 4     | 4     | 3     | 3     | 2     | 4     | 4     | 4     | 5     |
| 4     | 4     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 1     | 4     | 5     | 2     | 3     | 2     | 1     | 5     | 4     | 3     | 3     | 1     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 5     | 4     |
| 5     | 4     | 3     | 5     | 4     | 5     | 4     | 1     | 4     | 1     | 5     | 4     | 3     | 4     | 1     | 2     | 4     | 3     | 4     | 5     | 2     | 3     | 5     | 4     | 5     | 2     | 4     | 4     | 3     | 5     |
| 4     | 4     | 4     | 4     | 4     | 5     | 5     | 1     | 4     | 1     | 4     | 5     | 2     | 4     | 1     | 1     | 5     | 4     | 4     | 4     | 2     | 5     | 5     | 5     | 5     | 2     | 4     | 4     | 5     | 5     |
| 4     | 5     | 4     | 4     | 4     | 5     | 4     | 2     | 5     | 2     | 4     | 4     | 1     | 4     | 2     | 1     | 4     | 4     | 5     | 4     | 2     | 5     | 4     | 4     | 5     | 2     | 4     | 5     | 4     | 4     |
| 5     | 3     | 4     | 5     | 4     | 4     | 3     | 1     | 4     | 2     | 5     | 5     | 2     | 3     | 2     | 3     | 4     | 4     | 5     | 4     | 2     | 4     | 3     | 4     | 4     | 1     | 4     | 4     | 5     | 3     |
| 3     | 3     | 4     | 5     | 4     | 4     | 3     | 2     | 5     | 1     | 5     | 5     | 2     | 3     | 2     | 1     | 4     | 4     | 3     | 4     | 2     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     |
| 3     | 4     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 2     | 3     | 3     | 2     | 4     | 1     | 2     | 3     | 4     | 4     | 5     | 3     | 3     | 4     | 4     | 5     | 2     | 3     | 3     | 4     | 5     |
| 3     | 4     | 4     | 4     | 5     | 4     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 5     | 2     | 3     | 4     | 5     | 5     | 4     | 2     | 4     | 3     | 5     | 4     | 2     | 5     | 5     | 4     | 3     |
| 4     | 4     | 4     | 4     | 5     | 4     | 4     | 1     | 4     | 2     | 4     | 5     | 2     | 4     | 2     | 2     | 5     | 4     | 4     | 5     | 2     | 5     | 5     | 4     | 4     | 2     | 4     | 4     | 5     | 4     |
| 5     | 4     | 3     | 4     | 3     | 5     | 3     | 1     | 4     | 3     | 4     | 3     | 2     | 3     | 1     | 2     | 5     | 4     | 5     | 4     | 2     | 5     | 4     | 5     | 4     | 3     | 3     | 4     | 3     | 5     |
| 5     | 4     | 4     | 4     | 5     | 4     | 4     | 1     | 5     | 2     | 4     | 5     | 2     | 5     | 2     | 2     | 5     | 4     | 5     | 4     | 2     | 4     | 5     | 4     | 5     | 2     | 5     | 5     | 4     | 4     |
| 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 5     | 1     | 4     | 4     | 1     | 4     | 2     | 1     | 4     | 4     | 4     | 5     | 2     | 4     | 5     | 4     | 4     | 1     | 4     | 4     | 4     | 5     |
| 4     | 5     | 3     | 4     | 4     | 3     | 1     | 4     | 1     | 5     | 5     | 2     | 3     | 2     | 1     | 5     | 4     | 3     | 4     | 2     | 4     | 3     | 4     | 3     | 3     | 4     | 5     | 5     | 5     | 4     |
| 3     | 3     | 4     | 3     | 2     | 3     | 2     | 2     | 3     | 2     | 4     | 5     | 2     | 5     | 2     | 1     | 4     | 4     | 4     | 4     | 2     | 3     | 4     | 5     | 4     | 2     | 4     | 3     | 4     | 4     |
| 3     | 4     | 3     | 5     | 4     | 3     | 4     | 3     | 4     | 1     | 4     | 4     | 3     | 5     | 2     | 3     | 4     | 4     | 3     | 5     | 1     | 4     | 3     | 4     | 4     | 1     | 5     | 4     | 5     | 5     |
| 4     | 5     | 4     | 4     | 4     | 4     | 5     | 1     | 4     | 2     | 4     | 5     | 2     | 4     | 1     | 2     | 4     | 5     | 4     | 4     | 2     | 4     | 5     | 4     | 4     | 1     | 4     | 5     | 4     | 4     |
| 4     | 4     | 4     | 5     | 5     | 5     | 5     | 2     | 4     | 2     | 4     | 4     | 1     | 4     | 2     | 2     | 3     | 3     | 3     | 3     | 2     | 5     | 5     | 5     | 5     | 1     | 4     | 4     | 4     | 5     |
| 5     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 4     | 1     | 4     | 5     | 2     | 4     | 1     | 2     | 5     | 4     | 5     | 4     | 2     | 4     | 5     | 4     | 4     | 2     | 4     | 4     | 5     | 4     |
| 4     | 5     | 4     | 5     | 4     | 5     | 4     | 2     | 4     | 2     | 4     | 5     | 2     | 4     | 1     | 2     | 5     | 4     | 5     | 4     | 2     | 4     | 5     | 4     | 5     | 2     | 4     | 4     | 5     | 4     |
| 5     | 4     | 5     | 5     | 4     | 4     | 5     | 1     | 4     | 1     | 4     | 5     | 1     | 4     | 1     | 2     | 4     | 5     | 4     | 5     | 2     | 4     | 5     | 3     | 4     | 2     | 5     | 4     | 5     | 5     |
| 5     | 5     | 4     | 5     | 4     | 4     | 4     | 1     | 5     | 2     | 5     | 5     | 2     | 5     | 1     | 2     | 5     | 5     | 4     | 5     | 2     | 5     | 5     | 4     | 5     | 2     | 4     | 5     | 5     | 4     |
| 3     | 4     | 3     | 4     | 3     | 5     | 4     | 2     | 3     | 1     | 4     | 5     | 2     | 3     | 2     | 1     | 3     | 4     | 3     | 5     | 2     | 5     | 3     | 4     | 5     | 2     | 2     | 3     | 5     | 4     |
| 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 4     | 2     | 2     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 4     | 2     | 3     | 3     | 3     | 3     | 3     |
| 5     | 5     | 4     | 5     | 5     | 4     | 4     | 1     | 5     | 2     | 5     | 5     | 2     | 5     | 2     | 1     | 5     | 4     | 3     | 4     | 2     | 5     | 5     | 4     | 5     | 3     | 4     | 4     | 5     | 4     |
| 5     | 4     | 4     | 3     | 3     | 4     | 4     | 2     | 5     | 1     | 4     | 4     | 2     | 4     | 1     | 1     | 5     | 5     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 4     | 4     | 5     |
| 3     | 3     | 3     | 3     | 4     | 4     | 4     | 2     | 4     | 3     | 3     | 4     | 2     | 3     | 2     | 3     | 3     | 4     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 2     | 3     | 3     | 3     | 3     |
| 4     | 3     | 5     | 4     | 3     | 4     | 3     | 3     | 4     | 1     | 5     | 5     | 2     | 4     | 1     | 2     | 3     | 4     | 4     | 3     | 2     | 3     | 4     | 4     | 5     | 2     | 4     | 3     | 4     | 4     |
| 3     | 4     | 3     | 3     | 2     | 2     | 3     | 4     | 3     | 4     | 2     | 2     | 4     | 3     | 3     | 4     | 2     | 3     | 4     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 3     | 3     | 4     | 3     |

| hi151 | hi152 | hi153 | hi154 | hi155 | hi156 | hi157 | hi158 | hi159 | hi160 | hi161 | hi162 | hi163 | hi164 | hi165 | hi166 | hi167 | hi168 | hi169 | hi170 | hi171 | hi172 | hi173 | hi174 | hi175 | hi176 | hi177 | hi178 | hi179 | hi180 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 4     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 3     | 3     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 3     |   |
| 3     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 5     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 5     |   |
| 4     | 3     | 3     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     |   |
| 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 5     | 5     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 3     | 3     | 5     |   |
| 4     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 3     | 5     |   |
| 4     | 4     | 4     | 3     | 5     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 3     | 3     | 3     |   |
| 4     | 3     | 4     | 3     | 5     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 5     | 4     |   |
| 5     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 5     | 3     | 5     | 3     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 5     | 3     | 5     | 5     | 3     | 4     |   |
| 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 5     |   |
| 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 5     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     |   |
| 3     | 4     | 4     | 5     | 3     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 5     | 4 |
| 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     |   |
| 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 5     |   |
| 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     |   |
| 3     | 5     | 3     | 5     | 4     | 5     | 4     | 3     | 5     | 3     | 5     | 4     | 5     | 3     | 5     | 4     | 3     | 5     | 3     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     |   |
| 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 4     |   |
| 4     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     |   |
| 3     | 4     | 4     | 3     | 4     | 5     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     |   |
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     |   |
| 4     | 5     | 3     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 4     |   |
| 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     |   |
| 5     | 4     | 4     | 3     | 3     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 4     |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     |   |
| 5     | 4     | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     |   |
| 4     | 3     | 4     | 3     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 3     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     |   |
| 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 4     |   |
| 3     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 4     |   |
| 5     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 4     |   |
| 3     | 3</   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |

Appendix 2 Database: Company 321 – Company 354

| hi181 | hi182 | hi183 | hi184 | hi185 | hi186 | hi187 | hi188 | hi189 | hi190 | hi191 | hi192 | hi193 | hi194 | hi195 | hi196 | hi197 | hi198 | hi199 | hi200 | hi201 | hi202 | hi203 | hi204 | hi205 | hi206 | hi207 | hi208 | hi209 | hi210 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 4     | 4     | 4     | 3     | 3     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 5 |
| 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 3     | 4 |
| 5     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 5     | 5     | 4     | 3     | 3     | 3     | 3     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     |   |
| 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 3     |   |
| 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 5     | 4 |
| 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     |   |
| 4     | 5     | 4     | 3     | 4     | 5     | 5     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 4     |   |
| 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     |   |
| 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     |   |
| 4     | 5     | 5     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     |   |
| 4     | 5     | 5     | 3     | 4     | 4     | 3     | 5     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 5     | 4     |   |
| 3     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 4     |   |
| 4     | 5     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 3     | 5     | 5     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 5     |   |
| 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     |   |
| 5     | 4     | 3     | 5     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 3     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 5     | 3     | 5     | 3     | 5     | 4     | 2     | 4     |   |
| 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     |   |
| 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     |   |
| 5     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 5     |   |
| 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     |   |
| 4     | 5     | 5     | 3     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     |   |
| 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     |   |
| 3     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 3     | 3     |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 5     |   |
| 3     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     |   |
| 4     | 4     | 5     | 3     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     |   |
| 5     | 5     | 4     | 4     | 3     | 5     | 3     | 4     | 5     | 3     | 3     | 4     | 3     | 5     | 4     | 5     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 3     | 5     | 5     |   |
| 4     | 5     | 3     | 4     | 3     | 4     | 5     | 4     | 5     | 3     | 3     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     |   |
| 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     |   |
| 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 2     |   |
| 4     | 5     | 5     | 5     | 4     | 5     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     |   |
| 5     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     |   |
| 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 5     | 4     | 3     | 5     | 3     | 4     | 3     | 4     | 5     |   |
| 2     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 2     | 2     | 2     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |   |

| hi211 | hi212 | hi213 | hi214 | hi215 | hi216 | hi217 | hi218 | hi219 | hi220 | hi221 | hi222 | hi223 | hi224 | hi225 | hi226 | hi227 | hi228 | hi229 | hi230 | hi231 | hi232 | hi233 | hi234 | hi235 | hi236 | hi237 | hi238 | hi239 | hi240 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     |   |
| 4     | 5     | 5     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     |   |
| 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     |   |
| 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     |   |
| 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     |   |
| 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 5     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 5     |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 5     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     |   |
| 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     |   |
| 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 3     |   |
| 3     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 5     |   |
| 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     |   |
| 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     |   |
| 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 2     | 2     | 3     | 4     | 5 |
| 4     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 5     |   |
| 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 2     | 2     | 3     | 4     | 5     |   |
| 4     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 2     | 2     | 3     | 3     | 3     | 4     | 5     |   |
| 4     | 4     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 4     | 3     |   |
| 4     | 2     | 3     | 3     | 2     | 3     | 3     | 2     | 4     | 4     | 4     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 2     | 3     | 4     | 3     | 4     | 5     | 4     | 4     |   |
| 5     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 3     | 3     |   |
| 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 3     | 5     | 5     | 5     | 4     | 5     |   |
| 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 5     |   |
| 2     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 4     |   |

Appendix 2 Database: Company 321 – Company 354

| hi241 | hi242 | hi243 | hi244 | hi245 | hi246 | hi247 | hi248 | hi249 | hi250 | hi251 | hi252 | hi253 | hi254 | hi255 | hi256 | hi257 | hi258 | hi259 | hi260 | hi261 | hi262 | hi263 | hi264 | hi265 | hi266 | hi267 | hi269 | hi270 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 1     | 20    | 4     | 4     | 5     | 3     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 100   | 0     | 0     |
| 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 1     | 26    | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 100   | 0     | 0     |       |
| 5     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 1     | 20    | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 3     | 100   | 0     | 0     |
| 3     | 3     | 3     | 3     | 5     | 4     | 5     | 4     | 4     | 4     | 1     | 20    | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 5     | 100   | 0     | 0     |
| 5     | 4     | 5     | 4     | 5     | 3     | 5     | 4     | 3     | 5     | 1     | 12    | 5     | 3     | 4     | 4     | 5     | 5     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 4     | 0     | 25    | 75    |
| 5     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 1     | 30    | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 100   | 0     | 0     |
| 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 3     | 1     | 15    | 4     | 5     | 5     | 4     | 3     | 5     | 4     | 4     | 5     | 3     | 4     | 5     | 3     | 4     | 100   | 0     | 0     |
| 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 2     |       | 4     | 3     | 4     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 0     | 30    | 70    |       |
| 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 1     | 20    | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 100   | 0     | 0     |       |
| 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 1     | 20    | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 100   | 0     | 0     |       |
| 4     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 1     | 26    | 3     | 4     | 4     | 5     | 3     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 100   | 0     | 0     |       |
| 4     | 3     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 1     | 30    | 4     | 4     | 3     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 40    | 25    | 35    |       |
| 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 1     | 22    | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 3     | 3     | 4     | 100   | 0     | 0     |       |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 5     | 1     | 26    | 4     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 100   | 0     | 0     |
| 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 1     | 15    | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 100   | 0     | 0     |
| 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 1     | 11    | 3     | 4     | 3     | 4     | 4     | 2     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 100   | 0     | 0     |
| 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 1     | 35    | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 100   | 0     | 0     |       |
| 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 1     | 50    | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 100   | 0     | 0     |
| 5     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 2     |       | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 4     | 60    | 20    | 20    |       |
| 3     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 2     | 3     | 2     |       | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 100   | 0     | 0     |       |
| 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 1     | 25    | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 100   | 0     | 0     |       |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 1     | 30    | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 100   | 0     | 0     |       |
| 5     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 1     | 28    | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 100   | 0     | 0     |       |
| 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 2     |       | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 100   | 0     | 0     |       |
| 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 1     | 35    | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 100   | 0     | 0     |       |
| 5     | 4     | 5     | 5     | 4     | 5     | 5     | 5     | 4     | 4     | 1     | 25    | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 3     | 5     | 4     | 4     | 5     | 100   | 0     | 0     |       |
| 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 1     | 23    | 5     | 4     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 3     | 5     | 4     | 5     | 100   | 0     | 0     |       |
| 5     | 4     | 3     | 4     | 4     | 5     | 3     | 5     | 4     | 3     | 1     | 25    | 4     | 5     | 3     | 4     | 5     | 4     | 5     | 3     | 4     | 5     | 4     | 3     | 5     | 4     | 65    | 20    | 15    |
| 4     | 4     | 4     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 2     |       | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 0     | 0     | 100   |
| 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 1     | 18    | 4     | 4     | 3     | 4     | 3     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 30    | 30    | 40    |
| 3     | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 1     | 15    | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 100   | 0     | 0     |
| 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 1     | 25    | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 3     | 3     | 100   | 0     | 0     |       |
| 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 2     |       | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 100   | 0     | 0     |       |
| 4     | 3     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 3     | 1     | 30    | 3     | 2     | 3     | 3     | 3     | 2     | 2     | 2     | 3     | 3     | 2     | 2     | 3     | 4     | 20    | 20    | 60    |

| hi271 | hi272  | hi273 | hi274 | hi275 | hi276 | hi277       | hi278 | hi279       | hi280 | hi281 | hi282 | hi283 | hi284 | hi285          | hi286      | hi287 | hi288 | hi289 | hi290 |
|-------|--------|-------|-------|-------|-------|-------------|-------|-------------|-------|-------|-------|-------|-------|----------------|------------|-------|-------|-------|-------|
| 0     | 15000  | 8     | 1969  | 14    | 17    | 1397000000  | 2     | 1297000000  | 7.12  | 24.14 | 20    | 2004  | 6     | New Zealand    | 6000000    | 380   | 70    | 65    | 35    |
| 0     | 1423   | 6     | 1992  | 14    | 16    | 1300000000  | 2     | 1800000000  | 128.4 | 4.5   | 6.3   | 2005  | 6     | Singapore      | 5400000    | 480   | 70    | 90    | 10    |
| 0     | 5847   | 7     | 1951  | 17    | 20    | 5100000000  | 6     | 3200000000  | 317.3 | 2.2   | 4.3   | 1996  | 5     | Kazakhstan     | 180000000  | 1865  | 62    | 85    | 15    |
| 0     | 13000  | 8     | 1951  | 17    | 20    | 2500000000  | 3     | 800000000   | 75.3  | 9.5   | 5     | 2007  | 7     | Luxembourg     | 200000000  | 5200  | 73    | 88    | 12    |
| 0     | 2036   | 6     | 1984  | 17    | 20    | 2800000000  | 3     | 1200000000  |       |       |       | 2003  | 6     | Laos           | 48000000   | 180   | 95    | 96    | 4     |
| 0     | 379    | 4     | 3001  | 16    | 5     | 800000000   | 1     | 800000000   | 73.3  | 72    |       | 2007  | 7     | Laos           | 420000     | 110   | 80    | 85    | 15    |
| 0     | 200000 | 9     | 1999  | 17    | 20    | 29555000000 | 11    | 40266000000 | 2.64  | 29.6  | 15    | 2006  | 7     | South Africa   | 5800000000 | 5000  | 60    | 60    | 40    |
| 0     | 20000  | 8     | 1992  | 17    | 20    | 11063000000 | 11    | 9523000000  | 2.43  | 17.68 | 17    | 2005  | 6     | Vietnam        | 30000000   | 2000  | 55    | 66    | 34    |
| 0     | 10134  | 8     | 1999  | 17    | 20    | 2500000000  | 3     | 800000000   | 232.9 | 4.3   | 1.3   | 2001  | 6     | South Africa   | 90000000   | 2600  | 65    | 88    | 12    |
| 0     | 11629  | 8     | 1954  | 14    | 14    | 4500000000  | 5     | 8500000000  |       | -33.6 |       | 2008  | 7     | Germany        | 1200000000 | 7500  | 35    | 30    | 70    |
| 0     | 100000 | 9     | 2002  | 17    | 20    | 82632000000 | 11    | 73856000000 | 13.22 | 32.76 |       | 2002  | 6     | Burma          |            | 100   | 97    | 98    | 2     |
| 0     | 36000  | 9     | 1970  | 17    | 20    | 11129000000 | 11    | 7387000000  | 4.86  | 24.64 | 20.12 | 2006  | 7     | Equator Guinea | 40000000   | 38000 | 70    | 45    | 40    |
| 0     | 116800 | 9     | 2002  | 17    | 20    | 69888000000 | 11    | 20165000000 | 3.95  | 20.77 | 24.5  | 2003  | 6     | Vietnam        | 63500000   | 4200  | 40    | 60    | 40    |
| 0     | 15000  | 8     |       | 17    | 20    | 11943000000 | 11    | 90120000000 | 0.44  | 39.5  | 28.2  | 1993  | 4     | Singapore      | 52000000   |       | 30    | 60    | 40    |
| 0     | 64000  | 9     | 1960  | 17    | 14    | 8400000000  | 9     | 8200000000  | 5.8   | 21.3  | 5.5   | 1990  | 3     | Australia      | 1500000000 | 6500  | 90    | 96    | 4     |
| 0     | 1547   | 6     | 2002  | 17    | 20    | 1500000000  | 2     | 2700000000  |       | 13.7  | 16.3  | 2007  | 7     | Laos           | 250000000  | 78    | 90    | 89    | 11    |
| 0     | 3756   | 6     | 1979  | 16    | 5     | 2600000000  | 3     | 1700000000  |       |       |       | 1995  | 4     | UAE            | 150000000  | 1200  | 90    | 98    | 2     |
| 0     | 67972  | 9     | 2005  | 12    | 20    | 17500000000 | 11    | 8200000000  |       |       |       | 2009  | 7     | Vietnam        | 40000000   | 5000  | 90    | 96    | 4     |
| 0     | 110000 | 9     | 2002  | 17    | 20    | 82984000000 | 11    | 58434000000 | 2.46  | 35.47 | 27    | 2006  | 7     | Pakistan       | 2000000000 | 3000  | 70    | 60    | 40    |
| 0     | 60000  | 9     | 1979  | 17    | 20    | 12635000000 | 11    | 30063000000 | 3.46  | 7.64  | 12    | 2002  | 6     | Thailand       | 200000000  | 4300  | 25    | 75    | 25    |
| 0     | 45000  | 9     | 1998  | 17    | 20    | 16498000000 | 11    | 16498000000 |       | 41.3  | 5.76  | 2001  | 6     | Italy          | 30000000   | 2000  | 30    | 70    | 20    |
| 0     | 24431  | 8     | 2002  | 17    | 20    | 4000000000  | 5     | 6.6E+12     |       | 44.9  |       | 2009  | 7     | Canada         | 1200000000 | 3000  | 90    | 95    | 5     |
| 0     | 51000  | 9     | 1992  | 4     | 6     | 2500000000  | 3     | 2500000000  | 16    | 14.6  | 15.6  | 2002  | 6     | Japan          | 1300000000 | 14700 | 70    | 65    | 35    |
| 0     | 15646  | 8     | 2008  | 14    | 14    | 4200000000  | 5     | 2100000000  |       | -44.7 |       | 2010  | 7     | Singapore      | 80000000   | 4600  | 85    | 90    | 10    |
| 0     | 8893   | 7     | 1997  | 17    | 5     | 1600000000  | 2     | 1000000000  |       | -42.4 |       | 2000  | 5     | Jordan         | 1500000000 | 2750  | 90    | 96    | 4     |
| 0     | 34000  | 9     | 1951  | 17    | 20    | 8961000000  | 9     | 14563000000 | 2.31  | 16.64 | 19.8  | 2003  | 6     | Japan          | 70000000   | 13000 | 57    | 65    | 35    |
| 0     | 73000  | 9     | 1956  | 17    | 17    | 12036000000 | 11    | 14469000000 | 5.34  | 13.47 | 20.3  | 2000  | 5     | Hungary        | 60000000   |       | 50    | 40    | 30    |
| 0     | 110000 | 9     | 1982  | 17    | 20    | 26117000000 | 11    | 14106000000 | 15.26 | 19.81 |       | 2009  | 7     | Australia      | 1350000000 | 20000 | 60    | 58    | 42    |
| 0     | 5100   | 7     | 1998  | 17    | 20    | 37618314000 | 11    | 1531959000  | 850   | 60    |       | 2009  | 7     | Australia      | 500000000  | 1000  | 82    | 89    | 11    |
| 0     | 110000 | 9     | 1993  | 5     | 20    | 8976000000  | 9     | 6311000000  | 18.64 | 48.15 | 24    | 2005  | 6     | Russia         | 3500000000 | 5000  | 68    | 60    | 40    |
| 0     | 11052  | 8     | 2005  | 6     | 11    | 4000000000  | 5     | 5000000000  | 137.1 |       | 21    | 2007  | 7     | America        | 1500000000 | 2700  | 85    | 75    | 25    |
| 0     | 5806   | 7     | 1997  | 17    | 20    | 1000000000  | 2     | 800000000   | 4.8   | 4.7   | 4.4   | 2002  | 6     | Japan          | 450000000  | 1250  | 85    | 85    | 15    |
| 0     | 24000  | 9     | 1905  | 5     | 19    | 5417000000  | 6     | 8113000000  | 5.63  | 10.89 | 13.21 | 1998  | 5     | Burma          | 60000000   | 1000  | 60    |       |       |

Appendix 2 Database: Company 321 – Company 354

| hi291 | hi292 | hi293 | hi294 | hi295 | hi296 | hi298 | hi299 | hi300 | hi301 | hi302 | hi303 | hi304 | hi305 | hi306 | hi307 | hi308    | hi309 | hi311 | hi312 | hi313 | hi314 | hi315 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|-------|
| 30    | 1     |       |       | 1     |       | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |       | Chinese  | 1     | 1     | 10    | 7     | 30    |       |
| 35    | 1     |       |       | 1     |       |       | 1     | 1     |       |       |       | 1     | 1     |       |       | Chinese  | 2     | 3     | 7     | 6     | 17    |       |
| 15    | 1     |       |       | 1     |       | 1     |       |       |       |       |       | 1     |       |       |       | Chinese  | 1     | 3     | 6     | 6     | 20    |       |
| 15    | 1     |       |       | 1     |       | 1     | 1     |       |       |       |       | 1     | 1     |       | 1     | Canadian | 1     | 3     | 8     | 5     | 20    |       |
|       |       |       | 1     |       | 1     | 2     |       |       | 1     | 1     |       | 1     | 1     |       |       | Chinese  | 1     | 3     | 5     | 5     | 7     |       |
| 30    | 1     |       |       | 1     |       | 1     | 1     | 1     |       |       |       | 1     | 1     |       |       | Chinese  | 2     | 3     | 5     | 5     | 10    |       |
| 23    | 1     | 1     |       | 1     | 1     | 2     | 1     | 1     | 1     |       |       | 1     | 1     | 1     |       | Chinese  | 1     | 1     | 9     | 5     | 13    |       |
| 25    | 1     | 1     |       | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese  | 1     | 1     | 9     | 6     | 20    |       |
| 56    | 1     |       |       | 1     |       | 1     | 1     | 1     | 1     |       |       | 1     |       |       |       | Chinese  | 1     | 4     | 7     | 6     | 10    |       |
| 10    | 1     |       |       | 1     |       | 1     | 1     |       |       |       | 1     | 1     |       |       |       | Chinese  | 1     | 3     | 5     | 5     | 12    |       |
|       | 1     | 1     | 1     |       | 1     | 1     | 1     |       | 1     | 1     |       | 1     |       |       |       | Chinese  | 1     | 1     | 7     | 6     | 10    |       |
| 30    |       | 1     |       | 1     | 1     | 1     | 1     | 1     |       |       | 1     | 1     | 1     |       |       | Chinese  | 1     | 2     | 7     | 6     | 24    |       |
| 32.2  | 1     |       | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |       |       |       | Chinese  | 1     | 2     | 9     | 6     | 6     |       |
|       | 1     |       |       |       |       | 1     | 1     | 1     |       |       |       | 1     | 1     | 1     |       | Chinese  | 1     | 1     | 8     | 6     | 5     |       |
|       |       | 1     |       | 1     |       | 1     | 1     |       |       |       |       | 1     |       |       |       | Chinese  | 1     | 3     | 4     | 5     | 11    |       |
|       | 1     |       |       | 1     |       | 1     | 1     |       |       |       | 1     | 1     |       |       |       | Chinese  | 1     | 3     | 8     | 6     | 9     |       |
| 30    | 1     |       |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       |       |       | Chinese  | 1     | 1     | 9     | 6     | 15    |       |
| 25    | 1     |       |       | 1     |       | 2     | 1     |       | 1     | 1     |       |       |       |       |       | Chinese  | 1     | 1     | 9     | 7     | 5     |       |
| 30    | 1     | 1     | 1     |       |       | 2     | 1     | 1     | 1     | 1     | 1     |       |       | 1     |       | Chinese  | 1     | 2     | 10    | 5     | 10    |       |
| 7.23  | 1     |       |       | 1     |       | 1     | 1     | 1     | 1     |       |       | 1     |       | 1     |       | Chinese  | 1     | 1     | 7     | 5     | 17    |       |
| 6.22  | 1     | 1     | 1     |       | 1     | 1     | 1     | 1     | 1     | 1     |       | 1     |       |       |       | Chinese  | 1     | 1     | 9     | 6     | 7     |       |
| 30    | 1     |       |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       |       |       | Chinese  | 1     | 1     | 9     | 6     | 5     |       |
| 20    | 1     |       |       | 1     |       | 1     | 1     | 1     | 1     |       | 1     | 1     |       |       |       | Chinese  | 1     | 3     | 8     | 6     | 8     |       |
|       | 1     |       |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       |       |       | Chinese  | 1     | 1     | 9     | 6     | 3     |       |
|       | 1     |       |       | 1     |       | 1     | 1     | 1     | 1     |       |       |       |       |       |       | Chinese  | 1     | 1     | 5     | 6     | 17    |       |
| 7.01  | 1     |       |       | 1     |       | 2     | 1     | 1     | 1     | 1     | 1     |       |       | 1     |       | Chinese  | 1     | 1     | 9     | 5     | 15    |       |
| 32.2  | 1     | 1     | 1     |       |       | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | Chinese  | 1     | 1     | 9     | 5     | 6     |       |
| 20    |       |       | 1     |       | 1     | 2     | 1     | 1     | 1     |       |       | 1     |       |       |       | Chinese  | 1     | 2     | 8     | 6     | 30    |       |
| 5.4   |       | 1     |       | 1     |       | 1     |       |       |       | 1     |       | 1     | 1     |       |       | Chinese  | 1     | 1     | 7     | 6     | 12    |       |
| 28    | 1     | 1     | 1     | 1     | 1     | 2     | 1     |       | 1     | 1     | 1     | 1     |       |       |       | Chinese  | 1     | 1     | 8     | 6     | 19    |       |
|       |       | 1     |       | 1     |       | 1     | 1     | 1     |       |       | 1     | 1     |       | 1     |       | American | 1     | 4     | 5     | 5     | 3     |       |
| 30    | 1     |       |       | 1     |       | 1     | 1     | 1     |       |       | 1     |       |       | 1     |       | Chinese  | 2     | 1     | 7     | 5     | 10    |       |
| 5.77  | 1     |       |       | 1     |       | 1     | 1     | 1     | 1     | 1     |       |       |       |       |       | Chinese  | 1     | 1     | 8     | 6     | 5     |       |
| 68    |       | 1     |       | 1     |       | 2     |       | 1     |       |       | 1     |       |       |       |       | Chinese  | 1     | 2     | 5     | 5     | 6     |       |

| hi316 | hi317 | hi318 | hi319       | hi320 | hi321 | hi322       | hi323 | hi324 | hi325 | hi326 | hi327  | hi329 | hi330 | hi331 | hi332 | hi333 | hi334 | hi335 |
|-------|-------|-------|-------------|-------|-------|-------------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 20    | 12    |       |             | 2     |       |             | 2     | 0     |       | 2     | basic  | 1     | 2     | 1     | 1     | 1     | 1     | 1     |
| 10    | 12    |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 2     | 2     | 1     | 1     | 1     | 2     | 2     |
|       |       |       |             | 2     |       |             | 2     | 1     |       | 2     | basic  | 1     | 1     | 2     | 1     | 2     | 2     | 2     |
| 3     | 4     |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 2     | 1     | 2     | 2     | 2     | 1     |
| 7     | 7     |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 2     | 2     | 1     | 1     | 2     | 1     |
| 4     |       |       |             | 2     |       |             | 2     | 0     |       | 2     | basic  | 2     | 1     | 2     | 1     | 2     | 2     | 2     |
| 10    | 6     |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 15    | 12    |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 2     |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 2     | 2     | 1     | 2     | 1     | 1     | 1     |
| 10    | 12    |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 2     | 2     | 2     | 2     | 1     | 1     | 1     |
| 3     | 3     |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 1     | 1     | 1     | 2     | 1     | 1     |
| 14    | 12    |       |             | 2     |       |             | 2     | 0     |       | 2     | basic  | 1     | 1     | 1     | 1     | 2     | 2     | 1     |
| 4     | 4     | 3     | UK          | 1     | 3     | UK          | 1     | 1     | UK    | 1     |        | 1     | 1     | 2     | 1     | 1     | 1     | 1     |
| 4     | 4     |       |             | 2     |       |             | 2     | 0     |       | 2     |        | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 7     | 11    |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 4     | 9     |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 2     | 2     |
| 7     | 15    |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 2     | 1     | 2     | 1     | 1     | 1     |
| 5     | 5     |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 2     | 1     | 1     | 2     | 1     | 2     | 2     |
| 8     | 8     |       |             | 2     |       |             | 2     | 0     |       | 2     | basic  | 1     | 1     | 2     | 1     | 1     | 1     | 1     |
| 5     | 5     |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 1     | 1     | 1     | 2     | 1     | 1     |
| 4     | 3     | 2     | Italy       | 1     | 2     | Italy       | 1     | 0     |       | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 5     | 5     |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 7     | 8     |       |             | 2     |       |             | 2     | 0     |       | 2     | basic  | 1     | 1     | 2     | 1     | 1     | 2     | 2     |
| 3     | 5     |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 2     | 1     | 2     | 2     | 2     | 1     |
| 15    | 17    |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 2     | 2     | 1     | 1     | 2     | 2     |
| 7     | 7     |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 1     | 2     | 2     | 1     | 1     | 1     |
| 3     | 3     | 4     | Netherlands | 1     | 4     | Netherlands | 1     | 0     |       | 2     |        | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 10    | 21    |       |             | 2     |       |             | 2     | 0     |       | 2     | basic  | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 7     | 3     |       |             | 2     |       |             | 2     | 0     |       | 2     | basic  | 1     | 2     | 2     | 2     | 1     | 1     | 1     |
| 13    | 13    |       |             | 2     |       |             | 2     | 0     |       | 2     | basic  | 1     | 2     | 2     | 2     | 1     | 1     | 1     |
| 2     | 3     |       |             | 2     |       |             | 2     | 0     |       | 2     | basic  | 2     | 2     | 2     | 2     | 2     | 2     | 2     |
| 10    | 10    |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 2     | 1     | 2     | 1     | 1     | 2     | 2     |
| 4     | 4     |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 6     | 4     |       |             | 2     |       |             | 2     | 0     |       | 2     | fluent | 1     | 1     | 1     | 1     | 1     | 1     | 1     |

Appendix 2 Database: Company 321 – Company 354

| hi336 | hi337 | hi338 | hi339 | hi340 | hi341 | hi342 | hi343 | hi344 | hi345 | hi346 | hi347 | hi348 | hi349 | hi350 | hi351 | hi352 | hi353 | hi354 | hi355 | hi356 | hi357 | hi358 | hi359 | hi360 |   |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |   |   |
| 2     | 2     | 2     | 1     | 1     | 1     | 2     | 2     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 2     | 1     | 2 |   |
| 2     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 1     | 2     | 2     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 2     | 2     | 1     | 1     | 2     | 1     | 2 |   |
| 2     | 1     | 2     | 1     | 1     | 2     | 2     | 1     | 1     | 1     | 2     | 2     | 2     | 1     | 1     | 1     | 1     | 2     | 2     | 2     | 2     | 2     | 1     | 2     | 2     | 2 |   |
| 2     | 1     | 2     | 2     | 1     | 2     | 2     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 1     | 1     | 1     | 2     | 1 |   |
| 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1 |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1 |   |
| 2     | 1     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1 |   |
| 1     | 2     | 2     | 2     | 1     | 1     | 1     | 1     | 2     | 2     | 1     | 2     | 1     | 1     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 1     | 1     | 2     | 2     | 1 |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1 |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1 |   |
| 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2 |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1 |   |
| 2     | 1     | 2     | 1     | 1     | 2     | 2     | 2     | 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 1 | 2 |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 2     | 1 |   |
| 1     | 2     | 2     | 1     | 2     | 1     | 2     | 1     | 1     | 2     | 1     | 2     | 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 1     | 1     | 1 |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1 |   |
| 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1 |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1 |   |
| 2     | 1     | 2     | 1     | 1     | 2     | 2     | 2     | 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 1 | 2 |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1 |   |
| 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1 |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1 |   |
| 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1 |   |
| 1     | 2     | 2     | 2     | 2     | 2     | 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2 |   |
| 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1 |   |
| 1     | 2     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1 |   |
| 1     | 1     | 2     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1 |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1 |   |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1 |   |
| 1     | 2     | 2     | 2     | 2     | 2     | 2     | 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2 |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1 |   |
| 2     | 1     | 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 1     | 1     | 1     | 2     | 2     | 2     | 2     | 2     | 2     | 1     | 1     | 1 |   |
| 2     | 1     | 1     | 2     | 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 1     | 1     | 1     | 1     | 2     | 2 |   |
| 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1 |   |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 2     | 2 |   |

| hi361 | hi362 | hi363 | hi364 | hi365 | hi366 | hi367 | hi368 | si1 | si2 | si3 | si4 | si5 | si6 | si7 | si8 | si9 | si10 | si11 | si12 | si13 | si14 | si15 | si16 | si17 | si18 | si19 | si20 |
|-------|-------|-------|-------|-------|-------|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 4   | 4   | 5   | 4   | 3   | 5   | 5   | 4   | 4   | 3    | 5    | 5    | 4    | 4    | 4    | 5    | 5    | 4    | 3    | 4    |
| 1     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 3   | 4   | 4   | 4   | 5   | 5   | 3   | 3   | 3   | 3    | 4    | 4    | 4    | 4    | 5    | 5    | 3    | 4    | 3    | 4    |
| 2     | 2     | 1     | 1     | 2     | 2     | 1     | 1     | 4   | 4   | 4   | 3   | 3   | 3   | 3   | 4   | 4   | 5    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 3    | 4    | 5    |
| 1     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 3   | 3   | 3   | 3   | 3   | 4   | 4   | 4   | 4   | 5    | 5    | 5    | 4    | 3    | 5    | 5    | 5    | 5    | 3    | 3    |
| 1     | 2     | 2     | 2     | 1     | 2     | 1     | 2     | 3   | 4   | 5   | 3   | 5   | 4   | 5   | 4   | 3   | 5    | 4    | 5    | 4    | 3    | 4    | 3    | 5    | 4    | 3    | 4    |
| 2     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 4   | 3   | 3   | 3   | 3   | 4   | 4   | 5   | 5   | 5    | 4    | 4    | 4    | 3    | 5    | 5    | 5    | 4    | 4    | 4    |
| 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 4   | 4   | 5   | 5   | 4   | 5   | 4   | 4   | 3   | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    |
| 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 4   | 4   | 5   | 4   | 3   | 4   | 4   | 4   | 3   | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    |
| 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 4   | 4   | 4   | 3   | 4   | 4   | 4   | 4   | 3   | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |
| 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 4   | 4   | 4   | 3   | 4   | 4   | 4   | 4   | 3   | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 5   | 5   | 4   | 3   | 4   | 4   | 5   | 4   | 4   | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |
| 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 4   | 3   | 3   | 4   | 4   | 4   | 4   | 4   | 3   | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |
| 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4   | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 5   | 5   | 4   | 5   | 4   | 3   | 4   | 4   | 5   | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 5   | 5   | 4   | 5   | 5   | 4   | 4   | 5   | 3   | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |
| 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 4   | 5   | 3   | 4   | 3   | 5   | 4   | 4   | 5   | 3    | 4    | 3    | 5    | 4    | 4    | 5    | 4    | 5    | 3    | 4    |
| 2     | 2     | 2     | 1     | 1     | 2     | 1     | 2     | 4   | 3   | 3   | 4   | 4   | 4   | 4   | 3   | 4   | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 5   | 5   | 4   | 5   | 4   | 5   | 5   | 4   | 5   | 3    | 4    | 5    | 5    | 4    | 4    | 5    | 5    | 5    | 4    | 3    |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 4   | 3   | 3   | 5   | 5   | 5   | 4   | 4   | 4   | 3    | 4    | 4    | 4    | 4    | 5    | 5    | 3    | 3    | 3    | 4    |
| 2     | 2     | 2     | 1     | 1     | 1     | 1     | 1     | 4   | 3   | 3   | 4   | 4   | 3   | 4   | 4   | 4   | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 5   | 5   | 4   | 3   | 4   | 3   | 4   | 4   | 5   | 4    | 3    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 4    | 3    |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 3   | 3   | 3   | 2   | 3   | 3   | 3   | 3   | 2   | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    |



Appendix 2 Database: Company 321 – Company 354

| si21 | si22 | si23 | si24 | si25 | si26 | si27 | si28 | si29 | si30 | si31 | si32 | si33 | si34 | si35 | si36 | si37 | si38 | si39 | si40 | si41 | si42 | si43 | si44 | si45 | si46 | si47 | si48 | si49 | si50 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 4    | 3    | 4    | 3    | 3    | 4    | 3    | 5    | 2    | 5    | 4    | 5    | 5    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 5    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    |
| 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 1    | 2    | 4    | 4    | 3    | 3    | 4    | 5    | 5    | 4    | 3    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 3    |
| 5    | 5    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 2    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 3    |
| 3    | 3    | 4    | 4    | 5    | 5    | 5    | 1    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 5    | 5    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 4    |
| 5    | 4    | 4    | 3    | 5    | 4    | 4    | 3    | 1    | 2    | 3    | 5    | 4    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 5    | 3    | 5    | 4    | 3    | 5    | 4    | 4    | 4    | 3    |
| 3    | 3    | 4    | 5    | 5    | 4    | 4    | 3    | 2    | 1    | 5    | 5    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 3    | 3    | 4    | 5    |
| 3    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 2    | 2    | 5    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 5    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 3    | 5    | 4    | 4    |
| 5    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 2    | 1    | 4    | 4    | 3    | 5    | 4    | 4    | 3    | 3    | 4    | 4    | 5    | 3    | 5    | 5    | 4    | 3    | 4    | 4    | 3    | 4    |
| 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 3    |
| 3    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 2    | 2    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 5    |
| 4    | 4    | 3    | 4    | 3    | 4    | 3    | 5    | 2    | 1    | 4    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 5    | 5    | 4    | 5    | 4    | 5    | 5    | 4    | 4    | 5    | 5    | 4    |
| 4    | 3    | 5    | 4    | 4    | 5    | 4    | 5    | 1    | 2    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 5    | 5    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 3    |
| 3    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 1    | 2    | 4    | 3    | 3    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 3    |
| 4    | 3    | 5    | 5    | 4    | 3    | 4    | 3    | 1    | 2    | 5    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 5    | 5    | 4    | 5    | 4    | 3    | 5    | 4    | 3    | 4    | 4    | 5    |
| 4    | 4    | 4    | 5    | 4    | 4    | 5    | 2    | 2    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    |
| 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 5    | 3    | 3    | 4    |
| 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 1    | 2    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 5    | 4    | 3    | 4    | 5    |
| 4    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 1    | 2    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    |
| 5    | 4    | 4    | 4    | 5    | 4    | 5    | 5    | 2    | 2    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 3    | 5    | 4    |
| 5    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 1    | 2    | 3    | 4    | 5    | 4    | 5    | 3    | 4    | 5    | 5    | 4    | 3    | 5    | 4    | 3    | 5    | 4    | 5    | 3    | 4    | 5    |
| 4    | 4    | 4    | 3    | 4    | 4    | 2    | 2    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    |
| 4    | 3    | 5    | 4    | 4    | 5    | 4    | 5    | 3    | 3    | 4    | 4    | 3    | 4    | 5    | 5    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 5    | 4    | 3    | 4    | 4    | 3    | 4    |
| 4    | 5    | 4    | 3    | 3    | 4    | 4    | 4    | 1    | 1    | 5    | 4    | 3    | 4    | 5    | 5    | 4    | 3    | 5    | 5    | 4    | 3    | 4    | 5    | 4    | 4    | 3    | 3    | 3    | 5    |
| 3    | 3    | 3    | 4    | 4    | 3    | 3    | 2    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 3    |
| 3    | 4    | 4    | 5    | 4    | 3    | 4    | 5    | 2    | 2    | 5    | 4    | 3    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    |
| 5    | 4    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 1    | 1    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 5    | 4    | 3    | 4    | 5    | 5    | 5    | 3    | 4    | 4    | 3    |
| 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 1    | 2    | 4    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    |
| 5    | 4    | 4    | 4    | 5    | 5    | 5    | 2    | 2    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    |
| 4    | 3    | 3    | 4    | 4    | 3    | 5    | 5    | 2    | 1    | 4    | 4    | 5    | 5    | 4    | 5    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 3    | 4    |
| 4    | 5    | 5    | 4    | 5    | 5    | 4    | 5    | 2    | 2    | 5    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 5    | 4    | 5    | 5    | 4    | 5    | 4    |
| 5    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 1    | 2    | 3    | 4    | 5    | 4    | 5    | 3    | 4    | 5    | 5    | 4    | 3    | 5    | 4    | 3    | 5    | 4    | 5    | 3    | 4    | 5    |
| 4    | 4    | 4    | 3    | 4    | 4    | 2    | 2    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    |
| 4    | 3    | 5    | 4    | 4    | 5    | 4    | 5    | 3    | 3    | 4    | 4    | 3    | 4    | 5    | 5    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 5    | 4    | 3    | 4    | 4    | 3    | 4    |
| 4    | 5    | 4    | 3    | 3    | 4    | 4    | 4    | 1    | 1    | 5    | 4    | 3    | 4    | 5    | 5    | 4    | 3    | 5    | 5    | 4    | 3    | 4    | 5    | 4    | 4    | 3    | 3    | 3    | 5    |
| 5    | 4    | 5    | 4    | 4    | 3    | 3    | 2    | 2    | 4    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    |
| 5    | 4    | 5    | 4    | 4    | 3    | 4    | 3    | 2    | 1    | 5    | 5    | 4    | 4    | 5    | 3    | 4    | 5    | 5    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 5    | 3    | 4    | 5    |
| 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 2    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 3    |

| si51 | si52 | si53 | si54 | si55 | si56 | si57 | si58 | si59 | si60 | si61 | si62 | si63 | si64 | si65 | si66 | si67 | si68 | si69 | si70 | si71 | si72 | si73 | si74 | si75 | si76 | si77 | si78 | si79 | si80 |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
| 5    | 4    | 3    | 4    | 4    | 5    | 3    | 4    | 5    | 3    | 4    | 5    | 5    | 5    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 5    | 5    | 4    | 3    | 4    | 3    | 4    | 4    |   |
| 3    | 4    | 4    | 5    | 5    | 5    | 5    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 4    | 4    |   |
| 4    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 3    | 3    | 3    | 5    | 4    | 4    | 4    | 5    | 5    | 5    | 5    |   |
| 4    | 4    | 4    | 4    | 5    | 5    | 5    | 3    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 2    |   |
| 4    | 5    | 4    | 4    | 5    | 4    | 3    | 5    | 4    | 3    | 4    | 3    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 3    | 4    | 4    | 3    | 4    | 5    | 4    | 5    | 4    | 5    |   |
| 5    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 5    | 5    | 5    |   |
| 5    | 3    | 4    | 4    | 3    | 4    | 3    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 3    | 5    | 3    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    |   |
| 5    | 4    | 5    | 4    | 4    | 5    | 3    | 4    | 5    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 3    | 5    | 5    | 4    | 3    | 4    | 5    | 4    | 3    |   |
| 3    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 4    | 3    |   |
| 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 5    | 4    | 5    |   |
| 4    | 5    | 4    | 5    | 5    | 4    | 4    | 4    | 3    | 5    | 5    | 4    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 2    |   |
| 4    | 5    | 3    | 4    | 3    | 4    | 5    | 3    | 4    | 5    | 4    | 5    | 5    | 5    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 5    |   |
| 3    | 4    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 5    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 3    | 3    | 4    |   |
| 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4 |
| 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 5    |   |
| 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 3    |   |
| 4    | 4    | 4    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |   |
| 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 4    |   |
| 4    | 4    | 5    | 5    | 4    | 4    | 3    | 4    | 3    | 5    | 4    | 5    | 5    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 4    | 3    | 5    | 4    | 4    | 4    | 3    | 3    | 4    |   |
| 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 5    |   |
| 5    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5 |
| 4    | 3    | 5    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 3    | 5    | 5    | 4    | 4    | 4    | 5    | 4    | 5    | 5    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 5    |   |
| 5    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 5    |   |
| 4    | 3    | 4    | 4    | 5    | 3    | 4    | 4    | 3    | 5    | 3    | 5    | 5    | 4    | 3    | 4    | 5    | 4    | 4    | 5    | 4    | 3    | 4    | 3    | 5    | 4    | 3    | 4    | 4    | 5    |   |
| 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 3    | 4 |
| 3    | 4    | 4    | 4    | 5    | 3    | 3    | 4    | 5    | 3    | 4    | 3    | 5    | 5    | 5    | 4    | 5    | 3    | 4    | 5    | 3    | 4    | 3    | 4    | 5    | 4    | 4    | 3    | 4    | 3    |   |
| 4    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 5    | 4</  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |

Appendix 2 Database: Company 321 – Company 354

| si81 | si82 | si83 | si84 | si85 | si86 | si87 | si88 | si89 | si90 | si91 | si92 | si93 | si94 | si95 | si96 | si97 | si98 | si99 | si100 | si101 | si102 | si103 | si104 | si105 | si106 | si107 | si108 | si109 | si110 |   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 3    | 4    | 5    | 4    | 3    | 5    | 5    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     |   |
| 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 4    | 4    | 3    | 3    | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 3     | 4     |   |
| 4    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 4    | 5    | 5    | 5    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 3     | 3     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 3     | 3     |   |
| 4    | 4    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 5    | 3    | 4    | 5    | 4    | 4    | 4    | 4    | 5     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     |   |
| 4    | 4    | 3    | 4    | 3    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 3    | 4    | 5    | 4    | 5    | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     |   |
| 5    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 5    | 5    | 5    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 5    | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     |   |
| 4    | 5    | 4    | 4    | 5    | 5    | 4    | 5    | 4    | 5    | 3    | 4    | 5    | 4    | 5    | 3    | 4    | 4    | 3    | 4     | 5     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 3     | 4     |   |
| 4    | 4    | 4    | 4    | 5    | 5    | 3    | 5    | 4    | 5    | 5    | 3    | 4    | 5    | 4    | 3    | 4    | 3    | 5    | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 5     | 5     |   |
| 3    | 3    | 3    | 4    | 4    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 3     | 5     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     |   |
| 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     |   |
| 2    | 2    | 5    | 3    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 5    | 4    | 4    | 4    | 3     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 4     | 5     | 5     |   |
| 5    | 4    | 3    | 5    | 4    | 3    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 3    | 4    | 5    | 5    | 4    | 3    | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 5     |   |
| 5    | 4    | 4    | 3    | 3    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     |   |
| 4    | 3    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 4    | 3    | 5    | 4    | 3    | 4    | 4    | 3     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     |   |
| 4    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 3    | 4    | 4    | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     |   |
| 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 4    | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 2     |   |
| 5    | 4    | 4    | 4    | 3    | 3    | 4    | 3    | 4    | 5    | 4    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4 |
| 4    | 4    | 5    | 4    | 5    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     |   |
| 4    | 3    | 3    | 4    | 4    | 3    | 4    | 5    | 5    | 4    | 4    | 5    | 5    | 4    | 5    | 4    | 5    | 4    | 4    | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 5 |
| 3    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 3    | 4    | 2    | 3    | 2    | 3    | 4    | 2    | 3    | 3    | 2    | 3     | 2     | 4     | 3     | 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4 |
| 4    | 5    | 4    | 4    | 3    | 4    | 3    | 4    | 4    | 3    | 4    | 4    | 5    | 4    | 5    | 4    | 3    | 4    | 3    | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     |   |
| 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 3 |
| 5    | 5    | 5    | 4    | 4    | 5    | 3    | 4    | 4    | 5    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 3    | 5    | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 5     |   |
| 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     |   |
| 4    | 4    | 5    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 4    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     |   |
| 4    | 3    | 4    | 5    | 5    | 4    | 4    | 5    | 4    | 5    | 5    | 4    | 3    | 4    | 3    | 4    | 4    | 5    | 3    | 3     | 3     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     |   |
| 3    | 4    | 5    | 4    | 5    | 4    | 5    | 5    | 5    | 4    | 3    | 4    | 3    | 4    | 5    | 4    | 5    | 3    | 3    | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 5     | 5     | 4     | 5     |   |
| 4    | 5    | 5    | 4    | 5    | 4    | 4    | 3    | 4    | 3    | 5    | 4    | 3    | 4    | 3    | 4    | 5    | 3    | 4    | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 5 |
| 4    | 4    | 4    | 3    | 4    | 4    | 3    | 4    | 3    | 4    | 2    | 2    | 3    | 4    | 3    | 4    | 3    | 4    | 3    | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3 |
| 5    | 4    | 5    | 5    | 5    | 4    | 4    | 5    | 4    | 5    | 5    | 4    | 5    | 4    | 5    | 4    | 5    | 4    | 3    | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 5     |   |
| 4    | 4    | 3    | 4    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 4    | 4    | 3    | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 4     | 3     |   |
| 3    | 4    | 4    | 3    | 3    | 4    | 4    | 4    | 5    | 5    | 4    | 4    | 5    | 4    | 4    | 5    | 5    | 4    | 4    | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 3     | 3     |   |
| 3    | 3    | 4    | 5    | 4    | 4    | 5    | 4    | 3    | 4    | 5    | 4    | 4    | 3    | 4    | 4    | 4    | 5    | 4    | 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 3     | 5     |   |
| 3    | 2    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 4    | 3    | 3    | 4    | 3    | 3    | 3    | 3    | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3 |

| si111 | si112 | si113 | si114 | si115 | si116 | si117 | si118 | si119 | si120 | si121 | si122 | si123 | si124 | si125 | si126 | si127 | si128 | si129 | si130 | si131 | si132 | si133 | si134 | si135 | si136 | si137 | si138 | si139 | si140 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 1     | 4     | 2     | 4     | 4     | 1     | 4     | 3     | 4     | 4     | 1     | 4     | 4     |   |
| 5     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 3     | 3     | 3     | 4     | 2     | 4     | 4     | 1     | 5     | 5     | 4     | 4     | 2     | 4     | 5     |   |
| 4     | 4     | 5     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 3     | 5     | 3     | 3     | 3     | 3     | 4     | 2     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 1     | 5     | 3     |   |
| 4     | 4     | 3     | 3     | 5     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 1     | 5     | 2     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 2     | 4     | 5     |   |
| 5     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 1     | 4     | 3     | 2     | 3     | 5     | 4     | 3     | 2     | 3     | 4     |   |
| 3     | 3     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 1     | 3     | 3     | 3     | 4     | 2     | 4     | 4     | 5     | 5     | 3     | 3     | 3     |   |
| 4     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 1     | 4     | 3     | 5     | 2     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     |   |
| 5     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 5     | 5     | 4     | 5     | 5     | 4     | 1     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 1     | 4     | 3     |   |
| 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 2     | 4     | 3     | 3     | 4     | 2     | 4     | 3     | 3     | 3     | 2     | 4     | 3     |   |
| 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 5     | 2     | 4     | 3     | 3     | 4     | 2     | 4     | 4     | 5     | 4     | 5     |   |
| 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 2     | 5     | 5 |
| 5     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 3     | 2     | 3     | 1     | 4     | 5     | 1     | 4     | 3     | 4     | 3     | 2     | 3     | 3     |   |
| 4     | 5     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 4     | 3     | 3     | 2     | 5     | 1     | 3     | 4     | 2     | 5     | 5     | 4     | 3     | 3     | 3     | 4     |   |
| 5     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 4     | 2     | 3     | 1     | 4     | 5     | 1     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 4 |
| 5     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 2     | 3     | 3     | 4     | 5     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3 |
| 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 3     | 2     | 4     | 3     | 3     | 4     | 2     | 4     | 3     | 4 |
| 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 2     | 4     | 1     | 4     | 4     | 1     | 5     | 5     | 4     | 4     | 4     | 2     | 4     | 5     |   |
| 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 2     | 4     | 1     | 4     | 5     | 2     | 4     | 1     | 4     | 5     | 4     | 5     | 2     | 4     | 5 |
| 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 2     | 4     | 1     | 4     | 4     | 1     | 4     | 4     | 4     | 5     | 2     | 5     | 4     |   |
| 5     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 5     | 5     | 2     | 5     | 4     | 4     | 3     | 2     | 3     | 2     | 3     | 3     |   |
| 5     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 3     | 5     | 2     | 5     | 1     | 4     | 5     | 1     | 4     | 5     | 4     | 4     | 2     | 5     | 5     |   |
| 4     | 3     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 3     | 4     | 2     | 5     | 3     | 4     | 5     | 3     | 4     | 5     | 3     | 4     | 1     | 4     | 5     |   |
| 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 3     |   |
| 5     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 2     | 5     | 1     | 5     | 5     | 2     | 5     | 4     | 3     | 4     | 3     | 4     | 4     |   |
| 4     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 2     | 4     | 1     | 4     | 4     | 1     | 4     | 4     | 5     | 4     | 2     | 5     | 5     |   |
| 4     | 4     | 5     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 2     | 5     | 1     | 4     | 5     | 1     | 4     | 4     | 4     | 4     | 3     | 4     | 4     |   |
| 5     | 4     | 3     | 3     | 4     | 5     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 2     | 3     | 2     | 5     | 5     | 1     | 4     | 3     | 4     | 5     | 2     | 5     | 4     | 4     |   |
| 3     | 4     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 4     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 2     | 3     | 3     | 2 |

Appendix 2 Database: Company 321 – Company 354

| si141 | si142 | si143 | si144 | si145 | si146 | si147 | si148 | si149 | si150 | si151 | si152 | si153 | si154 | si155 | si156 | si157 | si158 | si159 | si160 | si161 | si162 | si163 | si164 | si165 | si166 | si167 | si168 | si169 | si170 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3     | 4     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 5     | 3     | 4     | 4     | 18    | 16    | 18    | 16    | 3     | 4     | 5     | 4     |
| 5     | 4     | 2     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 12    | 12    | 10    | 10    | 4     | 4     | 5     | 5     |
| 4     | 4     | 1     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 3     | 3     | 3     | 3     | 3     | 4     | 5     | 5     | 5     | 3     | 3     | 3     | 15    | 15    | 10    | 10    | 4     | 4     | 4     | 4     |
| 5     | 5     | 2     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 10    | 10    | 10    | 10    | 5     | 5     | 4     | 3     |
| 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 13.5  | 18    | 7.5   | 11.2  | 3     | 4     | 5     | 4     |
| 3     | 3     | 2     | 5     | 5     | 4     | 4     | 4     | 5     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 15    | 10    | 10    | 15    | 3     | 3     | 3     | 3     |
| 5     | 3     | 2     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 19    | 17    | 16    | 16    | 4     | 3     | 4     | 4     |
| 4     | 3     | 1     | 5     | 5     | 4     | 3     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 3     | 3     | 18    | 24    | 22    | 21    | 5     | 4     | 4     | 3     |
| 3     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 10    | 20    | 15    | 20    | 3     | 4     | 3     | 3     |
| 4     | 5     | 2     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 20    | 20    | 10    | 10    | 4     | 4     | 5     | 5     |
| 4     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 1     | 1     | 2     | 3     | 3     | 2     | 3     |       |       |       | 2     | 2     | 2     | 3     |       |
| 3     | 4     | 1     | 4     | 5     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 4     | 5     | 3     | 4     | 4     | 18    | 26    | 27    | 20    | 4     | 5     | 4     | 3     |
| 4     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 7.2   | 8.6   | 4.1   | 3.5   | 4     | 4     | 3     | 3     |
| 4     | 3     | 2     | 4     | 4     | 5     | 3     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 7.5   | 9.3   | 11    | 5.2   | 4     | 3     | 5     | 4     |
| 3     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 25    | 20    | 15    | 15    | 4     | 5     | 4     | 4     |
| 4     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 10    | 15    | 20    | 10    | 4     | 3     | 4     | 3     |
| 5     | 4     | 2     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 35    | 25    | 20    | 15    | 5     | 4     | 4     | 5     |
| 4     | 4     | 1     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 28    | 20    | 15    | 12    | 4     | 5     | 4     | 4     |
| 4     | 5     | 2     | 4     | 3     | 3     | 5     | 5     | 4     | 5     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 25    | 21    | 21    | 25    | 4     | 5     | 5     | 4     |
| 3     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 3     | 2     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 6.23  | 11.3  | 3.04  | 8.06  | 3     | 4     | 3     | 4     |
| 3     | 4     | 1     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 6.5   | 5.8   | 4.7   | 4.2   | 5     | 4     | 4     | 5     |
| 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 30    | 30    | 25    | 25    | 4     | 5     | 4     | 4     |
| 5     | 5     | 2     | 4     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 22    | 25    | 20    | 10    | 5     | 5     | 5     | 4     |
| 4     | 5     | 2     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 28    | 25    | 25    | 15    | 4     | 4     | 5     | 4     |
| 4     | 4     | 1     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 30    | 28    | 25    | 20    | 4     | 5     | 4     | 4     |
| 4     | 5     | 2     | 4     | 5     | 5     | 3     | 5     | 4     | 5     | 5     | 4     | 5     | 3     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 4.77  | 8.25  | 1.89  | 12    | 5     | 5     | 4     | 4     |
| 4     | 3     | 2     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 60    | 35    | 20    | 30    | 5     | 5     | 4     | 5     |
| 3     | 4     | 1     | 4     | 5     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 18    | 20    | 20    | 15    | 4     | 5     | 3     | 4     |
| 3     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 17    | 9     | 10    | 12    | 4     | 4     | 3     | 4     |
| 5     | 4     | 1     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 3     |       |       |       | 5     | 4     | 4     | 5     |       |
| 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 30    | 25    | 20    | 20    | 4     | 3     | 4     | 4     |
| 5     | 5     | 1     | 5     | 5     | 5     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 10    | 10    | 10    | 4     | 5     | 5     | 3     |
| 4     | 3     | 1     | 4     | 5     | 5     | 3     | 3     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 4.9   | 7.23  | 3.55  | 8.64  | 5     | 4     | 3     | 4     |
| 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 25    | 20    | 20    | 15    | 3     | 3     | 3     | 4     |

| si171 | si172 | si173 | si174 | si175 | si176 | si177 | si178 | si179 | si180 | si181 | si182 | si183 | si184 | si185 | si186 | si187 | si188 | si189 | si190 | si191 | si192 | si193 | si194 | si195 | si196 | si197 | si198 | si199 | si200 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 4     | 3     | 5     | 5     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     |   |
| 5     | 5     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     |   |
| 5     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 3     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 3     | 3     | 4     | 4     |   |
| 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 3     |   |
| 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 3     | 4     | 5     | 4     |   |
| 4     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 5     | 4     | 4     | 5     |   |
| 3     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     |   |
| 5     | 4     | 3     | 4     | 4     | 3     | 5     | 5     | 5     | 4     | 5     | 5     | 3     | 4     | 3     | 5     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 5     | 5     | 4     |   |
| 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     |   |
| 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4 |
| 3     | 3     | 2     | 3     | 2     | 3     | 2     | 3     | 3     | 5     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 4 |
| 3     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 3     | 5     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 5     | 5     | 4     |   |
| 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5 |
| 4     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 5     | 4     | 3 |
| 5     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 4     | 3     | 4 |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3 |
| 3     | 4     | 3     | 3     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5 |
| 5     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5 |
| 3     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 3     | 5 |
| 3     | 2     | 3     | 2     | 3     | 2     | 2     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 2     | 2     | 2     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 3     |   |
| 3     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 3     |   |
| 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 3     | 4     | 4 |
| 4     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4 |
| 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4 |
| 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 4 |
| 5     | 4     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 4     | 5     | 3     | 4     | 5     | 4     | 5     | 3     | 4     | 5     | 3     | 4     | 5     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 5 |
| 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 4 |
| 3     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     |       |       |       |       |   |

Appendix 2 Database: Company 321 – Company 354

| si201 | si202 | si203 | si204 | si205 | si206 | si207 | si208 | si209 | si210 | si211 | si212 | si213 | si214 | si215 | si216 | si217 | si218 | si219 | si220 | si221 | si222 | si223 | si224 | si225 | si226 | si227 | si228 | si229 | si230 |   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 3     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 5     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     |   |
| 4     | 4     | 3     | 3     | 5     | 4     | 5     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 3     |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 3     | 3     | 3     | 3     | 4     |   |
| 3     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 3     |   |
| 5     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     |   |
| 5     | 5     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 5     | 5     | 5     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 3     | 3     | 3     | 4     | 5     | 5     |   |
| 3     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     |   |
| 3     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 2     | 3     | 5     | 4     | 4     | 3     | 4     | 3     | 3     | 5     | 4     | 5     | 3     | 4     | 4     | 3     | 4     |   |
| 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     |   |
| 4     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     |   |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 5     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 5     |   |
| 3     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 5     | 4     | 4     | 3     | 5     | 5     | 5     | 5     |   |
| 4     | 4     | 4     | 3     | 4     | 4     | 5     | 3     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     |   |
| 4     | 3     | 4     | 5     | 5     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     |   |
| 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 3     | 4 |
| 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 2     | 3     | 3     |   |
| 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     |   |
| 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 4     | 4     |   |
| 5     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 3     |   |
| 5     | 4     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 3     | 4     | 3     | 5     |   |
| 4     | 4     | 4     | 2     | 2     | 3     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 4     | 3     | 4     |   |
| 4     | 4     | 3     | 4     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 3     |   |
| 3     | 4     | 4     | 3     | 4     | 3     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     |   |
| 5     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 5     | 5     | 4     |   |
| 5     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     |   |
| 5     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 5     | 4     | 4     | 5     |   |
| 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 3     | 4     |   |
| 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 4     |   |
| 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 3     | 4     | 3     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 5     |   |
| 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 3     |   |
| 4     | 3     | 3     | 4     | 5     | 4     | 3     | 5     | 5     | 4     | 4     | 4     | 3     | 4     | 3     | 5     | 4     | 5     | 3     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     |   |
| 4     | 5     | 5     | 5     | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     |   |
| 3     | 4     | 4     | 4     | 4     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     |   |
| 3     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 2     | 4     | 3     | 4     | 4     |   |
| 3     | 3     | 4     | 3     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 4     | 3     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 2     | 3     | 3     | 4     | 3     | 3     | 3     |   |

| si231 | si232 | si233 | si234 | si235 | si236 | si237 | si238 | si239 | si240 | si241 | si242 | si243 | si244 | si245 | si246 | si247 | si248 | si249 | si250 | si251 | si252 | si253 | si254 | si255 | si256 | si257 | si258 | si259 | si260 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 1     | 15    | 4     | 5     | 5     | 4     | 3     | 5     | 5     |
| 5     | 5     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 1     | 25    | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 3     |
| 4     | 4     | 3     | 3     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 5     | 5     | 3     | 3     | 3     | 1     | 10    | 3     | 4     | 4     | 4     | 5     | 5     | 5     | 5     |       |
| 4     | 4     | 4     | 3     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 3     | 1     | 5     | 4     | 4     | 4     | 3     | 4     | 3     | 4     |
| 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 1     | 12    | 4     | 3     | 4     | 4     | 5     | 5     | 4     |
| 5     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 5     | 3     | 3     | 4     | 5     | 5     | 5     | 4     | 3     | 3     | 3     | 3     | 1     | 6     | 4     | 4     | 4     | 3     | 3     | 3     | 3     |       |
| 3     | 4     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 4     | 5     | 3     | 4     | 5     | 3     | 4     | 5     | 1     | 15    | 4     | 3     | 4     | 3     | 5     | 5     | 5     |
| 3     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 2     |       | 3     | 4     | 4     | 5     | 3     | 5     | 4     |
| 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 1     | 4     | 4     | 4     | 5     | 5     | 5     | 4     | 4     | 3     |
| 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 1     | 20    | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     |
| 4     | 5     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 4     | 3     | 5     | 4     | 5     | 1     | 9     | 5     | 5     | 4     | 3     | 4     | 1     | 2     |
| 4     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 3     | 3     | 5     | 4     | 4     | 3     | 4     | 1     | 30    | 3     | 4     | 4     | 5     | 4     | 5     | 5     |
| 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 1     | 22    | 3     | 3     | 4     | 4     | 4     | 4     | 4     |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 3     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 1     | 26    | 3     | 4     | 4     | 3     | 5     | 5     | 4     |
| 3     | 4     | 4     | 3     | 3     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 3     | 3     | 1     | 30    | 4     | 5     | 4     | 3     | 4     | 4     | 3     |
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 1     | 8     | 3     | 4     | 3     | 4     | 3     | 4     |
| 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 4     | 1     | 40    | 4     | 3     | 3     | 4     | 3     | 4     | 5     |
| 3     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 1     | 25    | 4     | 5     | 4     | 4     | 5     | 5     | 4     |
| 5     | 4     | 3     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 5     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 2     |       | 4     | 4     | 5     | 4     | 3     | 5     | 5     |
| 3     | 2     | 2     | 3     | 2     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 2     | 2     |       | 4     | 3     | 5     | 2     | 3     | 3     | 2     |
| 4     | 4     | 3     | 4     | 5     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 3     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 1     | 25    | 4     | 3     | 4     | 5     | 4     | 4     | 5     |
| 4     | 5     | 4     | 4     | 4     | 4     | 4     | 3     | 4     | 3     | 4     | 2     | 3     | 3     | 4     | 2     | 4     | 5     | 3     | 3     | 4     | 1     | 30    | 2     | 3     | 2     | 4     | 3     | 5     | 4     |
| 4     | 5     | 5     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 1     | 6     | 4     | 4     | 4     | 3     | 3     | 3     | 3     |
| 5     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 1     | 30    | 4     | 3     | 3     | 4     | 3     | 4     | 5     |
| 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 5     | 1     | 30    | 4     | 4     | 5     | 4     | 4     | 4     | 5     |
| 5     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 1     | 23    | 4     | 5     | 4     | 4     | 5     | 5     | 5     | 5     |
| 4     | 3     | 5     | 4     | 3     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 1     | 20    | 3     | 4     | 5     | 4     | 4     | 4     | 5     |
| 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 2     |       | 3     | 4     | 4     | 3     | 4     | 4     | 4     |
| 4     | 4     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |

Appendix 2 Database: Company 321 – Company 354

| si261 | si262 | si263 | si264 | si265 | si266 | si267 | si268 | si269 | si270 | si271 | si272 | si273 | si274 | si275 | si276 | si277 | si278 | si279 | si280 | si281 | si282 | si283 | si284 | si285 | si286 | si287 | si288 | si289 | si290 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 3     | 4     | 3     | 3     | 61    | 39    | 0     | 100   | 0     | 380   | 2004  | 6     | 17    |
| 4     | 4     | 5     | 5     | 5     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     | 480   | 2005  | 6     | 14    |       |
| 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 5     | 5     | 5     | 3     | 4     | 4     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 950   | 1996  | 5     | 17    |       |
| 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 100   | 0     | 0     | 0     | 1800  | 2007  | 7     | 17    |       |
| 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 5     | 4     | 5     | 100   | 0     | 0     | 0     | 180   | 2003  | 6     | 17    |       |
| 3     | 4     | 4     | 5     | 5     | 3     | 3     | 3     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 3     | 3     | 4     | 4     | 4     | 70    | 30    | 0     | 100   | 0     | 48    | 2007  | 7     | 16    |
| 4     | 3     | 4     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 5     | 4     | 5     | 3     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 30    | 35    | 35    | 30    | 70    | 1000  | 2006  | 7     | 17    |
| 5     | 3     | 4     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 3     | 4     | 4     | 3     | 5     | 4     | 5     | 5     | 4     | 3     | 4     | 59    | 41    | 0     | 100   | 0     | 750   | 2005  | 6     | 17    |
| 3     | 3     | 4     | 4     | 3     | 3     | 3     | 3     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 1250  | 2001  | 6     | 17    |       |
| 5     | 4     | 5     | 4     | 3     | 4     | 4     | 2     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 100   | 0     | 0     | 0     | 2000  | 2008  | 7     | 14    |       |
| 3     | 3     | 4     | 3     | 4     | 4     | 2     | 2     | 3     | 3     | 4     | 3     | 2     | 4     | 3     | 1     | 3     | 4     | 3     | 2     | 3     | 100   | 0     | 0     | 0     | 101   | 2010  | 7     | 17    |       |
| 4     | 4     | 3     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 5     | 4     | 3     | 4     | 4     | 3     | 65    | 25    | 10    | 90    | 10    | 9600  | 2007  | 7     | 17    |
| 5     | 4     | 3     | 3     | 3     | 4     | 4     | 5     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 3     | 4     | 4     | 5     | 100   | 0     | 0     | 0     | 0     | 0     | 2002  | 6     | 17    |
| 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 0     | 2002  | 6     | 17    |
| 3     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 1500  | 1990  | 3     | 17    |
| 3     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 3     | 4     | 3     | 4     | 3     | 4     | 100   | 0     | 0     | 0     | 0     | 78    | 2007  | 7     | 17    |
| 4     | 4     | 4     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 1200  | 1995  | 4     | 16    |
| 4     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 100   | 0     | 0     | 0     | 0     | 1200  | 2009  | 7     | 12    |
| 4     | 4     | 5     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 72    | 28    | 0     | 100   | 0     | 580   | 2006  | 7     | 17    |
| 1     | 3     | 4     | 3     | 2     | 3     | 2     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 3     | 2     | 2     | 3     | 3     | 2     | 100   | 0     | 0     | 0     | 0     | 42    | 2005  | 6     | 17    |
| 4     | 5     | 4     | 4     | 5     | 5     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 5     | 100   | 0     | 0     | 0     | 0     | 45000 | 1998  | 5     | 17    |
| 4     | 4     | 5     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 3     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 100   | 0     | 0     | 0     | 0     | 1000  | 2009  | 7     | 17    |
| 4     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 7000  | 2002  | 6     | 4     |
| 4     | 4     | 4     | 5     | 5     | 4     | 4     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 4     | 5     | 4     | 4     | 5     | 100   | 0     | 0     | 0     | 0     | 1250  | 2010  | 7     | 14    |
| 4     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 4     | 100   | 0     | 0     | 0     | 0     | 205   | 1984  | 2     | 17    |
| 4     | 5     | 4     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 4     | 5     | 4     | 4     | 3     | 5     | 4     | 4     | 5     | 4     | 3     | 100   | 0     | 0     | 0     | 0     | 276   | 2006  | 7     | 17    |
| 4     | 5     | 4     | 5     | 5     | 4     | 4     | 5     | 4     | 5     | 5     | 5     | 4     | 5     | 4     | 4     | 5     | 3     | 4     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 2630  | 2002  | 6     | 17    |
| 3     | 4     | 5     | 4     | 3     | 4     | 5     | 4     | 4     | 3     | 4     | 5     | 5     | 4     | 3     | 4     | 5     | 3     | 4     | 5     | 4     | 70    | 30    | 0     | 100   | 0     | 10000 | 2009  | 7     | 17    |
| 3     | 4     | 4     | 3     | 4     | 4     | 3     | 4     | 3     | 4     | 4     | 3     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 100   | 0     | 0     | 0     | 0     | 500   | 2009  | 7     | 17    |
| 4     | 4     | 5     | 4     | 4     | 4     | 5     | 5     | 4     | 4     | 3     | 4     | 3     | 3     | 4     | 4     | 5     | 4     | 4     | 3     | 4     | 75    | 25    | 0     | 100   | 0     | 1300  | 2005  | 6     | 5     |
| 3     | 4     | 5     | 5     | 4     | 3     | 3     | 4     | 5     | 5     | 5     | 4     | 4     | 3     | 3     | 4     | 5     | 5     | 3     | 3     | 3     | 100   | 0     | 0     | 0     | 0     | 1280  | 2007  | 7     | 6     |
| 3     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 4     | 3     | 3     | 4     | 4     | 3     | 4     | 4     | 4     | 4     | 3     | 100   | 0     | 0     | 0     | 0     | 308   | 2002  | 6     | 17    |
| 4     | 5     | 4     | 3     | 4     | 4     | 3     | 4     | 5     | 4     | 5     | 4     | 3     | 4     | 4     | 5     | 5     | 4     | 3     | 4     | 5     | 100   | 0     | 0     | 0     | 0     | 30    | 2007  | 7     | 5     |
| 3     | 3     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 3     | 4     | 3     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 50    | 30    | 20    | 50    | 50    | 4000  | 2003  | 6     | 17    |

| si291 | si292          | si293       | si294 | si295 | si296 | si297 | si298 | si299 | si300 | si301 | si302 | si303 | si304 | si305 | si306 | si307 | si308 | si309 | si310       |
|-------|----------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| 20    | New Zealand    | 6000000     | 1     | 0     | 1     |       |       | 1     | 2     | 1     |       | 1     | 1     | 1     | 1     | 1     |       |       | Chinese     |
| 16    | Singapore      | 5400000     | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     |       |       | 1     |       | 1     |       |       | Chinese     |
| 20    | Kazakhstan     | 150000000   | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     |       | 1     | 1     | 1     |       |       |       | Chinese     |
| 20    | Luxembourg     | 12000000    | 1     | 0     | 0     |       | 1     |       | 1     | 1     |       |       |       | 1     | 1     | 1     | 1     |       | Chinese     |
| 20    | Laos           | 48000000    | 1     | 0     | 0     |       | 1     |       | 1     | 1     | 1     | 1     |       |       | 1     | 1     |       |       | Chinese     |
| 5     | Laos           | 150000      | 1     | 0     | 0     |       |       | 1     | 1     | 1     |       |       | 1     | 1     |       |       | 1     |       | Chinese     |
| 20    | South Africa   | 2000000000  | 0     | 1     | 1     | 1     |       |       | 1     | 1     | 1     | 1     | 1     |       |       |       |       |       | Chinese     |
| 20    | Vietnam        | 20000000    | 1     | 1     | 1     | 1     |       |       | 2     | 1     | 1     | 1     | 1     |       | 1     | 1     | 1     |       | Chinese     |
| 20    | South Africa   | 4500000     | 0     | 1     | 0     | 1     |       |       | 1     |       |       | 1     |       | 1     | 1     | 1     |       |       | Chinese     |
| 14    | Germany        | 150000000   | 0     | 1     | 0     |       | 1     |       | 2     |       | 1     | 1     |       | 1     |       |       |       |       | Chinese     |
| 20    | Burma          | 45000000    | 1     | 1     | 1     | 1     |       |       | 1     | 1     |       |       | 1     | 1     | 1     |       |       |       | Chinese     |
| 20    | Equator Guinea | 18000000    | 1     | 1     | 1     |       |       | 1     | 2     | 1     | 1     | 1     | 1     | 1     |       |       |       |       | Chinese     |
| 20    | Vietnam        | 0           | 1     | 1     | 1     | 1     |       |       | 1     | 1     |       |       | 1     | 1     |       |       |       |       | Chinese     |
| 20    | Singapore      | 52000000    | 1     | 1     | 1     | 1     |       |       | 1     | 1     |       | 1     |       |       |       |       |       |       | Chinese     |
| 14    | Australia      | 67000000    | 1     | 0     | 0     | 1     |       |       | 1     | 1     |       |       | 1     |       |       |       |       |       | Chinese     |
| 20    | Laos           | 2500000000  | 1     | 0     | 0     |       | 1     |       | 1     | 1     |       |       | 1     | 1     |       |       |       |       | Chinese     |
| 5     | UAE            | 6000000     | 1     | 0     | 0     |       | 1     |       | 1     | 1     |       |       |       | 1     |       |       |       |       | Chinese     |
| 20    | Vietnam        | 10000000    | 0     | 0     | 1     | 1     |       |       | 1     | 1     | 1     |       |       |       |       |       |       |       | Chinese     |
| 20    | Pakistan       | 8000000000  | 1     | 1     | 0     |       |       | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       | Chinese     |
| 20    | Thailand       | 120000000   | 0     | 0     | 1     |       | 1     |       | 2     | 1     | 1     |       |       |       | 1     | 1     |       |       | Chinese     |
| 20    | Italy          | 12620000000 | 1     | 1     | 1     | 1     |       |       | 1     | 1     | 1     | 1     |       | 1     | 1     |       |       |       | Chinese     |
| 20    | Canada         | 150000000   | 1     | 0     | 0     | 1     |       |       | 1     | 1     |       |       | 1     |       |       |       |       |       | Chinese     |
| 6     | Japan          | 50000000    | 1     | 0     | 0     | 1     |       |       | 1     |       | 1     |       | 1     | 1     |       | 1     |       |       | Chinese     |
| 14    | Singapore      | 5600000     | 1     | 0     | 0     | 1     |       |       | 1     |       |       | 1     |       | 1     |       |       |       |       | Singaporean |
| 20    | Jordan         | 18000000    | 1     | 0     | 0     | 1     |       |       | 1     | 1     | 1     |       |       |       |       |       |       |       | Chinese     |
| 20    | Japan          | 15000000    | 1     | 1     | 1     | 1     |       |       | 2     | 1     | 1     | 1     | 1     |       |       |       | 1     |       | Chinese     |
| 17    | Hungary        | 63000000    | 1     | 1     | 1     |       | 1     |       | 1     |       | 1     |       | 1     | 1     | 1     |       |       |       | Chinese     |
| 20    | Australia      | 900000000   | 1     | 1     | 1     | 1     |       |       | 2     |       | 1     | 1     | 1     | 1     |       |       |       |       | Chinese     |
| 20    | Australia      | 1000000000  | 0     | 1     | 0     | 1     |       |       | 1     |       |       | 1     |       | 1     | 1     |       |       |       | Australian  |
| 20    | Russia         | 10000000000 | 1     | 1     | 1     |       |       | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |       |       | Russian     |
| 11    | America        | 850000000   | 0     | 1     | 0     |       | 1     |       | 2     | 1     |       |       | 1     |       |       |       | 1     |       | Chinese     |
| 20    | Japan          | 100000000   | 0     | 1     | 0     |       | 1     |       | 1     | 1     | 1     |       |       | 1     |       | 1     | 1     |       | Chinese     |
| 19    | Burma          | 50000000    | 1     | 0     | 0     |       | 1     |       | 2     | 1     | 1     |       | 1     | 1     | 1     |       |       |       | Chinese     |
| 20    | Chile          | 1000000000  | 0     | 1     | 0     |       |       | 1     | 2     |       | 1     | 1     |       |       | 1     |       |       |       | Chilean     |

Appendix 2 Database: Company 321 – Company 354

| si312 | si313 | si314 | si315 | si316 | si317 | si318 | si319             | si320 | si321             | si322 | si323     | si324 | si325  | si326 | si327 | si328 | si329 | si330 |
|-------|-------|-------|-------|-------|-------|-------|-------------------|-------|-------------------|-------|-----------|-------|--------|-------|-------|-------|-------|-------|
| 2     | 8     | 6     | 8     | 8     | 12    | 8     | New Zealand       | 8     | New Zealand       | 0     |           | 2     | fluent | 4     | 1     | 2     | 2     | 1     |
| 3     | 7     | 5     | 1     | 5     | 5     | 5     | Singapore         | 5     | Singapore         | 1     | America   | 1     | fluent | 4     | 2     | 2     | 1     | 1     |
| 3     | 6     | 5     | 10    | 2     | 10    | 10    | Kazakhstan        | 10    | Kazakhstan        | 0     |           | 2     | fluent | 4     | 1     | 2     | 1     | 2     |
| 3     | 7     | 5     | 2     | 2     | 2     | 2     | Luxembourg        | 2     | Luxembourg        | 0     |           | 2     | fluent | 4     | 2     | 1     | 2     | 1     |
| 3     | 5     | 6     | 3     | 3     | 3     | 3     | Laos              | 3     | Laos              | 0     |           | 2     | fluent | 4     | 1     | 2     | 1     | 1     |
| 3     | 6     | 5     | 3     | 3     | 3     | 3     | Laos              | 3     | Laos              | 0     |           | 2     | fluent | 4     | 1     | 2     | 2     | 1     |
| 2     | 7     | 6     | 6     | 6     | 6     | 6     | South Africa      | 6     | South Africa      | 0     |           | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 2     | 7     | 5     | 7     | 7     | 12    | 7     | Vietnam           | 7     | Vietnam           | 0     |           | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 3     | 7     | 5     | 8     | 5     | 8     | 8     | South Africa      | 8     | South Africa      | 0     |           | 2     | fluent | 4     | 2     | 1     | 1     | 1     |
| 1     | 5     | 6     | 3     | 1     | 3     | 3     | Germany           | 3     | Germany           | 0     |           | 2     | fluent | 4     | 1     | 2     | 1     | 2     |
| 3     | 7     | 6     | 8     | 2     | 4     |       |                   |       |                   | 0     |           | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 7     | 6     | 5     | 5     | 12    | 5     | Equatorial Guinea | 5     | Equatorial Guinea | 0     |           | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 8     | 6     | 4     | 3     | 3     |       |                   |       |                   | 0     |           | 2     | fluent | 4     | 1     | 1     | 2     | 1     |
| 1     | 7     | 6     | 7     | 3     | 3     | 7     | Singapore         | 7     | Singapore         | 0     |           | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 3     | 5     | 5     | 15    | 5     | 15    | 15    | Australia         | 15    | Australia         | 0     |           | 2     | fluent | 4     | 1     | 1     | 1     | 2     |
| 3     | 8     | 6     | 2     | 2     | 2     | 2     | Laos              | 2     | Laos              | 0     |           | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 3     | 5     | 5     | 7     | 7     | 10    | 7     | UAE               | 7     | UAE               | 0     |           | 2     | fluent | 4     | 2     | 1     | 1     | 2     |
| 3     | 5     | 5     | 1     | 1     | 5     | 1     | Vietnam           | 1     | Vietnam           | 0     |           | 2     | fluent | 4     | 1     | 2     | 1     | 2     |
| 2     | 8     | 5     | 8     | 6     | 8     | 6     | Pakistan          | 6     | Pakistan          | 0     |           | 2     | basic  | 2     | 1     | 1     | 2     | 1     |
| 2     | 6     | 5     | 7     | 7     | 5     | 7     | Thailand          | 7     | Thailand          | 0     |           | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 1     | 8     | 7     | 6     | 4     | 4     |       |                   |       |                   | 0     |           | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 3     | 5     | 5     | 2     | 2     | 2     | 2     | Canada            | 2     | Canada            | 0     |           | 2     | fluent | 4     | 1     | 1     | 2     | 1     |
| 3     | 7     | 5     | 5     | 5     | 5     | 5     | Japan             | 10    | Japan             | 0     |           | 2     | fluent | 4     | 2     | 1     | 1     | 2     |
| 3     | 4     | 5     | 1     | 1     | 1     | 1     | Singapore         | 1     | Singapore         | 0     |           | 2     | fluent | 4     | 1     | 2     | 1     | 2     |
| 3     | 5     | 5     | 10    | 5     | 10    | 10    | Jordan            | 10    | Jordan            | 0     |           | 2     | fluent | 4     | 1     | 2     | 1     | 2     |
| 3     | 6     | 5     | 12    | 6     | 10    | 6     | Japan             | 6     | Japan             | 0     |           | 2     | fluent | 4     | 1     | 1     | 1     | 1     |
| 2     | 8     | 6     | 3     | 2     | 2     |       |                   |       |                   | 0     |           | 2     |        |       | 1     | 2     | 2     | 1     |
| 2     | 8     | 6     | 3     | 3     | 21    | 3     | Australia         | 3     | Australia         | 0     |           | 2     | basic  | 2     | 1     | 1     | 1     | 1     |
| 1     | 5     | 6     | 3     | 3     | 3     | 3     | Australia         | 3     | Australia         | 1     | Australia | 1     | fluent | 4     | 1     | 2     | 1     | 1     |
| 3     | 5     | 6     | 7     | 3     | 10    | 7     | Russia            | 7     | Russia            | 0     |           | 2     | basic  | 2     | 1     | 1     | 1     | 2     |
| 3     | 6     | 5     | 4     | 2     | 5     | 4     | America           | 4     | America           | 0     |           | 2     | basic  | 2     | 1     | 2     | 1     | 1     |
| 3     | 3     | 5     | 10    | 8     | 10    | 10    | Japan             | 15    | Japan             | 0     |           | 2     | fluent | 4     | 2     | 2     | 2     | 1     |
| 3     | 7     | 5     | 20    | 5     | 10    | 5     | Burma             | 5     | Burma             | 0     |           | 2     | fluent | 4     | 1     | 2     | 1     | 1     |
| 3     | 4     | 5     | 4     | 4     | 3     |       |                   |       |                   | 1     | Chile     | 1     | fluent | 4     | 1     | 2     | 1     | 1     |

| si331 | si332 | si333 | si334 | si335 | si336 | si337 | si338 | si339 | si340 | si341 | si342 | si343 | si344 | si345 | si346 | si347 | si348 | si349 | si350 | si351 | si352 | si353 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 2     | 1     | 1     | 2     | 1     | 2     | 2     | 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 2     | 2     | 2     | 1     |
| 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 1     | 2     |
| 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 1     | 2     | 2     | 2     | 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     |
| 2     | 2     | 1     | 1     | 2     | 1     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 1     | 1     |
| 2     | 1     | 2     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 2     | 2     | 1     | 1     | 1     | 2     | 2     | 2     | 2     | 1     | 1     | 2     | 2     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 2     |
| 1     | 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 2     | 2     | 1     | 1     | 2     | 2     | 2     | 2     | 2     | 1     | 1     | 1     | 1     |
| 1     | 2     | 1     | 2     | 1     | 1     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 2     | 1     | 2     | 1     | 2     | 1     |
| 1     | 2     | 1     | 2     | 2     | 1     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 1     | 2     | 1     | 2     | 2     | 2     | 1     |
| 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 2     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 2     | 1     | 2     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 2     | 1     |
| 1     | 2     | 2     | 1     | 1     | 2     | 1     | 1     | 1     | 2     | 2     | 1     | 1     | 1     | 2     | 2     | 1     | 1     | 1     | 2     | 2     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 1     | 2     | 2     | 1     | 2     | 2     | 1     | 2     | 2     | 2     | 1     | 1     | 1     | 2     | 1     | 2     | 1     | 1     | 2     | 1     | 2     | 1     |
| 2     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 2     | 2     | 2     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 1     | 1     | 1     | 1     | 2     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |

Appendix 2 Database: Company 321 – Company 354

| si354 | si355 | si356 | si357 | si358 | si359 | si360 | si361 | si362 | si363 | si364 | si365 | si366 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 2     | 1     | 2     | 1     | 1     | 2     | 2     | 2     | 1     | 2     | 2     | 1     |
| 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 2     | 1     |
| 1     | 2     | 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     |
| 2     | 2     | 1     | 1     | 2     | 1     | 2     | 2     | 1     | 1     | 2     | 1     | 2     |
| 2     | 1     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 2     |
| 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 2     | 1     | 2     |
| 2     | 2     | 2     | 2     | 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 2     | 1     | 2     | 2     | 2     | 1     | 2     | 1     |
| 2     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 2     | 1     | 1     | 2     | 1     | 2     | 2     | 1     | 2     | 1     | 1     | 2     |
| 2     | 1     | 1     | 2     | 2     | 2     | 1     | 2     | 1     | 1     | 2     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     |
| 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 1     | 1     | 2     | 1     | 1     | 2     | 1     | 2     | 1     | 1     | 2     | 2     |
| 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     |
| 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 1     | 2     | 2     | 1     | 1     |
| 2     | 1     | 1     | 2     | 1     | 2     | 1     | 1     | 2     | 1     | 2     | 1     | 1     |
| 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 2     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| 2     | 2     | 1     | 1     | 1     | 2     | 2     | 1     | 1     | 1     | 2     | 2     | 1     |
| 1     | 1     | 1     | 2     | 1     | 2     | 2     | 1     | 1     | 1     | 2     | 1     | 1     |
| 1     | 2     | 2     | 1     | 1     | 2     | 2     | 1     | 1     | 2     | 2     | 2     | 1     |
| 1     | 1     | 1     | 2     | 2     | 2     | 1     | 1     | 2     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |





**Appendix 3 DATABASE DICTIONARY**

| Variable Name | Variable Label | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|----------------|--|----------|-------------|
|               |                | Item   | Question |             |
| ID            | Company ID     |  |          |             |
| hi1           | Hfispol        | 1  | 1        | HQ          |
| hi2           | Hantitrust     | 2  | 1        | HQ          |
| hi3           | Hpolitrans     | 3  | 1        | HQ          |
| hi4           | Hintelprotec   | 4  | 1        | HQ          |
| hi5           | Hjudicsyseff   | 5  | 1        | HQ          |
| hi6           | Hramktdom      | 6  | 1        | HQ          |
| hi7           | Hinflation     | 7  | 1        | HQ          |
| hi8           | Hpolisysadp    | 1  | 2        | HQ          |
| hi9           | Hgovpoladap    | 2  | 2        | HQ          |
| hi10          | Hgovtransp     | 3  | 2        | HQ          |
| hi11          | Hpolrisk       | 4  | 2        | HQ          |
| hi12          | Hdgrbuhind     | 5  | 2        | HQ          |
| hi13          | Hbucorrupt     | 6  | 2        | HQ          |
| hi14          | Hlocgovdep     | 7  | 2        | HQ          |
| hi15          | Hhqpractice    | 1  | 3        | HQ          |
| hi16          | Hleadership    | 2  | 3        | HQ          |
| hi17          | Hinfoanalysis  | 3  | 3        | HQ          |
| hi18          | Hplanning      | 4  | 3        | HQ          |
| hi19          | Hpeople        | 5  | 3        | HQ          |
| hi20          | Hpromgmt       | 6  | 3        | HQ          |
| hi21          | Hbusireult     | 7  | 3        | HQ          |
| hi22          | Hcusfocsatis   | 8  | 3        | HQ          |
| hi23          | Hwilleffort    | 1  | 4        | HQ          |
| hi24          | Hreorgbusi     | 2  | 4        | HQ          |
| hi25          | Hvaluesimi     | 3  | 4        | HQ          |
| hi26          | Hinspinvolv    | 4  | 4        | HQ          |
| hi27          | Hhappyadopt    | 5  | 4        | HQ          |
| hi28          | Hcarefuture    | 6  | 4        | HQ          |
| hi29          | Hdiffctoagree  | 7  | 4        | HQ          |
| hi30          | Hlocalauto     | 1  | 5        | HQ          |
| hi31          | Hdirectsuper   | 2  | 5        | HQ          |
| hi32          | Hplanningsys   | 3  | 5        | HQ          |
| hi33          | Hreportsys     | 4  | 5        | HQ          |
| hi34          | Hstandardise   | 1  | 6        | HQ          |
| hi35          | Hdegenforce    | 2  | 6        | HQ          |

Appendix 3 Database Dictionary: Headquarters Data

| Variable Name | Variable Label | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|----------------|--|----------|-------------|
|               |                | Item   | Question |             |
| hi36          | Htechstand     | 3  | 6        | HQ          |
| hi37          | Hstandreport   | 4  | 6        | HQ          |
| hi38          | Hsharedvalue   | 1  | 7        | HQ          |
| hi39          | Huseexpat      | 2  | 7        | HQ          |
| hi40          | Hfreqexchan    | 3  | 7        | HQ          |
| hi41          | Hsubmantrain   | 4  | 7        | HQ          |
| hi42          | Hsubmaninvol   | 5  | 7        | HQ          |
| hi43          | Hprovtrain     | 1  | 8        | HQ          |
| hi44          | Hstaffing      | 2  | 8        | HQ          |
| hi45          | Hskilldevelop  | 3  | 8        | HQ          |
| hi46          | Hevaluate      | 4  | 8        | HQ          |
| hi47          | Hchance        | 5  | 8        | HQ          |
| hi48          | Hovalcommt     | 6  | 8        | HQ          |
| hi49          | Hevalbehav     | 1  | 9        | HQ          |
| hi50          | Hsubacct       | 2  | 9        | HQ          |
| hi51          | Hconsid        | 3  | 9        | HQ          |
| hi52          | Hperfprog      | 4  | 9        | HQ          |
| hi53          | Hfreqoffdbk    | 5  | 9        | HQ          |
| hi54          | Hevalresult    | 1  | 10       | HQ          |
| hi55          | Hpayperf       | 2  | 10       | HQ          |
| hi56          | Htargetstaff   | 3  | 10       | HQ          |
| hi57          | Hnumeffect     | 4  | 10       | HQ          |
| hi58          | Hperfresult    | 5  | 10       | HQ          |
| hi59          | Happgoals      | 6  | 10       | HQ          |
| hi60          | Hlacklow       | 7  | 10       | HQ          |
| hi61          | Hknowsub       | 1  | 11       | HQ          |
| hi62          | Hsubwilling    | 2  | 11       | HQ          |
| hi63          | Hconfsub       | 3  | 11       | HQ          |
| hi64          | Hsuperrela     | 4  | 11       | HQ          |
| hi65          | Hsubseek       | 5  | 11       | HQ          |
| hi66          | Htrusted       | 6  | 11       | HQ          |
| hi67          | Hletsubknow    | 7  | 11       | HQ          |
| hi68          | Hsubonf        | 8  | 11       | HQ          |
| hi69          | Hflexsub       | 1  | 12       | HQ          |
| hi70          | Hsubwillsolve  | 2  | 12       | HQ          |
| hi71          | Hsubbail       | 3  | 12       | HQ          |

| Variable Name | Variable Label | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|----------------|--|----------|-------------|
|               |                | Item   | Question |             |
| hi72          | Hfreqsugg      | 4  | 12       | HQ          |
| hi73          | Hlikesubman    | 1  | 13       | HQ          |
| hi74          | Hsubmanfri     | 2  | 13       | HQ          |
| hi75          | Hsubmanfun     | 3  | 13       | HQ          |
| hi76          | Hsubmandef     | 4  | 13       | HQ          |
| hi77          | Hsubdefatt     | 5  | 13       | HQ          |
| hi78          | Hsubdefmis     | 6  | 13       | HQ          |
| hi79          | Happefft       | 7  | 13       | HQ          |
| hi80          | Happeffint     | 8  | 13       | HQ          |
| hi81          | Himpressed     | 9  | 13       | HQ          |
| hi82          | Hrespect       | 10   | 13       | HQ          |
| hi83          | Hadmire        | 11   | 13       | HQ          |
| hi84          | Hlegalpolisys  | 1  | 14       | HQ          |
| hi85          | Hmktstructure  | 2  | 14       | HQ          |
| hi86          | Hecoenviron    | 3  | 14       | HQ          |
| hi87          | Hbusiprac      | 4  | 14       | HQ          |
| hi88          | Hlanguage      | 5  | 14       | HQ          |
| hi89          | Hpowerdis      | 1  | 15       | HQ          |
| hi90          | Huncertain     | 2  | 15       | HQ          |
| hi91          | Hindividual    | 3  | 15       | HQ          |
| hi92          | Hmasculin      | 4  | 15       | HQ          |
| hi93          | Hlongterm      | 5  | 15       | HQ          |
| hi94          | Hstaffinput    | 1  | 16       | HQ          |
| hi95          | Hcoopcollab    | 2  | 16       | HQ          |
| hi96          | Hagreement     | 3  | 16       | HQ          |
| hi97          | Hsubapproach   | 4  | 16       | HQ          |
| hi98          | Hchangesub     | 5  | 16       | HQ          |
| hi99          | Hsubresp       | 6  | 16       | HQ          |
| hi100         | Hsublongterm   | 7  | 16       | HQ          |
| hi101         | Hsubvision     | 8  | 16       | HQ          |
| hi102         | Hclarity       | 9  | 16       | HQ          |
| hi103         | Hsystem        | 10   | 16       | HQ          |
| hi104         | Hintegration   | 11   | 16       | HQ          |
| hi105         | Hinnovation    | 12   | 16       | HQ          |
| hi106         | Hacct          | 13   | 16       | HQ          |
| hi107         | Haction        | 14   | 16       | HQ          |

| Variable Name | Variable Label | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|----------------|--|----------|-------------|
|               |                | Item   | Question |             |
| hi108         | Hfairness      | 15   | 16       | HQ          |
| hi109         | Hdevelop       | 16   | 16       | HQ          |
| hi110         | Hcritsub       | 1  | 17       | HQ          |
| hi111         | Hsubinterest   | 2  | 17       | HQ          |
| hi112         | Hsubtalk       | 3  | 17       | HQ          |
| hi113         | Hsubsuccess    | 4  | 17       | HQ          |
| hi114         | Hpraisesub     | 5  | 17       | HQ          |
| hi115         | Hmediacrit     | 6  | 17       | HQ          |
| hi116         | Hcommcandi     | 1  | 18       | HQ          |
| hi117         | Hsubtell       | 2  | 18       | HQ          |
| hi118         | Hresponsive    | 3  | 18       | HQ          |
| hi119         | Hcommuni       | 4  | 18       | HQ          |
| hi120         | Hinteraction   | 5  | 18       | HQ          |
| hi121         | Hcommclear     | 6  | 18       | HQ          |
| hi122         | Hcommopen      | 7  | 18       | HQ          |
| hi123         | Hinfoforcomm   | 8  | 18       | HQ          |
| hi124         | Hsubfrank      | 1  | 19       | HQ          |
| hi125         | Hpromise       | 2  | 19       | HQ          |
| hi126         | Hsubknow       | 3  | 19       | HQ          |
| hi127         | Hsubfalse      | 4  | 19       | HQ          |
| hi128         | Hsubopen       | 5  | 19       | HQ          |
| hi129         | Hsubhonest     | 6  | 19       | HQ          |
| hi130         | Hprobanswer    | 7  | 19       | HQ          |
| hi131         | Hdefsub        | 1  | 20       | HQ          |
| hi132         | Hloyal         | 2  | 20       | HQ          |
| hi133         | Hestabnews     | 3  | 20       | HQ          |
| hi134         | Hopersub       | 4  | 20       | HQ          |
| hi135         | Hdropsub       | 5  | 20       | HQ          |
| hi136         | Hnotcommit     | 6  | 20       | HQ          |
| hi137         | Hlongtminvest  | 7  | 20       | HQ          |
| hi138         | Hlongtmrela    | 8  | 20       | HQ          |
| hi139         | Hpatient       | 9  | 20       | HQ          |
| hi140         | Hdedicate      | 10   | 20       | HQ          |
| hi141         | Hcouldbetter   | 1  | 21       | HQ          |
| hi142         | Hsatisfied     | 2  | 21       | HQ          |
| hi143         | Hbest          | 3  | 21       | HQ          |

| Variable Name | Variable Label | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|----------------|--|----------|-------------|
|               |                | Item   | Question |             |
| hi144         | Hpleased       | 4  | 21       | HQ          |
| hi145         | Hclدntbetter   | 5  | 21       | HQ          |
| hi146         | Hnothappy      | 6  | 21       | HQ          |
| hi147         | Hroi           | 1  | 22       | HQ          |
| hi148         | Hprofitability | 2  | 22       | HQ          |
| hi149         | Hcashflow      | 3  | 22       | HQ          |
| hi150         | Hproductivity  | 4  | 22       | HQ          |
| hi151         | Hsalesgrowth   | 5  | 22       | HQ          |
| hi152         | Hsalesvolume   | 6  | 22       | HQ          |
| hi153         | Hnewsale       | 7  | 22       | HQ          |
| hi154         | Hcustsatisf    | 8  | 22       | HQ          |
| hi155         | Hcustretention | 9  | 22       | HQ          |
| hi156         | Hcustrrespon   | 10   | 22       | HQ          |
| hi157         | Hontime        | 11   | 22       | HQ          |
| hi158         | Hmaterial      | 12   | 22       | HQ          |
| hi159         | Hmanufact      | 13   | 22       | HQ          |
| hi160         | Hrate          | 14   | 22       | HQ          |
| hi161         | Hlabefficiency | 15   | 22       | HQ          |
| hi162         | Hnewpatent     | 16   | 22       | HQ          |
| hi163         | Hnewlaunch     | 17   | 22       | HQ          |
| hi164         | Htimetomkt     | 18   | 22       | HQ          |
| hi165         | Hempsatisf     | 19   | 22       | HQ          |
| hi166         | Hintmove       | 1  | 23.1     | HQ          |
| hi167         | Hfeelpossi     | 2  | 23.1     | HQ          |
| hi168         | Hfeelattract   | 3  | 23.1     | HQ          |
| hi169         | Hontosth       | 4  | 23.1     | HQ          |
| hi170         | Htakeon        | 1  | 23.2     | HQ          |
| hi171         | Hprefstable    | 2  | 23.2     | HQ          |
| hi172         | Hprefstim      | 3  | 23.2     | HQ          |
| hi173         | Hprefincrease  | 4  | 23.2     | HQ          |
| hi174         | Hprefnewski    | 1  | 23.3     | HQ          |
| hi175         | Hprefincrcapa  | 2  | 23.3     | HQ          |
| hi176         | Hprefnewtech   | 3  | 23.3     | HQ          |
| hi177         | Hprefbroaden   | 4  | 23.3     | HQ          |
| hi178         | Hglobalmktng   | 1  | 24.1     | HQ          |
| hi179         | Hprodglobalmk  | 2  | 24.1     | HQ          |

Appendix 3 Database Dictionary: Headquarters Data

| Variable Name | Variable Label | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|----------------|--|----------|-------------|
|               |                | Item   | Question |             |
| hi180         | Hgoglobal      | 3  | 24.1     | HQ          |
| hi181         | Hleaddevelop   | 4  | 24.1     | HQ          |
| hi182         | Hdemo          | 1  | 24.2     | HQ          |
| hi183         | Hflexibility   | 2  | 24.2     | HQ          |
| hi184         | Hharmonize     | 3  | 24.2     | HQ          |
| hi185         | Hadapt         | 4  | 24.2     | HQ          |
| hi186         | Hearlywarning  | 1  | 24.3     | HQ          |
| hi187         | Hglobalobjec   | 2  | 24.3     | HQ          |
| hi188         | Hidentify      | 3  | 24.3     | HQ          |
| hi189         | Hlearn         | 4  | 24.3     | HQ          |
| hi190         | Hcoordin       | 1  | 24.4     | HQ          |
| hi191         | Hproddevelop   | 2  | 24.4     | HQ          |
| hi192         | Hoodcountry    | 3  | 24.4     | HQ          |
| hi193         | Hanticipate    | 4  | 24.4     | HQ          |
| hi194         | Hbalance       | 5  | 24.4     | HQ          |
| hi195         | Hresponseqik   | 6  | 24.4     | HQ          |
| hi196         | Hinmyjob       | 1  | 25.1     | HQ          |
| hi197         | Hnecessary     | 2  | 25.1     | HQ          |
| hi198         | Hprojects      | 3  | 25.1     | HQ          |
| hi199         | Htakepride     | 4  | 25.1     | HQ          |
| hi200         | Hbelieve       | 5  | 25.1     | HQ          |
| hi201         | Hinterlink     | 6  | 25.1     | HQ          |
| hi202         | Halmost        | 7  | 25.1     | HQ          |
| hi203         | Hglobalvillage | 8  | 25.1     | HQ          |
| hi204         | Hdiscussion    | 9  | 25.1     | HQ          |
| hi205         | Hlife          | 10   | 25.1     | HQ          |
| hi206         | Hdisgrace      | 11   | 25.1     | HQ          |
| hi207         | H510years      | 12   | 25.1     | HQ          |
| hi208         | Hrethink       | 13   | 25.1     | HQ          |
| hi209         | Hcomfortable   | 14   | 25.1     | HQ          |
| hi210         | Hfrustrated    | 15   | 25.1     | HQ          |
| hi211         | Hcontradictors | 16   | 25.1     | HQ          |
| hi212         | Hnotime        | 17   | 25.1     | HQ          |
| hi213         | Hfulfill       | 18   | 25.1     | HQ          |
| hi214         | H5years        | 19   | 25.1     | HQ          |
| hi215         | Henjoyfood     | 1  | 25.2     | HQ          |

| Variable Name | Variable Label | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|----------------|--|----------|-------------|
|               |                | Item   | Question |             |
| hi216         | Hfindpeople    | 2  | 25.2     | HQ          |
| hi217         | Henjoywork     | 3  | 25.2     | HQ          |
| hi218         | Hanxious       | 4  | 25.2     | HQ          |
| hi219         | Hlocalnews     | 5  | 25.2     | HQ          |
| hi220         | Hsocialaffilia | 6  | 25.2     | HQ          |
| hi221         | Hmybest        | 7  | 25.2     | HQ          |
| hi222         | Hcurious       | 8  | 25.2     | HQ          |
| hi223         | Hreading       | 9  | 25.2     | HQ          |
| hi224         | Hidea          | 10   | 25.2     | HQ          |
| hi225         | Hmeetsbd       | 11   | 25.2     | HQ          |
| hi226         | Htravelling    | 12   | 25.2     | HQ          |
| hi227         | Hprofessional  | 13   | 25.2     | HQ          |
| hi228         | Hirritated     | 14   | 25.2     | HQ          |
| hi229         | Himpatient     | 15   | 25.2     | HQ          |
| hi230         | Hempathy       | 16   | 25.2     | HQ          |
| hi231         | Hprefer        | 17   | 25.2     | HQ          |
| hi232         | Hunexpected    | 18   | 25.2     | HQ          |
| hi233         | Haccomplish    | 19   | 25.2     | HQ          |
| hi234         | Hclosefriend   | 20   | 25.2     | HQ          |
| hi235         | Himportant     | 1  | 26.1     | HQ          |
| hi236         | Hinternational | 2  | 26.1     | HQ          |
| hi237         | Hhavetointerna | 3  | 26.1     | HQ          |
| hi238         | Hgrowthaim     | 4  | 26.1     | HQ          |
| hi239         | Hfounder       | 1  | 26.2     | HQ          |
| hi240         | Hmgmt          | 2  | 26.2     | HQ          |
| hi241         | Hmgmtworld     | 1  | 26.3     | HQ          |
| hi242         | Hleader        | 1  | 26.4     | HQ          |
| hi243         | Hcustomer      | 2  | 26.4     | HQ          |
| hi244         | Hdrawemploy    | 3  | 26.4     | HQ          |
| hi245         | Hsameoppo      | 4  | 26.4     | HQ          |
| hi246         | Hscanning      | 5  | 26.4     | HQ          |
| hi247         | Hselecting     | 6  | 26.4     | HQ          |
| hi248         | Hview          | 7  | 26.4     | HQ          |
| hi249         | Huniversalid   | 8  | 26.4     | HQ          |
| hi250         | Hnationalid    | 9  | 26.4     | HQ          |
| hi251         | Hworldmanda    | 1  | 27       | HQ          |



Appendix 3 Database Dictionary: Headquarters Data

| Variable Name | Variable Label | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|----------------|--|----------|-------------|
|               |                | Item   | Question |             |
| hi252         | Hworldmanper   | 2  | 27       | HQ          |
| hi253         | Hnewproduct    | 1  | 28       | HQ          |
| hi254         | Hsuccessbid    | 2  | 28       | HQ          |
| hi255         | Hnewwinterbusi | 3  | 28       | HQ          |
| hi256         | Henhancement   | 4  | 28       | HQ          |
| hi257         | Hnewcorpinvest | 5  | 28       | HQ          |
| hi258         | Hprodrandd     | 1  | 29       | HQ          |
| hi259         | Hmancapa       | 2  | 29       | HQ          |
| hi260         | Hmktgcapa      | 3  | 29       | HQ          |
| hi261         | Hmanaging      | 4  | 29       | HQ          |
| hi262         | Hinnoentre     | 5  | 29       | HQ          |
| hi263         | Hintercompe    | 1  | 30       | HQ          |
| hi264         | Hbusiact       | 2  | 30       | HQ          |
| hi265         | Hprodaware     | 3  | 30       | HQ          |
| hi266         | Hnewprod       | 4  | 30       | HQ          |
| hi267         | Hchingov       | 1  | 31       | HQ          |
| hi269         | Hforeign       | 2  | 31       | HQ          |
| hi270         | Hprivate       | 3  | 31       | HQ          |
| hi271         | Hother         | 4  | 31       | HQ          |
| hi272         | Hnumemploy     | 1  | 32       | HQ          |
| hi273         | Hemployeescale | 2  | 32       | HQ          |
| hi274         | Hestablish     | 1  | 33       | HQ          |
| hi275         | Hcorebusi      | 1  | 34       | HQ          |
| hi276         | Hindustry      | 1  | 35       | HQ          |
| hi277         | Htotalasset    | 1  | 36       | HQ          |
| hi278         | Hassetsscale   | 2  | 36       | HQ          |
| hi279         | Hrevdomop      | 1  | 37       | HQ          |
| hi280         | Hprofit        | 1  | 38       | HQ          |
| hi281         | Hsalegrowth    | 1  | 39       | HQ          |
| hi282         | Hmktsharegrow  | 1  | 40       | HQ          |
| hi283         | HyearFDI       | 1  | 41       | HQ          |
| hi284         | HFDITime       | 2  | 41       | HQ          |
| hi285         | HcountryFDI    | 1  | 42       | HQ          |
| hi286         | HamountFDI     | 1  | 43       | HQ          |
| hi287         | Hforemployee   | 1  | 45       | HQ          |
| hi288         | Hbackhomeper   | 1  | 46       | HQ          |

| Variable Name | Variable Label  | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|-----------------|--|----------|-------------|
|               |                 | Item   | Question |             |
| hi289         | Hinputhome      | 1  | 47       | HQ          |
| hi290         | Hinputforeign   | 1  | 48       | HQ          |
| hi291         | Hreturnnoninves | 1  | 49       | HQ          |
| hi292         | Hmktseeking     | 1  | 50       | HQ          |
| hi293         | Hresoseeking    | 2  | 50       | HQ          |
| hi294         | Hassetseeking   | 3  | 50       | HQ          |
| hi295         | Hacquisition    | 1  | 51       | HQ          |
| hi296         | Hgreenfield     | 2  | 51       | HQ          |
| hi298         | Hother          | 3  | 51       | HQ          |
| hi299         | Hstrategy       | 1  | 52       | HQ          |
| hi300         | Hsourceparts    | 1  | 53       | HQ          |
| hi301         | Hsourcecapabi   | 2  | 53       | HQ          |
| hi302         | Hmktng          | 3  | 53       | HQ          |
| hi303         | Hfinancialres   | 4  | 53       | HQ          |
| hi304         | Hproddesign     | 5  | 53       | HQ          |
| hi305         | Hsourcename     | 6  | 53       | HQ          |
| hi306         | Hhiringlabour   | 7  | 53       | HQ          |
| hi307         | Hmngskill       | 8  | 53       | HQ          |
| hi308         | Hother          | 9  | 53       | HQ          |
| hi309         | Hnationality    | 1  | 54       | HQ          |
| hi311         | Hgender         | 1  | 55       | HQ          |
| hi312         | Hposition       | 1  | 56       | HQ          |
| hi313         | Hage            | 1  | 57       | HQ          |
| hi314         | Heducation      | 1  | 58       | HQ          |
| hi315         | Hyearsinfirm    | 1  | 59       | HQ          |
| hi316         | Hyearspositi    | 1  | 60       | HQ          |
| hi317         | Hyearsknowsub   | 1  | 61       | HQ          |
| hi318         | Hworkedover     | 1  | 62       | HQ          |
| hi319         | Hcountrywork    | 2  | 62       | HQ          |
| hi320         | Hwork           | 3  | 62       | HQ          |
| hi321         | Hlivedover      | 1  | 63       | HQ          |
| hi322         | Hcountrylive    | 2  | 63       | HQ          |
| hi323         | Hlive           | 3  | 63       | HQ          |
| hi324         | Hstudyover      | 1  | 64       | HQ          |
| hi325         | Hcountrystudy   | 2  | 64       | HQ          |
| hi326         | Hstudy          | 3  | 64       | HQ          |

Appendix 3 Database Dictionary: Headquarters Data

| Variable Name | Variable Label | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|----------------|--|----------|-------------|
|               |                | Item   | Question |             |
| hi327         | Henglishlevel  | 1  | 65       | HQ          |
| hi329         | Hdf1           | 1  | 66       | HQ          |
| hi330         | Hdf2           | 2  | 66       | HQ          |
| hi331         | Hdf3           | 3  | 66       | HQ          |
| hi332         | Hdf4           | 4  | 66       | HQ          |
| hi333         | Hdf5           | 5  | 66       | HQ          |
| hi334         | Hdf6           | 6  | 66       | HQ          |
| hi335         | Hdf7           | 7  | 66       | HQ          |
| hi336         | Hdf8           | 8  | 66       | HQ          |
| hi337         | Hdf9           | 9  | 66       | HQ          |
| hi338         | Hdf10          | 10   | 66       | HQ          |
| hi339         | Hgainfo1       | 11   | 66       | HQ          |
| hi340         | Hgainfo2       | 12   | 66       | HQ          |
| hi341         | Hgainfo3       | 13   | 66       | HQ          |
| hi342         | Hgainfo4       | 14   | 66       | HQ          |
| hi343         | Hgainfo5       | 15   | 66       | HQ          |
| hi344         | Hgainfo6       | 16   | 66       | HQ          |
| hi345         | Hgainfo7       | 17   | 66       | HQ          |
| hi346         | Hgainfo8       | 18   | 66       | HQ          |
| hi347         | Hgainfo9       | 19   | 66       | HQ          |
| hi348         | Hgainfo10      | 20   | 66       | HQ          |
| hi349         | Hmake1         | 21   | 66       | HQ          |
| hi350         | Hmake2         | 22   | 66       | HQ          |
| hi351         | Hmake3         | 23   | 66       | HQ          |
| hi352         | Hmake4         | 24   | 66       | HQ          |
| hi353         | Hmake5         | 25   | 66       | HQ          |
| hi354         | Hmake6         | 26   | 66       | HQ          |
| hi355         | Hmake7         | 27   | 66       | HQ          |
| hi356         | Hmake8         | 28   | 66       | HQ          |
| hi357         | Hmake9         | 29   | 66       | HQ          |
| hi358         | Hmake10        | 30   | 66       | HQ          |
| hi359         | Hneed1         | 31   | 66       | HQ          |
| hi360         | Hneed2         | 32   | 66       | HQ          |
| hi361         | Hneed3         | 33   | 66       | HQ          |
| hi362         | Hneed4         | 34   | 66       | HQ          |
| hi363         | Hneed5         | 35   | 66       | HQ          |

*Appendix 3 Database Dictionary: Headquarters Data*

| Variable Name | Variable Label | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|----------------|--|----------|-------------|
|               |                | Item   | Question |             |
| hi364         | Hneed6         | 36   | 66       | HQ          |
| hi365         | Hneed7         | 37   | 66       | HQ          |
| hi366         | Hneed8         | 38   | 66       | HQ          |
| hi367         | Hneed9         | 39   | 66       | HQ          |
| hi368         | Hneed10        | 40   | 66       | HQ          |

| Variable Name | Variable Label  | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|-----------------|--|----------|-------------|
|               |                 | Item   | Question |             |
| si1           | Sfispol         | 1  | 1        | Sub         |
| si2           | Santitrust      | 2  | 1        | Sub         |
| si3           | Spolittrans     | 3  | 1        | Sub         |
| si4           | Sintelprotc     | 4  | 1        | Sub         |
| si5           | Sjudiciary      | 5  | 1        | Sub         |
| si6           | Srarity         | 6  | 1        | Sub         |
| si7           | Sinflation      | 7  | 1        | Sub         |
| si8           | Spolisysada     | 1  | 2        | Sub         |
| si9           | Sgovpoli        | 2  | 2        | Sub         |
| si10          | Stransp         | 3  | 2        | Sub         |
| si11          | Spolirisk       | 4  | 2        | Sub         |
| si12          | Sdegreeofbu     | 5  | 2        | Sub         |
| si13          | Scorruption     | 6  | 2        | Sub         |
| si14          | Slocalautho     | 7  | 2        | Sub         |
| si15          | Shqpractice     | 1  | 3        | Sub         |
| si16          | Sleadership     | 2  | 3        | Sub         |
| si17          | Sinfoanalysis   | 3  | 3        | Sub         |
| si18          | Splanning       | 4  | 3        | Sub         |
| si19          | Speople         | 5  | 3        | Sub         |
| si20          | Sprocess        | 6  | 3        | Sub         |
| si21          | Sbusireult      | 7  | 3        | Sub         |
| si22          | Scustomer       | 8  | 3        | Sub         |
| si23          | Sswilling       | 1  | 4        | Sub         |
| si24          | Sreorgbusi      | 2  | 4        | Sub         |
| si25          | Svaluesimilar   | 3  | 4        | Sub         |
| si26          | Sthebest        | 4  | 4        | Sub         |
| si27          | Shappyadopt     | 5  | 4        | Sub         |
| si28          | Scare           | 6  | 4        | Sub         |
| si29          | Sdiffcultagree  | 7  | 4        | Sub         |
| si30          | Sautonomy       | 1  | 5        | Sub         |
| si31          | Ssupervision    | 2  | 5        | Sub         |
| si32          | Sexistence      | 3  | 5        | Sub         |
| si33          | Sutilization    | 4  | 5        | Sub         |
| si34          | Semphasis       | 1  | 6        | Sub         |
| si35          | Sformalizedrule | 2  | 6        | Sub         |
| si36          | Stechstand      | 3  | 6        | Sub         |

| Variable Name | Variable Label  | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|-----------------|--|----------|-------------|
|               |                 | Item   | Question |             |
| si37          | Sstandreport    | 4  | 6        | Sub         |
| si38          | Ssharedvalue    | 1  | 7        | Sub         |
| si39          | Ssexpat         | 2  | 7        | Sub         |
| si40          | Sfreqexchange   | 3  | 7        | Sub         |
| si41          | Smgertrain      | 4  | 7        | Sub         |
| si42          | Smgerinvolv     | 5  | 7        | Sub         |
| si43          | Sprovtraining   | 1  | 8        | Sub         |
| si44          | Sstaffing       | 2  | 8        | Sub         |
| si45          | Sskilldevelop   | 3  | 8        | Sub         |
| si46          | Sevaluation     | 4  | 8        | Sub         |
| si47          | Sbroadenskill   | 5  | 8        | Sub         |
| si48          | Soverallcommit  | 6  | 8        | Sub         |
| si49          | Shqevaluate     | 1  | 9        | Sub         |
| si50          | Ssubaccount     | 2  | 9        | Sub         |
| si51          | Sconsideration  | 3  | 9        | Sub         |
| si52          | Sperform        | 4  | 9        | Sub         |
| si53          | Sfreqsubfdbk    | 5  | 9        | Sub         |
| si54          | Sevaluateresult | 1  | 10       | Sub         |
| si55          | Spay            | 2  | 10       | Sub         |
| si56          | Spreestablish   | 3  | 10       | Sub         |
| si57          | Snumerical      | 4  | 10       | Sub         |
| si58          | Sconcretresult  | 5  | 10       | Sub         |
| si59          | Sappraisal      | 6  | 10       | Sub         |
| si60          | Sslackofachive  | 7  | 10       | Sub         |
| si61          | Sknowhq         | 1  | 11       | Sub         |
| si62          | Shqwilling      | 2  | 11       | Sub         |
| si63          | Sconfideinfo    | 3  | 11       | Sub         |
| si64          | Shiredhand      | 4  | 11       | Sub         |
| si65          | Shqseekinput    | 5  | 11       | Sub         |
| si66          | Strustedassist  | 6  | 11       | Sub         |
| si67          | Slethqknow      | 7  | 11       | Sub         |
| si68          | Shqconfide      | 8  | 11       | Sub         |
| si69          | Sflexihq        | 1  | 12       | Sub         |
| si70          | Shqwillsolve    | 2  | 12       | Sub         |
| si71          | Shqbail         | 3  | 12       | Sub         |
| si72          | Sfreqsuggest    | 4  | 12       | Sub         |

Appendix 3 Database Dictionary: Subsidiary Data

| Variable Name | Variable Label  | Correspondent Item and<br>Question in the<br>Questionnaire |          | Data Source |
|---------------|-----------------|--|----------|-------------|
|               |                 | Item   | Question |             |
| si73          | Slikehqmger     | 1  | 13       | Sub         |
| si74          | Shqfriend       | 2  | 13       | Sub         |
| si75          | Sfun            | 3  | 13       | Sub         |
| si76          | Shqdefend       | 4  | 13       | Sub         |
| si77          | Shqdefendattac  | 5  | 13       | Sub         |
| si78          | Shqdefendmis    | 6  | 13       | Sub         |
| si79          | Sextraefforts   | 7  | 13       | Sub         |
| si80          | Sextrainterest  | 8  | 13       | Sub         |
| si81          | Simpressed      | 9  | 13       | Sub         |
| si82          | Srespect        | 10   | 13       | Sub         |
| si83          | Sadmire         | 11   | 13       | Sub         |
| si84          | Slegalpolitisys | 1  | 14       | Sub         |
| si85          | Smktstructure   | 2  | 14       | Sub         |
| si86          | Seconoenviron   | 3  | 14       | Sub         |
| si87          | Sbusipract      | 4  | 14       | Sub         |
| si88          | Slanguage       | 5  | 14       | Sub         |
| si89          | Spowerdist      | 1  | 15       | Sub         |
| si90          | Suncertain      | 2  | 15       | Sub         |
| si91          | Sindividual     | 3  | 15       | Sub         |
| si92          | Smasculinity    | 4  | 15       | Sub         |
| si93          | Slongterm       | 5  | 15       | Sub         |
| si94          | Sstaffinput     | 1  | 16       | Sub         |
| si95          | Scoopandcoll    | 2  | 16       | Sub         |
| si96          | Slevelagree     | 3  | 16       | Sub         |
| si97          | Ssubapproach    | 4  | 16       | Sub         |
| si98          | Schangesub      | 5  | 16       | Sub         |
| si99          | Sresponsive     | 6  | 16       | Sub         |
| si100         | Slongtermpurpo  | 7  | 16       | Sub         |
| si101         | Ssharedvision   | 8  | 16       | Sub         |
| si102         | Sclarity        | 9  | 16       | Sub         |
| si103         | Ssystematic     | 10   | 16       | Sub         |
| si104         | Sintegration    | 11   | 16       | Sub         |
| si105         | Sinnovation     | 12   | 16       | Sub         |
| si106         | Saccountability | 13   | 16       | Sub         |
| si107         | Saction         | 14   | 16       | Sub         |
| si108         | Sfairness       | 15   | 16       | Sub         |

| Variable Name | Variable Label    | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|-------------------|--|----------|-------------|
|               |                   | Item   | Question |             |
| si109         | Sdevelopwithin    | 16   | 16       | Sub         |
| si110         | Scriticizesub     | 1  | 17       | Sub         |
| si111         | Smgerinterested   | 2  | 17       | Sub         |
| si112         | Smgertalk         | 3  | 17       | Sub         |
| si113         | Ssubsuccess       | 4  | 17       | Sub         |
| si114         | Spraise           | 5  | 17       | Sub         |
| si115         | Smediacriticize   | 6  | 17       | Sub         |
| si116         | Scommcandi        | 1  | 18       | Sub         |
| si117         | Stelleverything   | 2  | 18       | Sub         |
| si118         | Sresponsivehq     | 3  | 18       | Sub         |
| si119         | Scommopen         | 4  | 18       | Sub         |
| si120         | Sinteraction      | 5  | 18       | Sub         |
| si121         | Scommclear        | 6  | 18       | Sub         |
| si122         | Sstaffopen        | 7  | 18       | Sub         |
| si123         | Sforinforcomm     | 8  | 18       | Sub         |
| si124         | Sfrank            | 1  | 19       | Sub         |
| si125         | Spromise          | 2  | 19       | Sub         |
| si126         | Shqknowledge      | 3  | 19       | Sub         |
| si127         | Shqnofalseclaim   | 4  | 19       | Sub         |
| si128         | Shqnotopen        | 5  | 19       | Sub         |
| si129         | Shqhonest         | 6  | 19       | Sub         |
| si130         | Shqhasprob        | 7  | 19       | Sub         |
| si131         | Sdefendhq         | 1  | 20       | Sub         |
| si132         | Sloyal            | 2  | 20       | Sub         |
| si133         | Snotcommitted     | 3  | 20       | Sub         |
| si134         | Swillingtocontri  | 4  | 20       | Sub         |
| si135         | Slongtermrelation | 5  | 20       | Sub         |
| si136         | Spatient          | 6  | 20       | Sub         |
| si137         | Swillingdedicate  | 7  | 20       | Sub         |
| si138         | Sshouldbebetter   | 1  | 21       | Sub         |
| si139         | Ssatisfied        | 2  | 21       | Sub         |
| si140         | Sbestrelation     | 3  | 21       | Sub         |
| si141         | Shqpleased        | 4  | 21       | Sub         |
| si142         | Sclدntbetter      | 5  | 21       | Sub         |
| si143         | Snothappy         | 6  | 21       | Sub         |
| si144         | Sroi              | 1  | 22       | Sub         |



| Variable Name | Variable Label  | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|-----------------|--|----------|-------------|
|               |                 | Item   | Question |             |
| si145         | Sprofit         | 2  | 22       | Sub         |
| si146         | Scashflow       | 3  | 22       | Sub         |
| si147         | Sproductivity   | 4  | 22       | Sub         |
| si148         | Ssalesgrowth    | 5  | 22       | Sub         |
| si149         | Ssalesvolume    | 6  | 22       | Sub         |
| si150         | Snewsales       | 7  | 22       | Sub         |
| si151         | Scussatisf      | 8  | 22       | Sub         |
| si152         | Scusretention   | 9  | 22       | Sub         |
| si153         | Scusresponse    | 10   | 22       | Sub         |
| si154         | Sontimedeliver  | 11   | 22       | Sub         |
| si155         | Smaterial       | 12   | 22       | Sub         |
| si156         | Sleadtime       | 13   | 22       | Sub         |
| si157         | Srate           | 14   | 22       | Sub         |
| si158         | Slabour         | 15   | 22       | Sub         |
| si159         | Snewpatent      | 16   | 22       | Sub         |
| si160         | Slaunch         | 17   | 22       | Sub         |
| si161         | Stimetomkt      | 18   | 22       | Sub         |
| si162         | Semploysatisf   | 19   | 22       | Sub         |
| si163         | Sreturnoninves  | 1  | 23       | Sub         |
| si164         | Sreturnonsale   | 1  | 24       | Sub         |
| si165         | Sreturnonasset  | 1  | 25       | Sub         |
| si166         | Sprofitability  | 1  | 26       | Sub         |
| si167         | Sinterested     | 1  | 27.1     | Sub         |
| si168         | Spossiblegain   | 2  | 27.1     | Sub         |
| si169         | Smostattractive | 3  | 27.1     | Sub         |
| si170         | Slikeours       | 4  | 27.1     | Sub         |
| si171         | Sincreaserev    | 1  | 27.2     | Sub         |
| si172         | Sstablemkt      | 2  | 27.2     | Sub         |
| si173         | Sstimulate      | 3  | 27.2     | Sub         |
| si174         | Sincreaseprof   | 4  | 27.2     | Sub         |
| si175         | Snewskill       | 1  | 27.3     | Sub         |
| si176         | Sincreasecapa   | 2  | 27.3     | Sub         |
| si177         | Snewtech        | 3  | 27.3     | Sub         |
| si178         | Sbroadenorgskil | 4  | 27.3     | Sub         |
| si179         | Sglobalmktng    | 1  | 28.1     | Sub         |
| si180         | Sglobalmkt      | 2  | 28.1     | Sub         |

Appendix 3 Database Dictionary: Subsidiary Data

| Variable Name | Variable Label     | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|--------------------|--|----------|-------------|
|               |                    | Item   | Question |             |
| si181         | Sgoglobal          | 3  | 28.1     | Sub         |
| si182         | Sleadglobal        | 4  | 28.1     | Sub         |
| si183         | Sdemo              | 1  | 28.2     | Sub         |
| si184         | Shaveflexi         | 2  | 28.2     | Sub         |
| si185         | Sharmonise         | 3  | 28.2     | Sub         |
| si186         | Sadapt             | 4  | 28.2     | Sub         |
| si187         | Swarning           | 1  | 28.3     | Sub         |
| si188         | Sglobalobjective   | 2  | 28.3     | Sub         |
| si189         | Sidentify          | 3  | 28.3     | Sub         |
| si190         | Slearn             | 4  | 28.3     | Sub         |
| si191         | Scoordstrategy     | 1  | 28.4     | Sub         |
| si192         | Sproddevelop       | 2  | 28.4     | Sub         |
| si193         | Scoordcountry      | 3  | 28.4     | Sub         |
| si194         | Santicipate        | 4  | 28.4     | Sub         |
| si195         | Sbalance           | 5  | 28.4     | Sub         |
| si196         | Srespondquick      | 6  | 28.4     | Sub         |
| si197         | S1year             | 1  | 29.1     | Sub         |
| si198         | Sstrategicalliance | 2  | 29.1     | Sub         |
| si199         | Sproject           | 3  | 29.1     | Sub         |
| si200         | Spride             | 4  | 29.1     | Sub         |
| si201         | S10years           | 5  | 29.1     | Sub         |
| si202         | Sinterlinked       | 6  | 29.1     | Sub         |
| si203         | Severybody         | 7  | 29.1     | Sub         |
| si204         | Sglobalvillage     | 8  | 29.1     | Sub         |
| si205         | Sdiscussion        | 9  | 29.1     | Sub         |
| si206         | Slife              | 10   | 29.1     | Sub         |
| si207         | Sdisgrace          | 11   | 29.1     | Sub         |
| si208         | S510years          | 12   | 29.1     | Sub         |
| si209         | Seasyrethink       | 13   | 29.1     | Sub         |
| si210         | Scomfortable       | 14   | 29.1     | Sub         |
| si211         | Sfrustrated        | 15   | 29.1     | Sub         |
| si212         | Scontradictors     | 16   | 29.1     | Sub         |
| si213         | Snotime            | 17   | 29.1     | Sub         |
| si214         | Sfulfilling        | 18   | 29.1     | Sub         |
| si215         | S5years            | 19   | 29.1     | Sub         |
| si216         | Sfood              | 1  | 29.2     | Sub         |

Appendix 3 Database Dictionary: Subsidiary Data

| Variable Name | Variable Label   | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|------------------|--|----------|-------------|
|               |                  | Item   | Question |             |
| si217         | Sboring          | 2  | 29.2     | Sub         |
| si218         | Sworking         | 3  | 29.2     | Sub         |
| si219         | Sanxious         | 4  | 29.2     | Sub         |
| si220         | Slocalnews       | 5  | 29.2     | Sub         |
| si221         | Ssocialaffiliate | 6  | 29.2     | Sub         |
| si222         | Smybest          | 7  | 29.2     | Sub         |
| si223         | Scurious         | 8  | 29.2     | Sub         |
| si224         | Sforeign         | 9  | 29.2     | Sub         |
| si225         | Sidea            | 10   | 29.2     | Sub         |
| si226         | Smeetsomeone     | 11   | 29.2     | Sub         |
| si227         | Stravelling      | 12   | 29.2     | Sub         |
| si228         | Sprofessional    | 13   | 29.2     | Sub         |
| si229         | Sirritated       | 14   | 29.2     | Sub         |
| si230         | Simpatient       | 15   | 29.2     | Sub         |
| si231         | Sempathy         | 16   | 29.2     | Sub         |
| si232         | Sact             | 17   | 29.2     | Sub         |
| si233         | Sunexpected      | 18   | 29.2     | Sub         |
| si234         | Saccomplish      | 19   | 29.2     | Sub         |
| si235         | Sclosefriend     | 20   | 29.2     | Sub         |
| si236         | Sinterrapid      | 1  | 30.1     | Sub         |
| si237         | Sintergrowth     | 2  | 30.1     | Sub         |
| si238         | Sintertosucceed  | 3  | 30.1     | Sub         |
| si239         | Sgrowthaiming    | 4  | 30.1     | Sub         |
| si240         | Sfounder         | 1  | 30.2     | Sub         |
| si241         | Smanager         | 2  | 30.2     | Sub         |
| si242         | Smarketplace     | 1  | 30.3     | Sub         |
| si243         | Sleaderinindus   | 1  | 30.4     | Sub         |
| si244         | Sregardcusto     | 2  | 30.4     | Sub         |
| si245         | Sdrawemployee    | 3  | 30.4     | Sub         |
| si246         | Ssameoppo        | 4  | 30.4     | Sub         |
| si247         | Sscanning        | 5  | 30.4     | Sub         |
| si248         | Sselecting       | 6  | 30.4     | Sub         |
| si249         | Sglobalarena     | 7  | 30.4     | Sub         |
| si250         | Suniversalid     | 8  | 30.4     | Sub         |
| si251         | Snationalid      | 9  | 30.4     | Sub         |
| si252         | Sworldmandate    | 1  | 31       | Sub         |

| Variable Name | Variable Label     | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|--------------------|--|----------|-------------|
|               |                    | Item   | Question |             |
| si253         | Swldmandpercen     | 2  | 31       | Sub         |
| si254         | Snewproduct        | 1  | 32       | Sub         |
| si255         | Ssuccessbid        | 2  | 32       | Sub         |
| si256         | Snewbusi           | 3  | 32       | Sub         |
| si257         | Senhancement       | 4  | 32       | Sub         |
| si258         | Snewinvest         | 5  | 32       | Sub         |
| si259         | Srandd             | 1  | 33       | Sub         |
| si260         | Smancapability     | 2  | 33       | Sub         |
| si261         | Smktingcapa        | 3  | 33       | Sub         |
| si262         | Smgnginteract      | 4  | 33       | Sub         |
| si263         | Sinnoandentre      | 5  | 33       | Sub         |
| si264         | Ssupport           | 1  | 34       | Sub         |
| si265         | Sexperience        | 2  | 34       | Sub         |
| si266         | Srecognized        | 3  | 34       | Sub         |
| si267         | Sencouragement     | 4  | 34       | Sub         |
| si268         | Spositiveattribute | 5  | 34       | Sub         |
| si269         | Shistory           | 1  | 35       | Sub         |
| si270         | Scredibility       | 2  | 35       | Sub         |
| si271         | Sceo               | 3  | 35       | Sub         |
| si272         | Sintercompetition  | 1  | 36       | Sub         |
| si273         | Sbusiact           | 2  | 36       | Sub         |
| si274         | Sproductaware      | 3  | 36       | Sub         |
| si275         | Snewprodintro      | 4  | 36       | Sub         |
| si276         | Scompetition       | 1  | 37       | Sub         |
| si277         | Spromotionalwar    | 2  | 37       | Sub         |
| si278         | Scompeoffer        | 3  | 37       | Sub         |
| si279         | Switnessdemand     | 4  | 37       | Sub         |
| si280         | Snewcustomer       | 5  | 37       | Sub         |
| si281         | Sarter             | 6  | 37       | Sub         |
| si282         | Schinese           | 1  | 38       | Sub         |
| si283         | Shostcountryfirm   | 2  | 38       | Sub         |
| si284         | Shostcountrygov    | 3  | 38       | Sub         |
| si285         | Sprivate           | 1  | 39       | Sub         |
| si286         | Sgove              | 2  | 39       | Sub         |
| si287         | Semployee          | 1  | 40       | Sub         |
| si288         | Syear              | 1  | 41       | Sub         |

Appendix 3 Database Dictionary: Subsidiary Data

| Variable Name | Variable Label  | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|-----------------|--|----------|-------------|
|               |                 | Item   | Question |             |
| si289         | SFDITime        | 2  | 41       | Sub         |
| si290         | Scorebusi       | 1  | 42       | Sub         |
| si291         | Sindustry       | 1  | 43       | Sub         |
| si292         | Scountry        | 1  | 44       | Sub         |
| si293         | SamountFDI      | 1  | 45       | Sub         |
| si294         | Smktseeking     | 1  | 46       | Sub         |
| si295         | Snaturseeking   | 2  | 46       | Sub         |
| si296         | Sassetseeking   | 3  | 46       | Sub         |
| si297         | Sacquisition    | 1  | 47       | Sub         |
| si298         | Sgreenfield     | 2  | 47       | Sub         |
| si299         | Sjointventure   | 3  | 47       | Sub         |
| si300         | Sstrategy       | 1  | 48       | Sub         |
| si301         | Scompoandparts  | 1  | 49       | Sub         |
| si302         | Sprodcapability | 2  | 49       | Sub         |
| si303         | Smarketing      | 3  | 49       | Sub         |
| si304         | Sobtainfinance  | 4  | 49       | Sub         |
| si305         | Sdesigninnovate | 5  | 49       | Sub         |
| si306         | Snaturalresour  | 6  | 49       | Sub         |
| si307         | Socallabour     | 7  | 49       | Sub         |
| si308         | Smagerskill     | 8  | 49       | Sub         |
| si309         | Ssoother        | 9  | 49       | Sub         |
| si310         | Snationality    | 1  | 50       | Sub         |
| si312         | Sposition       | 1  | 51       | Sub         |
| si313         | Sage            | 1  | 52       | Sub         |
| si314         | Seducation      | 1  | 53       | Sub         |
| si315         | Syearworked     | 1  | 54       | Sub         |
| si316         | Syearposition   | 1  | 55       | Sub         |
| si317         | Syearshqmger    | 1  | 56       | Sub         |
| si318         | Syrworkedover   | 1  | 57       | Sub         |
| si319         | Sworkedcountry  | 2  | 57       | Sub         |
| si320         | Syrlivedover    | 1  | 58       | Sub         |
| si321         | Slivedcountry   | 2  | 58       | Sub         |
| si322         | Syrstudydover   | 1  | 59       | Sub         |
| si323         | Sstudiedcountry | 2  | 59       | Sub         |
| si324         | Sstudy          | 3  | 59       | Sub         |
| si325         | Senglishlevel   | 1  | 60       | Sub         |

| Variable Name | Variable Label | Correspondent Item and Question in the Questionnaire |          | Data Source |
|---------------|----------------|--|----------|-------------|
|               |                | Item   | Question |             |
| si326         | SEnglish       | 2  | 60       | Sub         |
| si327         | Sdf1           | 1  | 61       | Sub         |
| si328         | Sdf2           | 2  | 61       | Sub         |
| si329         | Sdf3           | 3  | 61       | Sub         |
| si330         | Sdf4           | 4  | 61       | Sub         |
| si331         | Sdf5           | 5  | 61       | Sub         |
| si332         | Sdf6           | 6  | 61       | Sub         |
| si333         | Sdf7           | 7  | 61       | Sub         |
| si334         | Sdf8           | 8  | 61       | Sub         |
| si335         | Sdf9           | 9  | 61       | Sub         |
| si336         | Sdf10          | 10   | 61       | Sub         |
| si337         | Sgainfo1       | 11   | 61       | Sub         |
| si338         | Sgainfo2       | 12   | 61       | Sub         |
| si339         | Sgainfo3       | 13   | 61       | Sub         |
| si340         | Sgainfo4       | 14   | 61       | Sub         |
| si341         | Sgainfo5       | 15   | 61       | Sub         |
| si342         | Sgainfo6       | 16   | 61       | Sub         |
| si343         | Sgainfo7       | 17   | 61       | Sub         |
| si344         | Sgainfo8       | 18   | 61       | Sub         |
| si345         | Sgainfo9       | 19   | 61       | Sub         |
| si346         | Sgainfo10      | 20   | 61       | Sub         |
| si347         | Smake1         | 21   | 61       | Sub         |
| si348         | Smake2         | 22   | 61       | Sub         |
| si349         | Smake3         | 23   | 61       | Sub         |
| si350         | Smake4         | 24   | 61       | Sub         |
| si351         | Smake5         | 25   | 61       | Sub         |
| si352         | Smake6         | 26   | 61       | Sub         |
| si353         | Smake7         | 27   | 61       | Sub         |
| si354         | Smake8         | 28   | 61       | Sub         |
| si355         | Smake9         | 29   | 61       | Sub         |
| si356         | Smake10        | 30   | 61       | Sub         |
| si357         | Sneed1         | 31   | 61       | Sub         |
| si358         | Sneed2         | 32   | 61       | Sub         |
| si359         | Sneed3         | 33   | 61       | Sub         |
| si360         | Sneed4         | 34   | 61       | Sub         |
| si361         | Sneed5         | 35   | 61       | Sub         |

*Appendix 3 Database Dictionary: Subsidiary Data*

| Variable Name | Variable Label | Correspondent Item and<br>Question in the<br>Questionnaire |          | Data Source |
|---------------|----------------|--|----------|-------------|
|               |                | Item   | Question |             |
| si362         | Sneed6         | 36   | 61       | Sub         |
| si363         | Sneed7         | 37   | 61       | Sub         |
| si364         | Sneed8         | 38   | 61       | Sub         |
| si365         | Sneed9         | 39   | 61       | Sub         |
| si366         | Sneed10        | 40   | 61       | Sub         |