COMPETITIVE ADVANTAGE OF SINO-BRITISH JOINT VENTURES IN CHINA

A Study from Positioning, Resources, Partnership and Locational Perspectives

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Abstract

As a large number of MNEs have entered China and many domestic companies become increasingly competitive, Sino-foreign joint ventures are facing intensified competition in many industries in China. The review of the literature shows that few studies on Sino-foreign joint ventures focus on competitive issues, and most studies tend to examine the issues associated with partnerships. This thesis examines competitive advantage of Sino-British joint ventures in China and explains why some joint ventures have (or have not) achieved competitive advantage.

The research developed a multi-perspective framework for analysing competitive advantage of the joint venture. The framework embraces strategic positioning, the resource-based view, partnerships, and location specific factors. The empirical study investigated five cases: AstraZeneca China, ERM China, Shanghai Marconi, GSK Chongqing, and YARACO.

The case studies have revealed some salient characteristics of the joint ventures from the differing perspectives. The positioning perspective examines the alignment of activities with the positioning and fit among activities. Partnerships and locational factors are incorporated into the analysis. The analysis from the resource-based view is focused on the potential of some critical resources for competitive advantage. The resources embedded in the partnership structure and the local context are likely to be sources of sustainable competitive advantage. The synthesized analysis investigates the relationship between activities and resources of the firm and leads to some theoretical propositions about creating sustainable competitive advantage.

The research aims to make contributions to knowledge in the following respects. First, the research draws attention to competitive advantage of the joint venture as a relatively new area for the study. Second, by developing multi-perspective framework, the research can help broaden theoretical perspectives for studying the joint venture and may effect discoveries of new issues. Moreover, the research seeks to contribute to the debate about competitive advantage and strategy through synthesizing positioning and the resource-based view.

Author's Declaration

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Gloucestershire and is original except where indicated by specific reference in the text. No part of the thesis has been submitted as part of any other academic award. The thesis has not been presented to any other education institution in the United Kingdom or overseas.

Any views expressed in the thesis are those of the author and in no way represent those of the University.

Signed: Date: 11 Dec. 2006

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I dedicate this thesis to my family and friends who have always given me courage and support.

Abbreviations

ATM	Asynchronous Transfer Mode
BP	British Petroleum
CBBC	China Britain Business Council
CRAES	Chinese Research Academy of Environmental Science
DWDM	Dense Wavelength Division Multiplexing
EIA	Environmental Impact Assessment
EHS	Environment, Health and Safety
ERM	Environmental Resources Management
ERP	Enterprise Resource Planning
FDI	Foreign Direct Investment
GM	General Manager
GMP	Good Manufacturing Practice
GMS	Global Manufacture & Supply
GSK	GlaxoSmithKline
IDP	Investment Development Path
IO	Industrial Organization
IPR	Intellectual Property Right
ISA	International Strategic Alliance
ISMO	International Sales and Marketing Organization
JV	Joint Venture
MNE	Multinational Enterprise
MOFCOM	Ministry of Commerce
MOFTEC	Ministry of Foreign Trade and Economic Cooperation
MSDR	Maximum Sustainable Daily Rate
NIC	Newly Industrialized Country
OTC	Over-the-Counter
QA/QC	Quality Assurance/Quality Control
RBV	The Resource-Based View
SEPA	State Environmental Protection Administration
SEZ	Special Economic Zone
SDH	Synchronous Digital Hierarchy
SFDA	State Food and Drug Administration
SINOPEC	China Petroleum and Chemical Corporation
SOE	State Owned Enterprise
SRC	Shanghai Railway Communications Equipment Factory
SVW	Sichuan Vinylon Works

SWOT	Strengths-Weaknesses-Opportunities-Threats
TNC	Transnational Corporation
TQM	Total Quality Management
TVE	Township and Village Enterprise
UNCTAD	United Nations Conference on Trade and Development
YARACO	Yangtze River Acetyls Co., Ltd.
WFOE	Wholly Foreign Owned Enterprise
WTO	The World Trade Organization

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Chapter 1
Introduction

Research Background

The last two decades' economic reforms and opening up to the outside world have reshaped the economic landscape in China. In the 1980s Volkswagen set up a joint venture in Shanghai – Shanghai Volkswagen. During that time Volkswagen hardly saw any major car competitors in the country except Chrysler, an American company. Chrysler might not be a competitor since it was only making jeeps in Beijing. As for Chinese domestic car manufacturers, they were technologically backward and their production scales were small. Government bureaus, state-owned enterprises, and taxi companies were largely buyers. Looking at the market today, one cannot miss the presence of so many global car manufacturers in China, such as GM, Volkswagen, Toyota, Hyundai, DaimerChrysler, BMW, Peugeot, and Citroën. These MNEs have joint ventures in many parts of the country. Some other foreign car makers, if not engaged in production, have opened sales offices in many big cities. As for customers, private car owners have become the main driving force of the market. China is now Volkswagen's second most important market after Germany.

For Volkswagen, the landscape is now apparently different from the one it saw over a decade ago. Thanks to its early establishment, Volkswagen had seized the lion's share of the car market in China. But the last three years saw its market share be squeezed from over 40% to over 30% and 20% (China Daily, 2005, March 17; McGregor, 2004, July 12). The company is now struggling with the sales, facing a choice between making profits and maintaining or regaining the market share. To win the fierce competition from other world-class manufacturers seems to be the key issue of the company rather than understand the market or tackle bureaucratic obstacles like in the early period. Along with the entry of many MNEs, Chinese manufacturers have been upgrading technology and improving their production, and many of them have aligned themselves with foreign car multinationals. They become increasingly competitive.

What is happening in the Chinese auto industry is not a unique phenomenon, but it epitomizes many other industries in China, in particular, the manufacturing sector. For example, many world-class pharmaceutical companies are operating in China. GSK, AstraZeneca, Johnson & Johnson, Merck, and Roche are competing with each other one way or another, and simultaneously competing with some Chinese pharmaceutical companies. In many other industries, from household goods to semiconductors and from cosmetics to mobile phones, there are many well-known global firms operating across the country. Marconi,[1] a British telecommunications company, encounters many MNEs in China such as Lucent Technologies, Siemens, Alcatel and Nortel Networks, and some domestic companies as well such as Huawei and ZTE. What is intriguing about the market is that the worldwide competition among many MNEs seems to have become a reality overnight in this new market after the past absence. And increasingly, Chinese domestic firms are becoming part of the game. In such an environment, the Chinese market appears to be no easier than any other major markets. In case of price war, industry overcapacity, or government measures to rein in investment, there could be even more competitive pressure on the firm. As a result, profit margins could be squeezed and firms could easily incur loss. For those MNEs that primarily operate through joint ventures as well as those domestic firms that have joint ventures with MNEs, how to manage joint ventures in China can be strategically important for their performance and long-term being.

Sino-British Joint Ventures in China

Since China began the economic reforms in 1979 and adopted the "Open Door" policy, it has received large amounts of foreign direct investment (FDI). In recent years, it has become the largest recipient of FDI in the world with annual FDI surpassing US$50 billion. As China has joined the World Trade Organization (WTO) and is expected to maintain its fast economic growth, it will continue to attract significant amounts of foreign investment. In the past two decades, a large number of Sino-foreign joint ventures were formed, and the joint venture has become a major form of investment used by overseas firms. By the end of year 2002, foreign investment in equity joint ventures accounted for 43% of total FDI in China (Invest in China, MOFCOM, 2003, July 10). Although there is an increase of wholly foreign owned enterprises (WFOE) in recent years, the joint venture still remains as an important form of investment. Amongst the investing countries and regions (including

Hong Kong, Taiwan and Virgin Islands), the UK ranks eighth in terms of FDI by value, and is the biggest European investor in China. By the end of 2004, British businesses have made accumulative FDI of over US$12.2 billion in China (Invest in China, MOFCOM, 2005, October 19).

A large number of Sino-British joint ventures have been formed in China over the last two decades. The exact number is unknown, but various sources of information indicate it could be as high as 3000 (Hewitt, 2004, January 7). Of those joint ventures, the investing parties can be giant MNEs like BP and Shell (Anglo-Dutch), medium sized companies, or small private businesses consisting of a dozen employees. Some joint ventures may have ceased the operation; some may have never entered the operation after the registration; some may have been restructured into wholly owned enterprises. Of course, a large number of Sino-British joint ventures have been operating and continue to operate, and in some cases, the parent firms made more investments and set up several joint ventures in the course of the operation. China is certainly a very attractive market but in some ways a crowded market. China Britain Business Council (CBBC), which advises and facilitates British companies' doing business in China, frequently points out new opportunities for investment, such as health care market, medical equipment, environmental protection, railways construction, and so on. Despite the intense competition and many challenges, British companies have compelling reasons to invest in this market just as many MNEs from Germany, the Netherlands, France, the US and Japan. To know how the Sino-British joint venture is actually doing in China is of great interest to many British and Chinese companies.

The joint venture as a form of strategic alliances attracts a great deal of interest from scholars who study foreign direct investment in China. Most literature is concerned with Sino-foreign joint ventures and treats foreign partners as a general category rather than distinguish them by their country of origin. A review of literature indicates that the studies that have a country specific focus tend to concentrate on joint ventures with American and Japanese partners. It is recognized that there can be differences in joint ventures due to the national origin of partners. For example, the country of origin can be one of the factors to explain ownership structures of the joint venture. It is also relevant to the geographical dispersion of some joint ventures in China. For

instance, Japanese companies' joint ventures tended to concentrate in northeast China, while companies from Hong Kong and Taiwan were more likely to form joint ventures in Guangdong and Fujian provinces in south China. Different nationalities and cultural backgrounds can also have a bearing on the management of the joint venture. Therefore, the studies on Sino-British joint ventures could help shed light on some characteristics that may not be apparent in Chinese firms' joint ventures with other foreign partners, but evident in joint ventures with British partners.

The Research Topic, Aim and Objectives

Competition is not new for joint ventures in many parts of the world. China may typify this phenomenon to a great extent, with some industries showing intensifying competitive features. The competitive issue of joint ventures deserves great attention from both business executives and academia. However, it appears that this issue has not been given sufficient attention in the business studies. Hence, studying how joint ventures are competing in China can be a worthwhile attempt for the research on joint ventures. Traditionally, the joint venture is studied under various themes related to partnerships. This is quite natural as the joint venture itself consists of two partners and the interfirm relationship is the most salient characteristic. The common themes of the research include partner selection and formation of the joint venture, ownership and control, performance, technology transfer, management within the joint venture, cooperative strategy, cross culture issues, and so on. What is overlooked here is how the joint venture is operating in the marketplace and interacting with other firms in the industry as a single business entity. Changing to this perspective can help redirect focus to competition and competitive strategy of the joint venture. The new perspective does not intend to deny or ignore the cooperative nature of the joint venture. Acknowledging and accommodating the partnership should always be welcome if it can shed some light on the competitive issue. In this context, the research presented in this thesis is to fulfil the need of studying the competitive issue of the joint venture.

The research will examine competitive advantage of Sino-British joint ventures in China and their strategies used to acquire competitive advantage. The topic concerns a number of important aspects: competitive advantage and strategy, partnership, and

host country conditions. The main issues to be investigated in the research can be summarized as the following questions:

1. How does the Sino-British joint venture operate in China?
2. How does the Sino-British joint venture exploit location specific advantages in China such as local economic and legal conditions to help achieve competitive advantage?
3. How does the partnership influence the joint venture acquiring competitive advantage?
4. Why has a particular Sino-British joint venture gained competitive advantage and achieved superior performance in China, and/or why has a particular Sino-British joint venture not?
5. What are the commonalities among those joint ventures that have competitive success and/or among those that have competitive failure?

By searching answers to the above questions, the research aims to explain competitive advantage and strategy of Sino-British joint ventures in China and to advance the understanding of joint ventures and their competitive strategy. More specifically, the research seeks to achieve the following objectives:

1. To analyse sources of competitive advantage of the joint venture in China;
2. To identify and assess partnership and country specific factors in relation to competitive advantage of the joint venture;
3. To construct a framework (multi-perspectives) for competitive advantage of the joint venture and to advance the study of Sino-British (foreign) joint ventures in China;
4. To illustrate competitive strategy of Sino-British joint ventures and to provide managerial prescriptions for managing joint ventures in China.

The Research Project Undertaken

The research on competitive advantage of Sino-British joint ventures is concerned with the positioning of the joint venture in the industry and the alignment of resources within the joint venture. On the basis of the literature study, the research undertakes 5 case studies. The cases are selected as being typical Sino-British joint ventures. The

research project seeks to make original contributions to knowledge in three areas. Firstly, as discussed above, the research draws attention to the competitive issue of joint ventures in China. As this theme is under-researched in spite of some awareness. the research can shed light on this relatively new topic of the joint venture. Secondly. the research is to develop a multi-perspective framework, embracing positioning in the industry, resources, joint venture partnerships, and locational factors to give an overarching view of competitive advantage of the Sino-British joint venture. The research thus aims to broaden the theoretical perspectives for studying joint ventures. Thirdly, the research also seeks to extend or build theories from emergent issues in the case studies and to contribute to theoretical debates concerning joint ventures and competitive strategy.

The Structure of the Thesis

This thesis has 4 parts following the introduction. Figure 1.1 has outlined the structure of the thesis. Part 1 covers the literature review. Chapter 2 will discuss theoretical issues of international production and location specific factors. This chapter will focus on a useful framework of host country determinants of FDI. Chapter 3 will review some major works of strategic alliances and joint ventures. Alliances theories and cooperative strategy are the major topics for discussion. Chapter 4 will examine the literature concerning competitive advantage and strategy. It will focus on the positioning perspective and the resource-based view (RBV). Chapter 5 will review some important works of Sino-foreign joint ventures. The review is largely based on empirical studies. Part 1 aims to present the relevant literature and to provide a theoretical basis for the research on Sino-British joint ventures.

Part 2 is about methodology. Chapter 6 will address the theoretical rationale and conceptual framework of the research. Chapter 7 will explain the research strategy. focusing on the design of the multiple case studies and techniques used in the case analyses. The chapter will also discuss some methodological issues relevant to the case studies of competitive advantage.

Part 3 will present the case data. Chapters 8 to 12 will report 5 cases: AstraZeneca China, ERM China, Shanghai Marconi, GSK Chongqing, and YARACO.

Part 4 covers the case analyses. Chapter 13 will analyse competitive advantage of the 5 cases independently and examine distinctive characteristics of each joint venture. Chapter 14 will then make comparisons of those five cases and present the findings of the multiple case studies. Chapter 15 will revisit the research framework and discuss some emergent theoretical issues in the case studies. The chapter will explore theoretical implications of the case studies for the joint venture and competitive strategy.

Finally, Chapter 16 will draw conclusions of the research. This chapter will also address contributions to knowledge, limitations of the research, and future agendas.

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[1] Marconi plc. was taken over by Ericsson in October, 2005.

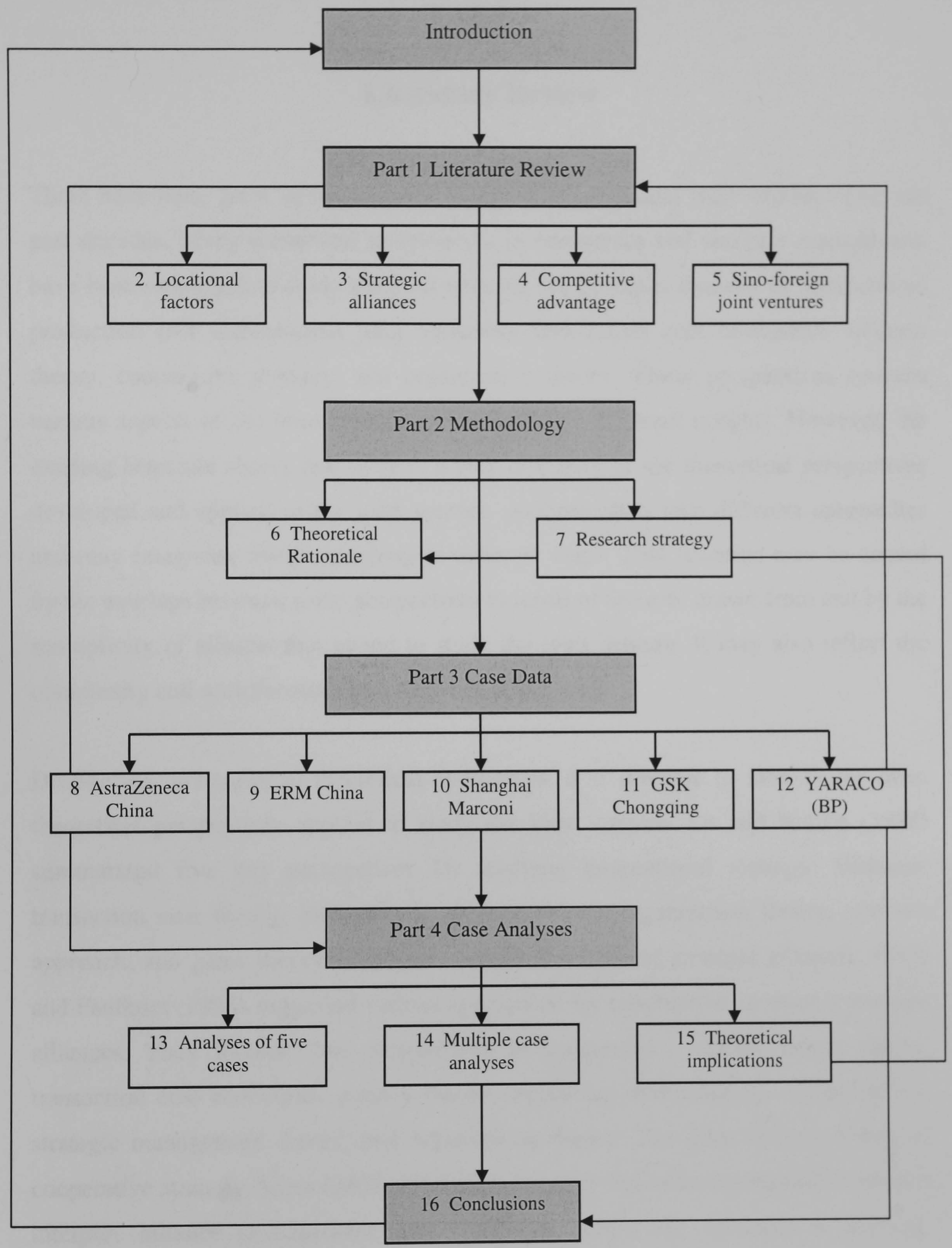

Figure 1.1 Thesis Structure

PART 1

Literature Review

There have been great advances in the study of international joint ventures over the past decades. Many theoretical perspectives in economics and strategic management have been employed to study the joint venture, for example, theories of international production (for international joint ventures), transaction cost economics, alliance theory, cooperative strategy, and organization theory. These perspectives concern various aspects of the joint venture and can provide different insights. However, the existing literature shows that there is a lack of clarity of the theoretical perspectives developed and applied to the joint venture. Authors often take different approaches and may categorize the perspectives in different ways. This situation may be caused by the overlaps between some perspectives in terms of theories drawn from and by the multiplicity of schools that intend to study the joint venture. It may also reflect the complexity and multifaceted characteristics of the topic.

Despite the ambiguity in theoretical approaches, it is possible to identify the main theoretical perspectives applied to study the joint venture. Lu and Burton (1998) summarized five key perspectives for studying international strategic alliances: transaction cost theory, international strategy theory, organization theory, network approach, and game theory. The joint venture is a form of strategic alliances. Child and Faulkner (1998) suggested various approaches for cooperative strategy to manage alliances. They include four perspectives in economics - market power theory, transaction cost economics, agency theory, increasing return theory - game theory, strategic management theory, and organization theory. The joint venture is part of cooperative strategy. Stiles (2001) identified six major theoretical perspectives used to interpret alliance management and behaviour. They are strategic positioning, international business theory, negotiations theory, transaction cost theory, game theory, and resource dependency theory. Other authors such as Varadarajan and Cunningham (1995) and Osborn and Hagedoorn (1997) have also suggested, *inter alia*, interorganizational field perspective for strategic alliances and joint ventures.

The research on Sino-British joint ventures in China is to investigate competitive advantage and strategy of joint ventures in China. This topic concerns a number of key dimensions. First of all, joint ventures can be considered as a means of sharing and transferring skills or resources between the partners, and forming an alliance may also help increase the market power of the partner firms. Taking this perspective allows the research to focus on competitive issues of the joint venture. Secondly, joint ventures are a form of strategic alliances. They are interfirm cooperation agreements to meet mutually agreed goals. In this respect, partner cooperation is an important element for the study. Thirdly, the subject of Sino-British joint ventures has an international dimension. Host country conditions can be important factors for the joint venture in the study. Salient characteristics of the economic reforms and management practices in China may influence Sino-British joint ventures' strategy, operations, and performance. These basic presumptions can help inform the relevance of the diverse perspectives to the research theme. Hence, to explain competitive advantage and strategy of Sino-British joint ventures may entail international strategy (or international business) theory, market power (positioning) theory, interorganizational field perspective, and strategic management theory.

It is worth noting that the application of specific theoretical perspectives for the research will depend on a close examination of the theories as well as the research strategy. The application of the theories will be further discussed in Chapter 6 on methodology. In the light of those theses about Sino-British joint ventures, Part 1 will examine four areas as building blocks of the literature: international production and host country conditions, strategic alliances and interfirm cooperation, competitive advantage and strategy, and Sino-foreign joint ventures.

International Production and Host Country Conditions

Chapter 2 will outline the relevant literature on international production and business. From the perspective of international business theory, the firm that establishes an international strategic alliance may gain competitive advantage in international markets. The theories of MNEs and transnational corporations (TNCs) can be used to study response strategies of a firm to the global environment. Among various forms of international production, joint ventures are one of the strategies adopted by MNEs to enter the foreign market. Theory of FDI, in particular, the host country determinants

of FDI can help study the country factors that may influence the operations and the strategy of joint ventures.

Strategic Alliances and Interfirm Cooperation

Chapter 3 will discuss strategic alliances and interfirm relationships. It will examine strategic alliances from a few major theoretical perspectives including transaction cost theory, international strategy theory, the RBV, and strategic management theory. These perspectives can shed light on different aspects of alliances, such as motives, formation, compatibility of partners, and interfirm relationship. As interfirm relationships are the most important characteristics of alliances and joint ventures, this chapter will further discuss the issue of partnerships within alliances. The partnership can be examined from both strategic positioning and the resource-based perspective.

Competitive Advantage and Strategy

Chapter 4 will address the issues of competitive advantage and strategy. Competition is a central topic for business strategy. Scholars may have different understandings of competitive advantage. Some of them believe that improving manufacturing and operational efficiencies such as benchmarking, TQM, and time-based competition are critical for success. Some of them claim that companies must nurture a few core competencies to stay ahead of rivals. Some of them suggest other approaches such as aggressive outsourcing, forming alliances, and flexible and rapid response to changes. Amongst various theories, strategic positioning and the RBV are the most influential perspectives for modern management. They represent different approaches to competitive strategy and can be usefully employed to explain competitiveness and formulate strategies. Chapter 4 will examine these two perspectives for competitive advantage.

Sino-Foreign Joint Ventures in China

Chapter 5 will review some important works on Sino-foreign joint ventures in China. The chapter will cover a number of topics that are often discussed in the literature such as performance, partnership, and ownership and control. The literature mostly reports empirical studies of joint ventures in China. As the empirical studies are usually underpinned by theories, this chapter can involve various perspectives taken by the studies. The chapter will also address some relevant issues of the business

context in China, for instance, the market, institutions, competition, and regional barriers.

Part 1 has three major objectives. First, the literature review is to identify the literature related to Sino-British joint ventures in a wide context of the theoretical perspectives of economics, management studies, and other disciplines of social sciences, and to explain the relevant literature in the proposed key areas – international production, strategic alliances and interfirm cooperation, competitive advantage and strategy, and host country conditions in China. Second, it aims to discuss and critically assess the contributions of the literature and to explore theoretical issues arising from debates. The final objective is to provide a theoretical basis for the research and to help develop a research framework which can contribute to the understanding of competitive advantage and strategy of Sino-British joint ventures.

Chapter 2

International Production and Host Country Determinants of Foreign Direct Investment

FDI can be studied in the context of international production. The literature on international production covers the theories of the MNE or the transnational corporation (TNC), FDI, and international trade. The MNE and the TNC refer to essentially the same entity. The term "multinational" suggests a firm associated with many nations; "transnational" suggests a firm which crosses national borders (Pitelis & Sugden, 1991). Various theoretical perspectives have been applied to international production. Cantwell (1991) notes that the main theories can be grouped under four headings. The first two are based on alternative theories of the firm - market power approach and internalization. The third group are macroeconomic developmental approach, and the fourth are based on the analysis of competitive international industries. They constitute four alternative theoretical frameworks, with approaches within each sharing certain common theoretical foundations. A general framework developed by John Dunning, is known as the eclectic paradigm. It incorporates elements from all four types of approaches (Cantwell, 1991), and can explain the levels and patterns of international production (Dunning, 1993 & 2001a).

This part of the literature review will concentrate on the theories which are most relevant to explaining the factors associated with foreign investment and host country conditions. Amongst those theories, the internalization approach has usefully been employed in studying the MNE and foreign investment, in particular, the *raison d'être* of the MNE and FDI. The internalization theory also serves as part of the theoretical foundation of the eclectic paradigm. As a general framework, the eclectic paradigm can incorporate locational factors into the analysis, and thus it extends to the host country conditions for FDI. In the following part, we will start from a simple model of MNEs, and then review the major theories of the MNE. Afterwards we will move to the eclectic paradigm and the host country determinants of FDI – an analytical framework employed by the United Nations Conference on Trade and Development (UNCTAD). Finally, we will highlight some salient issues of location specific factors in the current world economy, especially those which developing countries are facing.

Multinational Enterprises and FDI

From the viewpoint of the MNE. the strategic and tactical planning stems from an assessment of both environmental and internal factors (Rugman *et al.*, 1986). It is best recognized that most environmental factors are beyond the control of managers and the MNE. There are at least two sets of environmental variables of concern to the MNE: those that occur in the home and in relevant host nations in which the MNE operates. Environmental variables are often referred to as country specific advantages or locational specific advantages (factors). They can be categorized into three types: economic, noneconomic, and governmental. The internal factors are those within the control of the MNE. These internal or company variables are determined by management. They include labour, capital, technology, and other factor inputs. These internal variables are needed to build a theory of the MNE. They are also called firm specific advantages, or ownership advantages (factors). These two sets of environmental and internal variables have been discussed by various authors, for example, Caves, UNCTAD, Bartlett & Ghoshal, Rugman, and Dunning. To engage in strategic planning, the MNE must consider both environmental and company factors. The key decision to be made is the decision to enter foreign markets and the appropriate choice of entry mode with which it will serve these markets. The tactical planning dealing with short-run operational and managerial issues can also be complicated by cross-border production flows, labour and capital flows, and the regulations imposed by home and host governments. Environmental and company variables are two key sets of factors to be assessed when making decisions. In this simple model of the MNE, MNEs are considered to respond to the economic, political, and cultural environments of nations rather than determine them (Rugman, Lecraw & Booth, 1986).

The MNE is defined as an enterprise that controls and manages production establishments located in at least two countries. The MNE is essentially a multiplant firm (Caves, 1996). From the perspective of transaction cost theory, to explain the existence of the MNE requires finding the boundary between the allocation of resources in either an internal market or an external market (the arm's length market). According to Caves, multiplant firms are numerous and diverse, and they can be

divided into three groups: (1) horizontally integrated multiplant firms, (2) vertically integrated multiplant firms, and (3) diversified multiplant firms.

The transaction cost approach asserts that horizontal MNEs will exist only if the plants they control and operate attain lower costs or higher revenue productivity than the same plants under separate managements. The rise of this net-revenue advantage may be attributed to minimizing costs of production, but more importantly to the complementary nonproduction activities of the firm. The MNE has firm specific advantages (or proprietary assets), which explain the nonproduction bases for the firm. These assets can be in the form of knowledge, management skills, patents or trademarks, or firm's ability to innovate. While the productive use of these assets is not tightly tied to single physical sites or even nations, the arm's-length transfers of them between firms are prone to market failures (market imperfection). The market failures can be identified mainly as types of the public goods nature of knowledge – intangible assets tend to be underprovided or priced inefficiently – and the information impactedness – uncertainty about the information and opportunism. The transaction cost theory can also enrich the theory of vertical integration. Switching costs and durable, specialized assets discourage spot transactions and favour other modes such as long-term arrangements. The parties prefer vertical integration if long-term contracts encounter higher contracting, monitoring and haggling costs. The central proposition is that the vertically integrated firms internalize intermediate product markets, which fail to operate efficiently. The internalization approach embraces once again the concepts of uncertainty and information impactedness in explaining vertical foreign investment, especially in the natural resource sector. Diversified foreign investments suggest that foreign investment serves as a means of spreading risks to the firm. On the one hand, individual foreign investment might be regarded as particularly risky, due to certain host country conditions and the difficulties in obtaining information on the host country market. On the other hand, the diversified MNE can enjoy diversification gains from making investments in several national markets. Diversified foreign investments can also be explained in part by the parent's efforts to utilize its diverse R&D discoveries – proprietary assets useful outside its base industry.

Buckley and Casson (1976) have developed a theory to explain the MNE. They focused on the correlation, as evidenced by statistical data, between the degree of multinationality and the level of technology both across industries and within the same industries. The authors aimed to provide a theory of the MNE sufficiently powerful to afford long-term projections of the future growth and structure of MNEs (Buckley & Casson, 1976). Employing Coase's transaction cost theory of the firm (1937), they analysed the market for technology and explained internalization as a solution to the market failure. Technology is an intangible intermediate global public good with an imperfect market. Internalization occurs so long as the cost of internalization is less than the cost of using the market. The internalization of this market creates the link between innovation and multinational production. The authors distinguished three types of transaction costs associated with managing an internal market across national borders, which they called communication costs. A firm becomes a multinational as it internalizes the markets for its knowledge-based assets in multiple locations.

Buckley and Casson (2003) point out that multinationals have not increased their monopoly power since the 1970s in the way that some critics had predicted. The cost of internalization, along with the pressure from host governments and from multinationals' own shareholders, can lead to greater use of licensing, franchising, subcontracting and other contractual alternatives to FDI. A suitable framework of trust and protection of intellectual property rights can also encourage firms to license and share technologies and thus to achieve efficiencies.

Following Buckley and Casson (1976), Henisz (2003) has made an extension of their theory of the MNE. He examined MNEs' ability to manage country specific factors – institutional idiosyncrasies – to explain the MNE in a number of industries characterized by substantial government involvement due to social and environmental values. He argues that in the electricity generation sector and also in other industries, such as water, finance, natural resource extraction and transportation, MNEs' ability to manage institutional idiosyncrasies of the host country rather than their innovative capabilities, can explain their FDI activities. MNEs may enjoy the internal exploitation of knowledge regarding the management of institutional idiosyncrasies. These capabilities would be difficult to exploit through third-party transactions.

The market imperfections are the fundamental reason for the internalization of markets by the MNE. FDI seeks to improve upon the market as a transactional mechanism. The replacement or internalization of such markets by hierarchies leads to an extension of the boundaries of the firm (Dunning, 1993).

While the internalization economists acknowledged that country specific factors might influence the form and extent of market failure, and accepted that location specific variables would largely determine where the value added activities of MNEs would take place, the main focus of their attention was directed to identifying and evaluating the kinds of market failure promoting FDI (Dunning, 2001b). The internalization theory of the MNE is primarily interested in firm specific assets rather than country specific factors in explaining FDI such as the need to internalize property rights in knowledge (Rugman *et al.*, 1986). The development of international business study saw an attempt to offer a more integrated approach on the "why", "where", and "how" of such activities. Most noticeably, the eclectic paradigm asserts the existence of three necessary conditions for international production – ownership advantages (O), locational advantages (L), and internalization advantages (I).

Eclectic Paradigm

According to the eclectic paradigm – lately explained by Dunning (2001a) – the extent, geography and industrial composition of foreign production undertaken by MNEs is determined by the interaction of those three sets of interdependent variables, i.e. OLI (Dunning, 2001a). The competitive advantages of the enterprises seeking to engage in FDI are specific to the ownership of the investing enterprises, i.e. their ownership specific advantages. The greater the competitive advantages of the investing firms, the more they are likely to be able to engage in foreign production, relative to those of other firms, particularly their foreign competitors. O specific advantages can be property rights and/or intangible assets advantages, innovation capacity, management skills, know-how, and advantages of common governance, such as economies of scope, specialization, favoured access to resources, operational flexibility of production shifting, etc. (Dunning, 1993). Scholars have identified four main types of foreign-based MNE activities. They are categorized as market seeking, resource seeking, efficiency seeking, and strategic asset seeking FDI (UNCTAD, 1998; Narula & Dunning, 2000; Dunning, 2001a). One of the key characteristics of

the last two decades has been the increasing significance of FDI based on the possession of, or need to acquire dynamic ownership advantages, which are of efficiency seeking and strategic asset seeking types. The recent literature has thus given more attention to the firm's long-term strategy towards asset accumulation, learning capabilities, possession and deployment of knowledge-based assets.

Dunning (2001a & 2001c) has asserted the importance of the locational advantages of countries as a key determinant of the foreign production of MNEs. The more the immobile, natural or created endowments, which firms need to use jointly with their own competitive advantages, favour a presence in a foreign location, the more the firms will likely choose to augment or exploit their ownership specific advantages by engaging in FDI. Various factors affecting locational choices include, *inter alia*, demand and supply variables, price of created assets, government introduced incentives, infrastructure, and location specific risk. The research has also embraced new locational variables, such as exchange rate and political risks, the regulations and policies of supranational entities, and cultural differences. In the knowledge-based globalizing economy, firms need to take account not only of the traditional factor endowments, but also of knowledge accumulation, interactive learning, spatially related innovation, and the increasing dispersion of created assets. A country or region's comparative advantage, which has been traditionally based on its possession of a unique set of immobile natural resources and capabilities, is now more geared to its ability to offer a distinctive and non-imitable set of location bound created assets. Both nation states and sub-national authorities are aware of the need to provide the appropriate economic and social infrastructure to facilitate value-adding activities through FDI. Research on the kind of L advantages is most likely to explain the "where" of international production taking place. The extent to which the acquired assets – together with the business environment – advance the competitiveness and strategic trajectories of the investing firms, is the critical locational determinant.

Given O specific advantages and L specific advantages, whether value-adding activities are undertaken by MNEs is explained by the internalization of cross-border markets. Orthodox internalization theory asserts that the firm will engage in FDI if the transaction costs of using external arm's length markets exceed those incurred by internal hierarchies (as we explained the MNE theory in the previous part). The

eclectic paradigm, like internalization theory, states that the greater the net benefits of internalizing the cross-border markets (i.e. to protect against or exploit market failure), the more likely a firm will prefer to engage in foreign production itself, rather than license the right to use the intangible assets transferred. The propensity of the firm to engage in foreign production will be the most pronounced the greater its ownership advantages relative to other firms, and the more it finds it profitable to create and add value to these advantages itself from a foreign location. Dunning (2001a) points out some criticisms that orthodox internalization theory has received. Internalization theory ignores other functions which a firm may perform, other than those which are transaction related. Many cross-border M&As are undertaken to gain new resources or to access to new capabilities and markets, or to gain market power. Such objectives fit less comfortably with internalization theory. Orthodox internalization theory is also a static theory, and gives little guidance as to how best a firm may organize its activities to create future assets. The role of innovation in the contemporary global economy, and the need to explore resources and capabilities outside their home countries, is requiring a reappraisal of the rationale for extending the boundaries of a firm. Because of the concerns of the efficiency of asset exploitation, internalization theory focuses more on the optimal mode of coordinating the use of existing resources and capabilities, rather than on that of upgrading such resources and capabilities by innovating and other means. As it is embedded in a number of economics and business theories, the eclectic paradigm can offer a comprehensive explanation of MNE business activities. It has acknowledged that firms may seek to protect or advance their global competitive advantages through FDI (Dunning, 1993, 2001a, 2001b & 2001c), and has also given attention to, among other things, the dynamic competitiveness and upgrading of the core competencies of firms (Dunning, 2001a, 2001b & 2001c).

The eclectic paradigm further asserts that the precise configuration of the OLI parameters facing any particular firm and the response of the firm to that configuration are strongly contextual. In particular, they will reflect the economic and political features of home and host countries, the industry and the nature of the value-added activities in which the firms are engaged, the characteristics of individual investing firms including their objectives and strategies, and the nature and motives of FDI (Dunning, 2001a & 2001c). In comparison with other MNE theories such as

simple model and internalization theory, in which environmental variables are treated exogenous to the firm (Rugman *et al.*, 1986), the eclectic paradigm asserts the role of locational factors as to determine whether the firm will choose to invest home or abroad given the O and I advantages. The OLI triad of variables may be likened as a three-legged stool, with each leg is supportive of the other (Dunning, 1998a & 2001a).

Host Country Determinants of FDI

To appreciate locational factors in relation to FDI, it is necessary to understand how firms choose investment locations. Based on the eclectic paradigm, the UNCTAD has set out a framework of the location specific (host country) determinants of FDI flows and stocks. Figure 2.1 exhibits this framework. The host country determinants of FDI include policy framework, economic determinants, and business facilitation (UNCTAD, 1998 & 2003). The UNCTAD suggests that as direct investment abroad is a complex venture, there are many host country factors involved in deciding where an FDI project should be located and it is often difficult to pinpoint the most decisive factor. The relative importance of different location specific determinants depends on at least four aspects of investment: the motive for investment (e.g. resource seeking or market seeking), the type of investment (e.g. new or sequential FDI), the sector of investment, and the size of investors. The relative importance of different determinants also changes as the economic environment evolves over time. It is therefore possible that a set of host country determinants that explains FDI in a particular country changes. At the same time, there are also location specific determinants that remain constant. Firms also see locational determinants in their interaction with ownership specific and internalization advantages in the broader context of their corporate strategies. Different motives, for example, can translate into different location patterns, depending on the investor's strategy. Thus, host countries need not only to understand the motives of potential investors but also to understand their strategies.

According to the UNCTAD (1996, 1997 & 1998), core FDI policies consist of rules and regulations governing the entry and operations of foreign investors, the standards of treatment according to them, and the functioning of the markets within which they operate. Complementing core FDI policies are other policies that affect foreign investors' locational decisions directly or indirectly, by influencing the effectiveness

of FDI policies. They include trade policy and privatization policy. Among policy measures, membership in a regional integration framework can have a direct effect on FDI as this can change a key economic determinant: market size and perhaps market growth. UNCTAD (1998) states that a multilateral framework on investment could

Host country determinants
1. Policy framework for FDI ▪ economic, political and social stability ▪ rules regarding entry and operatons ▪ standards of treatment of foreign affliates ▪ policies on functioning and structure of markets (especially competition and M&A policies) ▪ international agreements on FDI ▪ privatization policy ▪ trade policy (tariffs and NBTs) and coherence of FDI and trade policies ▪ tax policy 2. Economic determinants 3. Business facilitation ▪ investment promotion (including image-building and investment-facilitation services) ▪ investment incentives ▪ hassle costs (related to corruption, administrative efficiency, etc.) ▪ social amenities (bilingual schools, quality of life, etc.) ▪ after-investment services

Type of FDI classified by motives of MNEs	**Principal economic determinants in host countries**
A. Market seeking	▪ market size and per capita income ▪ market growth ▪ access to regional and global markets ▪ country-specific consumer preferences ▪ structure of markets
B. Resource seeking	▪ raw materials ▪ low-cost unskilled labour ▪ skilled labour ▪ physical infrastructure (ports, road, power, telecommunication)
C. Efficiency seeking	▪ costs of resources listed under B and knowledge-based assets, and technology and innovative capacity ▪ other input costs, e.g. transport and communication costs and costs of other intermediate products ▪ spatial clusters and membership of a regional integration agreement conducive to the establishment of regional corporate networks
D. Strategic asset seeking	▪ knowledge-based assets, including localised tacit knowledge and interactive learning ▪ synergistic assets to MNEs, technological and innovative capacity and other created assets (e.g. brand names) ▪ different cultures, institutions and systems

Figure 2.1. Host Country Determinants of FDI.

Source: adapted from the host country determinants of FDI in UNCTAD (1998) and variables influencing the location of value-added activities by MNEs (Dunning, 1998a & 2001a).

underscore the importance of the principal economic determinants and business facilitation measures in influencing location in a globalizing world economy.

The FDI policy framework, a necessary but not sufficient determinant of FDI location, is becoming relatively less important with liberalization and globalization. Business facilitation measures are becoming relatively more important in the context of a greater similarity of investment policies at all levels. They include investment promotion, incentives, after-investment services, improvements in amenities, and measures that reduce the "hassle costs" of doing business. Business facilitation measures have become more sophisticated, increasingly targeting individual investors, even though this involves high human capital and other costs. Among these measures, after-investment services can be singled out because of the importance of reinvested earnings in overall investment flows.

Once an enabling FDI policy framework is in place, economic factors assert themselves as locational determinants and become dominant. They fall into four clusters, corresponding to the principal motives for FDI: resource (or asset) seeking, market seeking, efficiency seeking, and strategic asset seeking (UNCTAD 1998 & 2003 used the first three clusters). Historically, the availability of natural resources had been the most important FDI determinant for countries lacking the capital, skills, know-how and infrastructure required for their extraction and sale to the rest of the world. Market size has been another important traditional determinant, leading to market seeking investment. Large national markets are also important for those services whose non-tradability makes FDI the only mode of delivery to consumers. Largely immobile low cost labour has been another traditional economic determinant of FDI location, particularly important for efficiency seeking investment. Technology and innovation has become critical to competitiveness. Under simple integration strategies – transferring the production of labour intensive products or processes to foreign affiliates controlled through equity or non-equity arrangements – labour, physical infrastructure and telecommunication, access to international markets, labour literacy and skills are important factors for FDI. Complex integration strategies – splitting up the production process into specific activities or functions and carrying out each of them in the most suitable, cost competitive location – allow TNCs that pursue them to maximize the competitiveness of their corporate systems as a whole on

the international portfolio of location assets. Complex integration strategies give rise to a new configuration of locational determinants, with a growing emphasis on "created assets". Firms that undertake FDI enhancing competitiveness seek not only cost reduction and bigger market shares, but also access to technology and innovative capacity. These resources, as distinct from natural resources, are people made and created assets. The new configuration also includes agglomeration economies arising from the clustering of economic activity, infrastructure facilities, access to regional markets, and competitive pricing of relevant resources and facilities.

Perhaps, the most significant change in the motives for FDI over the last two decades has been the rapid growth of strategic asset seeking FDI, which is geared less to exploiting an existing O specific advantage of an investing firm, and more to protecting or augmenting that advantage by the acquisition of new assets or by a partnering arrangement with a foreign firm (Dunning, 1998a). Host countries and governments should therefore promote polices aimed at strengthening innovation systems, encouraging the diffusion of technology, encouraging the development of clusters based on created assets, and stimulating partnering and networking among domestic and foreign firms (UNCTAD, 1998).

Location Specific Advantages and Developing Countries in the New World Economy

It is recognized that globalization has a profound influence on international production. According to Narula and Dunning (2000), globalization has influenced both the nature of location specific advantages of countries and ownership specific advantages of firms. Both firms and governments have adjusted their strategies and policies to the realities of the new global environment.

Ownership specific advantages are more mobile, knowledge intensive and geographically dispersed than they used to be. MNEs are increasingly seeking to consolidate or advance their global competitive positions, by rationalizing their cross-border value added activities. To pursue their objectives, MNEs, particularly those in the knowledge intensive sectors, are being forced to give more attention to the availability and quality of the largely location specific created assets of alternative

investment sites. At the same time, national governments have shifted away from traditional inward-looking import-substituting model adopted by many developing countries, and reduced intervention in the economy through privatisation of state-owned enterprises (Narula & Dunning, 2000). With the change in policy orientation, governments' role as market facilitator and provider of complementary created asset-based location specific advantages has becomes more critical (Dunning, 1997; Narula & Dunning, 2000).

FDI based development strategies are now commonplace among developing countries. Although there has been a growth in the global FDI flows, there is also increased competition among governments for such investment, particularly that provides opportunities for indigenous spillovers of technology and organizational capability.

Figure 2.2 outlines how the MNE-country bargaining situation has changed with globalization and how this has affected different countries. Developing countries do not represent a homogenous group, and this situation has been exacerbated by the effects of globalization. The literature on economic catch-up and convergence tends to classify countries into three broad groups: the least developed countries which have "fallen behind"; the catching up developing countries, and the developed or "converged" countries (Narula and Dunning, 2000). Large and emerging countries, like India, China and Brazil, are seen as significant locations for MNEs' operations (Buckley & Ghauri, 2004).

Narula and Dunning suggest that FDI flows have shown the similar trends that characterize countries. They (Narula & Dunning, 2000; Dunning, 2001c) use the concept of the investment development path (IDP) to characterize the trajectory of countries' development. The IDP postulates that the relationship between FDI and economic development of countries can be usefully analysed by categorizing their evolution through five stages. Countries in stage 1 have limited L advantages and attract little or no inward FDI. Few domestic firms have O advantage to invest overseas. Stage 2 shows some "generic" L advantages. Countries experience a growth of domestic industries and inward FDI, but have little outward FDI. Countries in stage 3 begin to show the development of created asset type L advantages, rising FDI and

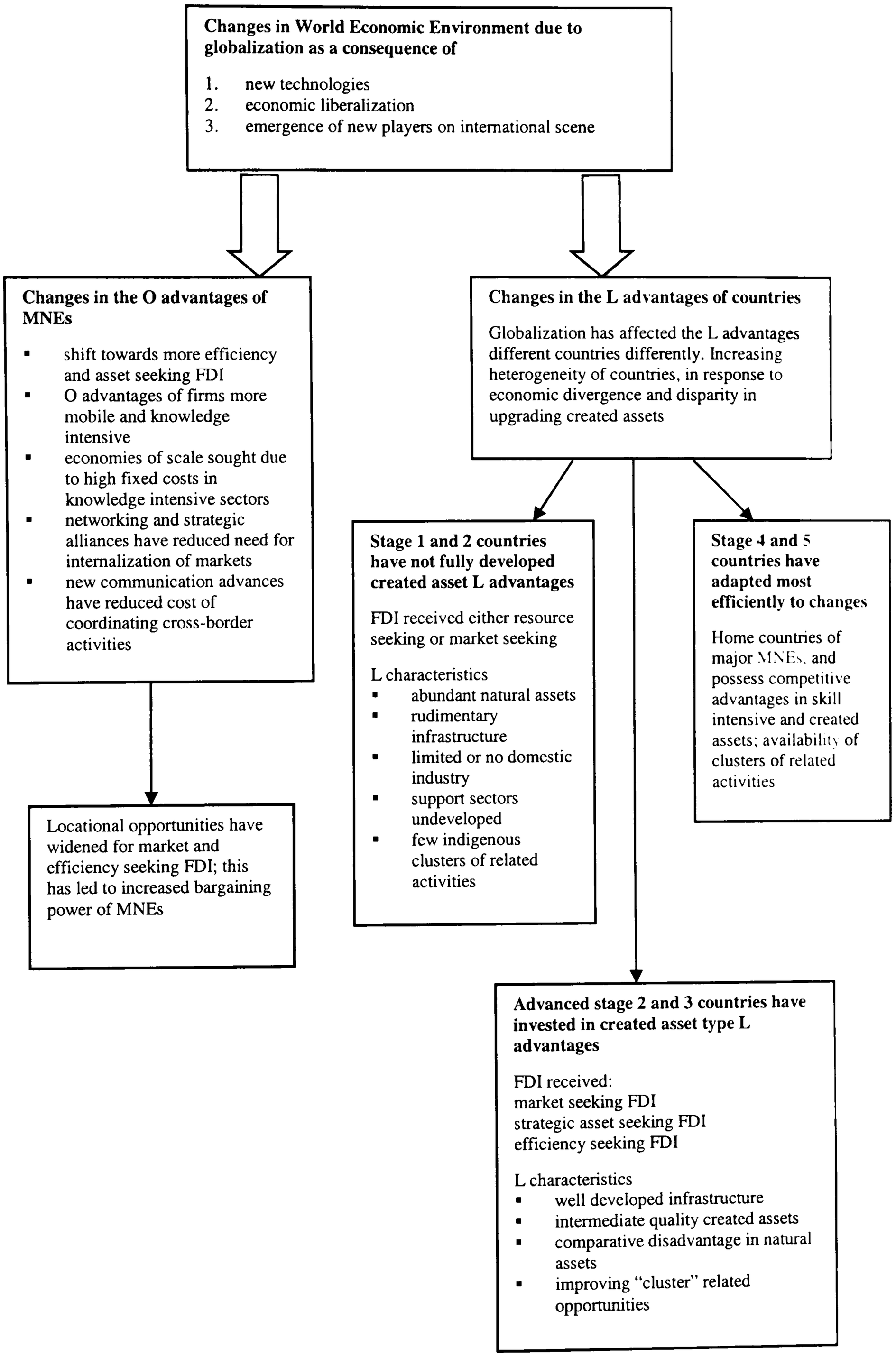

Figure 2.2. Reconfigured Country Groups and MNEs in the New World Economic Environment.

Source: Narula and Dunning, 2000.

strong domestic industries, and at the same time outward FDI. Countries in stage 4 have strong L advantages in created assets, and their domestic firms also possess strong O advantages in created assets. Outward FDI levels exceed inward FDI. Stage 5 is similar to stage 4 in respect of L advantages, but characterized by fluctuating net zero or positive level of inward and outward FDI.

The relative importance of location specific advantages can depend, *inter alia*, the motives for FDI (UNCTAD, 1998). The first three motives – resource seeking, market seeking and efficiency seeking – are primarily asset exploiting in nature. The investing company's primary purpose is to generate economic rents through the use of its existing firm-specific assets. The last motive of strategic asset seeking is a case of asset augmenting activity, whereby the investing firm wishes to add to its existing assets (Narula & Dunning, 2000).

As Narula and Dunning suggest, countries in stages 1 and 2 of their IDP are unlikely to attract much strategic asset seeking FDI. Such investment is primarily an activity undertaken in stage 4 and 5 countries and, to a lesser extent, stage 3 countries. Human resources, technological capabilities and organizational skills that the stage 1 and 2 countries (or their firms) possess tend to be in relatively low technology and/or natural resource-intensive sectors. Some studies show, with the exception of a few developing countries in stage 3 of their IDP, notably the Asian newly industrialized countries (NICs) and China, relatively little technology partnering involves developing country firms.

As far as resource-seeking FDI *per se* is concerned, there is relatively little difference in the bargaining positions between developing and developed countries. In general, a purely resource seeking investment is not normally tightly integrated into the investing firm's global strategy. FDI in stage 1 countries is in general resource seeking. Where vertical forward integration and further value adding does occur (perhaps because of developments in L advantages as the country moves to stage 2), the "stickiness" of the investment increases, which strengthens the bargaining position of the host government. Market seeking FDI often occurs in the latter part of stage 1 and from stage 2 of their IDP. This requires not only a sizable population, but also the

ability of the market to support the expected demand on which the investment is based. Market seeking FDI, by its nature, is based on a single central L advantage.

> In addition, though, there is often a "follow-the-leader" strategic response by other firms, whereby a market that might have supported two or three competitors is inundated with a larger number of new entrants than the market can efficiently support. The case of both the Chinese and the Indian automobile markets are examples of such a scenario, where, despite the potential for high demand levels, few participants are actually able to make a profit. This is not the case with all sectors – investment in food and personal products, for instance, are much more likely to achieve economies of scale, since these products have a relatively low income elasticity of demand. Indeed, the automobile industry may represent a special case in these countries, for what is now described as aggressive market-seeking investments in developing countries in many cases began life as defensive import-substituting investments.
>
> (Narula & Dunning, 2000, p. 151)

The efficiency seeking and strategic asset seeking FDI are similar in that they both normally require a certain threshold level of created assets in the host country, and they both tend to be fostered by the process of globalization. They are thus generally associated with countries at the latter end of stage 2 onwards and, especially in the case of asset seeking FDI, with the more advanced industrialized countries. In both efficiency and asset seeking investments, the role of sub-national clusters and the agglomeration of related activities are particularly significant. The bargaining positions of countries that are home to centres of agglomeration or possess the necessary science and technology infrastructure necessary to attract asset augmenting FDI, are considerably different from those of countries which primarily attract asset exploiting FDI. Countries that have agglomerative economies are the ones likely to be in a strong bargaining position. This was originally the case for export processing zones. It now applies to higher value adding activities – even in stage 2 countries such as India – but only where such L advantages are perceived by MNEs to complement their own core competencies. To develop location specific advantages, governments need to think about building enclaves and clusters in a selective way, in terms of both industrial sectors and geographical regions. Providing the necessary infrastructure to all parts of a country may be politically optimal, but economically inefficient. The provision of such immobile assets needs to be specific to investors. The assets

themselves are complementary to each other and spatially clustered for optimum efficiency (Narula & Dunning, 2000).

To pursue FDI based development strategies has not come easy for many countries. The relationship between national governments and MNEs can be, at the same time, complex and troublesome. There can exist conflicts of interests and tensions in the relationship of the two parties. The term TNC is often used in such a context. The uneasy relationship was manifested in the last several decades in various areas, including technology transfer, monopoly power, labour practices, environmental protection, and transfer pricing (Dunning, 1998b). As a result of political and economic events in the global economy and technological advances, the general relationship between national governments and TNCs has, since the mid 1980s, shifted from being predominantly adversarial and confrontational to being non-adversarial and cooperative. It is not possible to assert whether the new and constructive relationship between TNCs and national governments is here to stay, or whether it is specific to the current phase of a transient world economy. Admittedly, the areas of differences and conflicts of interest still remain today, but, for the most part, the debate is now conducted in the context of the globalization of economic activity rather than of strategies and behaviour of TNCs (Dunning, 1998b).

In developing the right types of L advantages to attract FDI, national governments, in particular, of stage 1 and stage 2 countries that are more likely in a weaker bargaining position *vis-à-vis* TNCs, need to take account of the national development strategy in formulating FDI polices minimizing adverse effects on domestic industries, labour practices and the environment, and in upgrading the L advantages to enter into stage 3 onwards. Therefore, it is necessary that FDI policies should be integrated into countries' industrial strategy and regional strategy. Narula and Dunning (2000) advocate selective and limited upgrading of the L advantages of countries in terms of industrial sectors and geographical regions. Such approach has been illustrated by some successful developments, which lead to higher-grade clusters of economic activities.

Governments have sometimes passively resorted to attracting inbound FDI and, as a result, give away potential benefits to be accruing from investment. The fiscal or other

incentives are no substitute for the presence of created assets, not just because of the inability to absorb spillovers, but also because in locational tournaments involving richer countries, the poorer developing countries are almost certainly bound to lose. Incentives, performance requirements, and subsidies (whatever their legal status) have had a limited effect on encouraging actual technological transfer and creation of domestic capabilities (Narula & Dunning, 2000).

Chapter 3

Strategic Alliances and Interfirm Cooperation

Strategic Alliances

The view of strategy underwent a change in the late 1980s. A large number of firms have turned to collaborative relationships to pursue multiple sources of competitive advantage (Bartlett & Ghoshal, 2000; Parkhe, 1993). The change in perspective may have been brought about by a variety of factors in the global business environment such as rising costs of R&D, shortening product life cycles (Parkhe, 1998; Bartlett & Ghoshal, 2000), increasing need for global scale economies (Bleeke & Ernst, 1991; Bartlett & Ghoshal, 2000), growing competition, and the emergence of new markets (Bleeke & Ernst 1991; Stiles, 2001). The latest and also perhaps the most visible manifestation of this growing role of collaborative strategies lies in the phenomenon often described as strategic alliances (Bartlett & Ghoshal, 2000).

Varied Definitions of Strategic Alliances

A great deal of literature covers strategic alliances. Varied definitions have been used as there are different approaches to alliances. Lorange and Roos (1993) suggested two theoretical approaches to define strategic alliances. One way is to look at the continuous scale between transactions on a market and total internalization ("hierarchy").

One side of the scale represents total integration of the activities within the wholly owned organization. Any merger or acquisition represents a lower degree of vertical integration than the subsidiary organization. Joint ownership arrangements could represent an even lower degree of integration. Various types of formal and informal cooperative ventures are further steps along the path towards lower levels of vertical integration. At the very end of the continuum is the market in which firms are free to exchange goods and services. There is no vertical integration. Strategic alliances can be defined as ventures along this scale (Lorange & Roos, 1993).

An alternative theoretical definition of strategic alliances, according to Contractor and Lorange (1988), is based on the degree of interdependency between the parties involved. The same strategic alliance options in terms of interdependence run from

high (and hard to reverse) to low (and easy to reverse). A firm might wish to start out in a less committed mode and then upgrade the type of cooperative relationship over time (Lorange & Roos, 1993).

In comparison, some other authors define strategic alliances from the internal aspect of resources. Strategic alliances, a manifestation of interorganizational cooperative strategies, entail the pooling of skills and resources by the alliance partners, in order to achieve one or more goals linked to the strategic objectives of the cooperating firms (Varadarajan & Cunningham, 1995). Parkhe (1993) defines global strategic alliances as relatively enduring interfirm cooperative arrangements, involving cross-border flows and linkages that use resources and/or governance structures from autonomous organizations headquartered in two or more countries, for the joint accomplishment of individual goals linked to the corporate mission of each sponsoring firm. Some other scholars, such as Das and Teng (2000) take a similar approach to strategic alliances focusing on the role of firm resources in alliances.

In contrast, some scholars identify a more competitive aspect of alliance relationship. Lei and Slocum (1992) define strategic alliances as coalignments between two or more firms in which the partners hope to learn and acquire from each other the technologies, products, skills, and knowledge that are not otherwise available to their competitors. There are risks associated with cooperation. Hamel, Doz and Prahalad (1989) believe that collaboration is a different form of competition and interfirm relations are largely competitive and governed by power and calculation. Bartlett and Ghoshal (2000) suggest that there was a shift of strategic focus in the late 1980s away from pre-empting competition to a broader view of building competitive advantage through both collaboration and competition.

Lu and Burton (1998) have identified three types of international strategic alliances (ISA) distinguishing "precise" and "broad" alliance boundaries. In the context of the alliance itself, the precise alliance boundary encompasses closely linked actors, that is to say, the individuals and units that are directly responsible for its operation and for maintaining linkages with partner firms. The broad boundary refers to the whole of the partners' organizations, embracing both the alliance and the partner firms (parent firms). The first type of ISA refers to any form of joint activity between partners

without the creation of an independent entity. These are *interfirm* ISAs of the kind associated with bilateral trading, licensing, co-production arrangements and joint R&D projects. To emphasize the ISA as a joint activity between the partner firms is to signify a broadly bounded arrangement in which the partners cooperate as independent units. To emphasize the internal differentiation of organizational structures, procedures and processes within partner firms is to view the ISA entity as a team activity around which a more precise boundary must be drawn. The second type refers to alliances which have equity invested in them by the partner firms, and includes equity joint ventures and mergers and acquisitions. Unlike the interfirm ISA, these *organization-ISAs* may have scope for independent action and have the kind of hierarchies, organizational structures, and management processes that are to be found in conventional firms. The precise inner-boundary centres around the organizational structure of the alliance. The broad outer-boundary embraces both the alliance and the partner firms. The third type of alliances can be *network-ISAs*, involving a multiple of partner firms enjoined in club-style arrangements such as buying groups, consortia and conglomerates. Here, the inner-boundary of the alliance is defined by the individuals and units seconded to them by the partner firms. The broader boundary circumscribes the federation of member firms.

Theoretical Perspectives

As discussed earlier, various theoretical perspectives have been proposed and applied to strategic alliances and cooperative strategies. We shall in this section examine alliances from transaction cost economics, international strategy theory and strategic management theory. Transaction cost theory is extensively applied to alliances and joint ventures. As discussed earlier, one way of defining strategic alliances is by the degree of integration of activities between the market and hierarchies. International strategy theory also has an economics base, and sees strategic alliances as a strategic choice to overcome entry barriers and gain competitive advantage. Strategic management theory draws attention to the need for prospective partners to achieve a fit between their respective strategies, so that an alliance makes a positive contribution to the attainment of each party's objectives (Child & Faulkner, 1998). The RBV will be discussed in the next section in exploring the interfirm relationships within strategic alliances. The RBV concerns the alignment of the resources of partner firms.

the value creation potential for alliances (Das & Teng, 2000). and interorganizational competitive advantage (Dyer & Singh, 1998).

Transaction cost theory views strategic alliances as a cost reduction device. Some authors, for example, Buckley and Casson (1976 & 1988) and Rugman, Lecraw and Booth (1986) have applied transaction cost theory to explain how the internalization of production through FDI including strategic alliances enables MNEs to replace the market. Chapter 2 has reviewed theories of the MNE and FDI based on transaction cost theory. Transaction costs are those incurred in arranging, managing, and monitoring transaction across markets such as the costs of negotiation, drawing up contracts, and monitoring contracts. The degree of market imperfection across national borders can be higher than in the domestic market, causing additional market failure risks to increase transaction costs. In order to avoid market imperfection, the internalization of production is used to enable MNEs to replace or augment the market (Buckley & Casson, 1976). Transaction cost theory has identified relevant factors for the choice between internalizing transactions within firms as opposed to effecting them through market exchanges: these factors include opportunism, bounded rationality, and uncertainty and complexity of the market.

Williamson (1985) has pointed out asset specificity as a point of reference for choosing between transaction governance structures. Asset specificity refers to durable investments that cannot readily be redeployed to other uses, and that are made in support of particular transactions. Asset specificity gives rise to the two polar governance structures of markets and hierarchies (within the organization). Between the two extremes, relational contracting and bilateral governance should prevail where transactions are recurrent. Relational contracting involves a long-term investment in building relationships between the parties. Bilateral governance can be implemented by the parties making mutual investments of specific assets which generate mutual dependence and serve as hostages against opportunism.

Relational contracting and bilateral governance indicate the intermediaries between markets and hierarchies - the hybrid governance structures. Hybrids such as joint ventures are characterized by bilateral dependency between the partners, in which they mutually commit equity and assets and agree on how costs and profits are to be

divided between them. As the partners share rights to control and monitor activities and thus have the weakened control, they have to rely on features such as long-term contracts or the offering of mutual hostages such as assets specific to collaboration and the development of mutual trust.

Advantages that hybrids can offer are avoidance of the high uncertainty caused by market failures and high costs of establishing hierarchies through internalization (Child & Faulkner, 1998; Lu & Burton, 1998). At the same time, however, since partner firms preserve a considerable degree of decision-making autonomy, hybrids exist in an inherent unstable state with regard to control (Child & Faulkner, 1998).

Transaction cost economics stresses the efficiency and cost minimizing rationales for cooperation. It provides numerous insights into the governance forms that alliances may take, the partners' motives, the nature of investments and the specific character of their transactions (Child & Faulkner, 1998). However, transaction cost theory seems to have limitations in explaining strategic alliances in certain respects. Ramanathan, Seth and Thomas (1997) point out the alliance governance mode must not only have superior cost reducing properties relative to markets, it must be more efficient than complete internalization. Complete internalization of the transaction by one party is a feasible alternative means to economize on transaction costs. In fact, the traditional transaction cost theory predicts that complete internalization is a more efficient mode than shared ownership: administrative fiat by virtue of full ownership resolves the hazards of opportunism more efficiently than shared ownership. If internalization is the best solution to the market failure, the question arises as to why partners in a joint venture choose shared ownership rather than full acquisition of the other party. To resolve this conundrum, some assumptions contained in the traditional version of transaction cost model must be relaxed or new assumptions introduced (Ramanathan *et al.*, 1997). For example, Buckley and Casson (1988) suggest that there is some net disadvantage to such a merger. It may be managerial diseconomies arising from the scale and diversity of the resultant enterprise, legal obstacles stemming from antitrust policy or restrictions on foreign acquisitions, difficulties of financing because of stock market scepticism, and so on. Dunning's eclectic model may offer different insights into this question. Market imperfection can be country specific, and MNEs can thus consolidate their ownership advantages and explore

benefits in different locations. By exploring the ownership advantages, MNEs may be able to integrate separate value-added activities within the firm. MNEs may realize internalization advantages, which arise from the capacity of MNEs' hierarchies *vis-à-vis* external markets to capture the transactional benefits arising from the common governance of these assets located in different countries (Dunning, 1988, 1993 & 2001a).

In comparison with transaction cost theory, international strategy theory emphasizes that the firm enters a foreign territory for business expansion and growth rather than cost reduction, albeit it recognizes the relevance of market failure and a firm's motivation to pursue efficiency. Terms such as "internationalization", "multinationalization" and "transnationalization" have been widely used to typify the strategic responses from the firm to the global environment. (Lu & Burton, 1998). Contextual variables identified as external forces promoting across border strategic alliances include technology exchange, global competition, industry convergence, economies of scale, and reduction of associated risks (Bartlett & Ghoshal, 2000; Lu & Burton, 1998). Some studies have shown some differences between the traditional foreign investment joint ventures and the recent wave of partnerships. The traditional joint ventures were formed between a senior multinational headquartered in an industrialized country and a junior local partner in a less developed country. The primary goal dominated their formation was to gain new market access for existing products. Local firms could gain access to new products and often learn important new skills from their partners. In contrast, the scope and motivations for the modern form of strategic alliances seem to be broadening. One characteristic of present partnerships is that strategic alliances are often forged during industry transitions when competitive positions are shifting and the very basis for building and sustaining competitive advantage is being defined (Bartlett & Ghoshal, 2000). From the international strategy perspective, the rationale for establishing interfirm cooperation is thus for maximization of profits through growth or improvement of competitive positions.

Market entry mode is linked to the level and form of control that a firm can exercise. MNEs can exercise the higher degree of control over a wholly owned subsidiary than over an equity joint venture. The rationale for forming alliances is that faced with

constraints, whether external or internal, a firm chooses to collaborate with others to achieve its objectives. The external constraints are those set by governments such as market entry hurdles and risks stemming from local markets (Lu & Burton, 1998). The external environmental variables are referred to as country specific advantages or location specific factors, which can be categorized as economic, non-economic, and governmental variables (Rugman *et al.*, 1986). Internal constraints include a lack of critical resources or capabilities such as knowledge, technology and management skills. These internal variables refer to firm-specific factors.

Lu and Burton (1998) have called for more exploration of internal relationships within alliances in international strategy theory. With regard to competitive advantage, cooperative strategies may offer a mutually advantageous opportunity for collaborating firms to increase their market power. Porter and Fuller (1986) point out that coalitions represent an important strategic option in international competition. They can offer various benefits such as economies of scale and shaping competition in favour of those firms forming the coalition, and result in costs as well such as complicating the process of global coordination. Firms in a weak position may defend themselves against dominant players through coalition (Child & Faulkner, 1998). A challenger may form an alliance to obtain necessary resources, technology, market access, or other strengths to attack an industry leader (Porter, 1985 & 1998). Some scholars have noted that many alliances involve partners who are fierce competitors outside the specific scope of the cooperative venture. Such relationships create possibility that the collaborative venture might be used by one or both partners to develop a competitive edge over the other, resulting competitive collaboration. Acquiring knowledge and skills by one partner can represent for the other partner hidden dangers and costs of entering into strategic alliances, particularly given growing production and technology-based interrelationship in alliances (Lei, 1993). Strategic alliances need to be regarded not only as the outcome of firms' strategic choice, but also as a mechanism through which the firms cooperate as well as compete (Lei, 1993; Lu & Burton, 1998).

Some authors point out that international business strategy research is preoccupied with strategy-industry linkages, but largely ignores political and customer-based aspects of the environment. Progress here would allow a comparison of both the

strategies of MNEs in different countries with regard to their choice of alliances and the strategies of different MNEs in the same country (Lu & Burton, 1998). Dunning has noted recent progress in FDI studies with regard to location. Scholarly research has extended standard theories of location, in particular, embracing new locational variables, for example, political risks, the regulations and policies of supranational entities (e.g. the impact of WTO agreements), and inter-country cultural differences (Dunning, 2001a). To incorporate these locational factors into international strategy can enrich studies on international strategic alliances.

In comparison with transaction cost and international strategy theories, strategic management theory can provide a different perspective on strategic alliances. As some authors (Child & Faulkner, 1998; Faulkner & de Rond, 2000) have suggested, the perspective on cooperative strategy offered by strategic management theory draws attention to the need for prospective partners to achieve a fit between their respective strategies, so that an alliance between them makes a positive contribution to the attainment of each party's objectives. Strategic management theory is also concerned, though to a lesser degree, with the desirability of achieving another fit between the organizational and national cultures which the partners bring to their cooperation (Child & Faulkner, 1998). A number of key themes relevant to cooperative strategy are: (1) the motives for forming alliances, (2) the selection of partners so as to achieve compatibility between their goals, and (3) the need to achieve integration between partner cultures and systems (Child & Faulkner, 1998; Faulkner & de Rond, 2000).

Specific alliances for specific firms are generally characterized by their strengths and weaknesses in helping a single parent counter threats and capitalize on opportunities to implement a chosen strategy (Osborn & Hagedoorn, 1997). Varadarajan and Cunningham (1995) suggest that building on Ansoff's conceptualization of major growth alternatives available to a firm, the major motives underlying a firm's entry into strategic alliances can be categorized as:

1. Enter new international markets;
2. Circumvent barriers to entering new international markets;
3. Shape industry structure by raising barriers to entry and creating new technological standards;

4. Broaden product line/fill product line gaps;
5. Enhance resource use efficiency and acquire resources from partners;
6. Acquire new skills with the intent of learning from partners.

These listed motives are neither mutually exclusive, nor collectively exhaustive. Either a single important objective or multiplicity of interrelated objectives may underlie a firm's decision to enter into strategic alliances (Varadarajan & Cunningham, 1995). Some authors also suggest other motives such as minimizing transaction costs (Buckley & Casson, 1988) and achieving economies of scale (Porter & Fuller, 1986; Contractor & Lorange, 1988).

In addition to the above listed motives, some literature also discusses external forces or external motives that drive alliance formation. The key external factors were covered earlier in our discussion of international strategy theory. They include technology exchange, shortening product life cycles, global competition, industry convergence, and international turbulence and uncertainty (Bartlett & Ghoshal, 2000; Lu & Burton, 1998; Child & Faulkner, 1998).

Furthermore, Oliver (1990) has identified six determinants of relationship formation, which give an alternative view of motivation. They are necessity, asymmetry, reciprocity, efficiency, stability and legitimacy. Although each of the factors may be sufficient to drive relationship formation, they may also interact. The necessity factor refers to the legal or regulatory requirements, and is only one used to explain why firms are mandated into relationship formation (i.e. the relationship is not voluntary). Asymmetry is important in explaining voluntary relationship formation because firms have different resources and abilities that are not shared equally by them. Reciprocity, on the other hand, explains the motivation of firms that seek control over resources through cooperation and collaboration rather than through domination. Efficiency motivations reflect the desires of firms to enter into relationships to reduce costs. When firms seek to adapt to uncertain environments, stability motives may drive them to enter into relationships. Finally, there may be a need for legitimacy for firms to enter into relationships if they enhance an organization's ability to comply with prevailing norms or improve its reputation and image.

The notion of compatibility concerning partner selection seems to be neither easy to capture nor clear for alliance studies. Osborn and Hagedoorn (1997) point out that one difficulty with this concept is the sheer number of alliances among organizations with apparently quite discrepant characteristics. Either many firms are strategically compatible, or compatibility is not particularly important in predicting alliance formation, operation, and success. Saxton (1997), through the study of strategic and organizational fit, found that although strategic similarities were related to initial satisfaction with an alliance, neither initial satisfaction nor similarity was linked to alliance performance.

> A second problem with the compatibility concept is that its measurement appears more illusive than its definition. Does the degree of compatibility of two organizations rest more in the eyes of senior managers or researchers than in definitively measurable organizational attributes? Park and Ungson's analysis of joint ventures (this issue) does not show that organizational measures of compatibility are important in dissolution rates. However, specific technology transfers and the extent to which sponsors are direct competitors does seem to matter. We would expect to see more comprehensive studies combining resource-based views and industry characteristics to begin to isolate when, where, and to what degree specific aspects of compatibility might be salient in alliance formation and performance.
>
> (Osborn & Hagedoorn, 1997, p. 268)

In spite of the fact that compatibility is a vague and illusive concept, it appears to be essential that partners should have sufficient awareness and flexibility to be able to work together constructively and to develop mutual confidence. In other words, they must be able to learn from each other's cultural differences and be able to bring together their respective management systems, capitalizing on the strengths of each (Child & Faulkner, 1998). Moreover, some authors have raised an important question about the relationships between a cooperating unit and its parent partners with regard to compatibility and cultural fit. For example, how much autonomy should a joint venture enjoy from its parent partners in order to have the freedom to develop a good cultural fit (Child & Faulkner, 1998)? There is also a growing recognition that sponsors may have incompatible expectations for a given alliance (Osborn & Hagedoorn, 1997). Lu and Burton's (1998) distinction between "precise" and "broad" alliance boundaries can be useful in this respect. The precise boundary centres around the organizational structure of the alliance. The broad boundary embraces both the

alliance and the partner firms, indicating a more complex web of relationships. In case of equity joint ventures, partner firms as parents, play stakeholder roles, which benefit from the advantage of ownership. Although the joint venture is an independent entity with its own structure and functions, its managerial authority is constrained by *quasi*-hierarchies that extend from the parents. From this respect, it is therefore necessary that we should situate the alliance in the broad alliance context when studying its partners' compatibility and cultural fit within the alliance operating unit.

Interfirm Relationship within Strategic Alliances

There have been divergent views on interfirm relationships, offered by many scholars, for example, Hamel *et al.*, Kanter, and Lorange and Roos. In the 1970s and early 1980s, the strategic challenge for business was viewed primarily as protecting its potential profits from erosion through either competition or bargaining. This view of strategy underwent a change in the late 1980s. The need to purse multiple sources of competitive advantage led to the need for building collaborative relationships with suppliers, customers, competitors, and a variety of other institutions (Bartlett & Ghoshal, 2000). Many companies shifted strategic focus and began to embrace both competitive and cooperative strategies.

How to understand the partnership remains a central issue for the studies of strategic alliances. Many aspects of strategic alliances such as partner selection, ownership, control, conflict, and performance can depend on the inter-partner relationship within the alliance. For the research on the competitive strategy of joint ventures, the partnership can have a significant bearing on the strategies that joint ventures can pursue and on their subsequent competitiveness. This part of the literature review will therefore examine the partnership within strategic alliances. Recognizing the different approaches to interfirm relationships, the literature study takes a paradoxical approach to cooperation and competition in strategic alliances.

Cooperation or collaboration can be considered as a counterpart to the pursuit of competitive advantage. It can offer significant advantages for companies which are lacking in particular competencies or resources to secure these through links with others possessing complementary skills and assets (Child & Faulkner, 1998; Dyer & Singh, 1998). Some authors describe this kind of advantage as collaborative

advantage (Kanter, 1994; Burton, 1995; Huxham, 1996). Some members of (what might be called) this Collaborationist School argue that a new style of cooperation is starting to replace old style competition and interfirm confrontation, and that guru of strategic management analysis, Tom Peters has pronounced strategic networks and business alliances to be the very wave of the future (Burton, 1995). Lorange and Roos (1993) have proposed that there may be a legitimate rationale for a more mature, long-term, win-win emphasis regarding strategic alliances: an emphasis on more lasting relationships where benefits and costs can tip both ways in the short run but even out in the long run.

In comparison with the above views, other authors stress the existence of both competition and cooperation. Cooperation can exist alongside competition but not without tensions (Child & Faulkner, 1998). In particular, de Wit and Meyer (1999) explain that the inter-organizational relationship is a paradox of competition and cooperation. Collaboration and competition can go hand-in-hand when working with the partner (Lei, 1993). Some studies show, for example, alliances between Asian companies and Western rivals seem to work against Western partners (Hamel *et al.*, 1989).

Although this paradoxical nature is acknowledged, there are few discussions about the paradox in the extant literature on alliance theory and on competitive and cooperative strategies. Moreover, little attempt has been made to explicitly explore the paradoxical relationship of competition and cooperation and to apply it to alliance strategy.

The Paradox of Cooperation and Competition

An awareness of the inevitability of paradox is evident in organizational and management studies. Scholars are becoming more sensitive to the presence of simultaneous opposites or contradictions, and many recognize that paradoxes are indigenous to effective organizational functioning. According to Cameron and Quinn (1988), paradox means an apparent contradiction, a state in which contradictory elements operate at the same time. It differs form other concepts such as dilemma, irony and inconsistency in that no choice needs to be made between two or more contradictions. The key characteristic in paradox is the simultaneous presence of contradictory, even mutually exclusive elements.

Several authors have explicitly acknowledged in their research the presence of paradoxes associated with organizational effectiveness. For example, in the research of colleges and universities, paradox was found to be central in explaining how institutions overcame decline and improved in effectiveness (Cameron & Quinn, 1988). Peters and Waterman's (1995) analysis of cooperate America also suggests that today's excellent firms possess a variety of paradoxical characteristics. Moreover, some authors also state that paradox can offer a powerful framework for examining the impacts of plurality and change and aiding understanding of divergent perspectives (Lewis, 2000; Stacey, 2000). Lewis also advocates using paradox as a thought provoking tool or perspective.

Ford and Backoff (1988) point out the central component of paradox is the notion of oppositional tendencies or dualities. Distinctions give rise to dualities, systems composed of two different things united by a non-trivial binary relation. Dualities establish a tension field of opposites.

> The idea that paradoxes must be solved and the tension they cause must be released to be successful, is part of the paradigm that equates success with the dynamics of stability, regularity and predictability. The notion that paradoxes can never be resolved, only endlessly rearranged, leads to a view of organisational dynamics couched in terms of continuing tension generating behaviour patterns that are irregular, unstable and unpredictable, but lead to creative novelty.
>
> (Stacy, 2000, p. 13)

Organizations must continuously balance differentiation and integration, change and stability, collectivity and individuality. De Wit and Meyer (1999) explain the paradox of competition and cooperation in the following way.

One the one hand, inter-organizational relationships can be primarily competitive. Such antagonism between organizations can vary from open "warfare" to more subtle forms of friction, tension and strain. Under conditions of competition, behaviour between rivals is characterized by calculations, bargaining, manoeuvring and the use of power to achieve results. On the other hand, inter-organizational relationships can be primarily cooperative. Such symbiosis between organizations can vary from occasional collaboration to virtual integration. Under conditions of cooperation,

behaviour between partners is characterized by trust, commitment, reciprocity and the use of coordination to achieve results.

Strategists employing the discrete organization perspective view companies as independent entities competing with other organizations in a hostile market environment. The best strategy is to strengthen their competitive position in relation to external forces. Collaboration is embedded with hazard of opportunism. Strategists taking the embedded organizational perspective are fundamentally at odds with the discrete organizational perspective and argue the relations between organizations are characterized by a dynamic mix of competitive and cooperative behaviour. Firms must balance their competitive and cooperative posture depending on the circumstances. Firms can embed themselves in a web of collaborative relationships.

Orthodox theories are largely based on linear and consistent analysis, and they are unidirectional, atomistic, and incompetent to capture contradictory, mutualistic, and interactive relationships of paradox which are embedded in organizations (Cameron & Quinn, 1988; Lu & Burton, 1998; Stacey, 2000). Thus, they frequently simplify the reality into polarized either/or distinctions that conceal complex interrelationships (Lewis, 2000). Stiles (2001) points out that previous research on alliances has tended to bias investigations towards either the cooperative or competitive aspects of the phenomenon.

Lewis (2000) states that exploring paradox requires remaining acutely aware of contradictions and anomalies and expanding our strategies accordingly. In this light, paradoxes may offer challenging, even frame-breaking experiences, pushing researchers to question approaches that oversimplify and overrationalize complex phenomena. Conceptualizing paradox entails building constructs that accommodate contradictions. Rather than polarize phenomena into either/or notions, researchers need to use both/and constructs for paradoxes, allowing for simultaneity and the study of interdependence. Some authors such as Poole and Van de Ven (1989) and Lewis (2000) propose a multiparadigm approach to identifying and locating paradoxes, using divergent or opposing theoretical perspectives. Theorizing paradox entails developing a frame that encompasses opposites, enabling a more complicated understanding of their coexistence and interrelationships. It may be necessary to depict the challenges

of plurality and change embedded in cognitive, emotional and social processes, and to use the notion of time and space to explain paradox.

It can be helpful to take into account the diversity of interpretations to explore the paradox of cooperation and competition in the alliance research. As discussed in the previous section, many theoretical perspectives can be used to study alliance strategy and behaviour, for example, strategic positioning, international business (strategy) theory, transaction cost theory, the RBV, and game theory. Stiles (2001) favours game theory and the RBV out of these perspectives for studying cooperative and competitive aspects of strategic alliances. She suggests that game theory can provide a useful basis to study alliance behaviour. The RBV can help provide further insights relevant to this form of investigation. Some authors, for example, Child and Faulkner (1998), and Faulkner and de Rond (2000), note that strategic positioning and the RBV can be applied to study cooperative strategy as well as competitive strategy as the two traditions of thinking.

Strategic positioning and the RBV could be regarded as divergent and competing theoretical perspectives. Strategic positioning is concerned with the industry structure and the pursuit of generic strategies to achieve competitive advantage. It highlights the competitive aspect of the firm and emphasizes the external environment. Its framework can still be employed to study cooperative behaviour. In comparison, the RBV draws attention to the unique resources and competencies from which the firm can obtain competitive advantage. It concentrates on the internal aspects of the firm, and has more emphasis on the potential advantages of cooperation. Stiles (2001) states that the RBV appears to provide an unbiased basis from which to view the cooperative and competitive aspects of intent.

In the light of the above arguments, we use strategic positioning and the RBV to illustrate how the firm can enhance its competitive position in the industry and gain access to resources and competencies through cooperation with other firms. These two perspectives can offer divergent yet complementary views, and enable a more complicated understanding of the coexistence and interaction of cooperation and competition.

Alliance Partnership and Strategic Positioning

According to Porter (1980, 1985 & 1996), a firm's performance is determined by the industry structure and profitability differences among competitors. The industry analysis (1980) concerns the competitive environment using the five forces framework. It can indicate the potential profitability of the industry and assist to identify an appropriate generic strategy to acquire competitive advantage. The profitability differences consist of operational effectiveness and strategic positioning (1996). Firms need to employ advanced technology and best practices to enhance their operational effectiveness. The essence of competitive strategy is the search for a favourable competitive position in an industry. The value chain analysis (1985) examines the value adding activities of a firm and the linkages between them. A sustainable competitive position requires both trade-offs and a fit among value chain activities, which make the imitation of the strategy difficult (1996).

Porter has also discussed alliances and their roles in helping firms gain competitive advantage. Alliances can be used to gain market power and to reconfigure activities and resources. Alliances should be used as enabling devices for globalization (Porter, 1980 & 1985; Porter & Fuller, 1986), but not as strategy (Argyres & McGahan, 2002).

Porter (1985) has stated that a challenger may form an alliance to obtain the necessary resources, technology, market access, or other strengths to attack an industry leader. Alliances of various types have played important roles in many successful attacks against leaders. He categorized two broad forms of alliances: acquisition and coalition. Acquisition refers to a firm's either acquiring another firm (or firms) or itself being acquired. Coalition refers to a firm's joining forces with another firm without outright merger, through such means as licensing, joint ventures, and supply agreements. As for coalitions, they can play a subtle role in attacking leaders. Challengers sometimes form coalitions with leaders that later provide the basis for attacking the leader. Licensing technology from a leader, or joint ventures in marketing or manufacturing, may allow a challenger to learn a leader's strengths, making it possible to leapfrog. A number of Japanese firms have licensed foreign technology from leaders which they later improved.

Although Porter's theory highlights competition, its framework can still be applicable to collaborative relationships. The ability to maintain both the structure of an industry and a firm's position within it can be enhanced by cooperation with competitors. Regarding the relative power in the market, alliances can be distinguished as offensive from defensive alliances or coalitions. Child and Faulkner (1998) state, "offensive coalitions are intended to develop firms' competitive advantages and strengthen their positions by diminishing other competitors' market share or by raising their production and/or distribution costs."(p. 18) Some alliance examples can give the partners an unfair competitive advantage and provide a basis for restrictive behaviour.

> Defensive coalitions are formed by firms to construct entry barriers which are intended to secure their position and stabilize the industry so as to increase their profits. Defensive coalitions may also be sought by firms that have a weak position in the market in order to defend themselves against a dominant player.
>
> (Child & Faulkner, 1998, p. 18)

There may also be cooperation between a partner with a defensive intent and another with an offensive intent for entering the alliance. An alliance which starts off with primarily defensive intentions can become offensive in nature if it is successful in the market (Child & Faulkner, 1998).

Positioning choices determine not only which activities a company will perform and how it will configure individual activities but also how activities relate to one another. Strategic fit among business activities is fundamental to sustainable competitive advantage (Porter, 1996). These activities refer to the concept of value chain. Collaboration has made it possible for business to adopt new configuration systems (Porter, 1985; Porter & Fuller, 1986), which are difficult for competitors to emulate and which can also sometimes enhance organizational responsiveness (Stonehouse, Hamill, Campbell, & Purdie, 2000). Porter (1985) has provided some examples that coalitions can bring together skills and resources of firms in ways that may allow reconfiguration and redefinition. Japanese TV set producers licensed RCA's colour TV technology, providing an important starting point for their own product and process innovations. Similarly, the coalition that led to Airbus Industrie has made a world-class competitor out of a group of struggling national firms. Coalitions are also frequently used in tandem with a firm's own activities to broaden scope. In the valve

industry, for example, WKM sells only in the US and uses licensees elsewhere in the world. In this respect, collaboration can be regarded as an avenue to achieving strategic fit and competitive advantage through internal and external linkages in the value chain system. Porter (1998c) explained that alliances could be used as for reconfiguration in the global context in the following way.

> Once a company understands how to configure its global network in a business, alliances with firms based elsewhere can be a means of more effectively or more rapidly achieving the desired configuration. Alliances are a means to build a network of dispersed activities not an end, and can make activities outside the home base more effective. Market access, for example, can often be enhanced by a local partner. The ability to source inputs or to tap advanced skills and technologies in a new location may require a partner's well-established presence.
>
> (Porter, 1998c, pp. 339-340)

However, Porter has pointed out that alliances can blur a company's positioning and get in the way of a consistent positioning in every market. They complicate coordination and can slow innovation (1998c).

> Acquisitions and coalitions are not without their problems, however. Acquisitions are difficult to integrate, and coordination among coalition partners can prove troublesome. In copiers, for example, Canon has benefited from the problems Xerox has had in coordinating with its joint venture partners Rank Xerox and, through Rank Xerox, Fuji Xerox. Canon's greater global coordination leads to some of its competitive advantages.
>
> (Porter, 1985, p. 530)

Porter (1998c) has also provided guidelines for forming alliances. He categorizes two types of alliances in terms of their activities.

> The best alliances are highly selective: They focus on particular activities and on obtaining a particular competitive benefit. Novo, for example, formed joint ventures with a variety of firms to gain access to particular national markets. Broad alliances, covering many activities and markets, tend to stunt a company's own development. They inhibit or relieve the sense of urgency about building the brand or developing the firm's own products. The best alliances are often transitional devices, assisting a firm to build on its strengths and to learn. In the long run, the partners may go their separate ways or upgrade the alliance to a full merger. A firm cannot rely on a partner for assets crucial to its competitive advantage.
>
> (Porter, 1998c, p. 340)

Alliance Partnership and the RBV

According to the RBV, firms possess individual resources and their differential performance is fundamentally due to the heterogeneity of the resources each form owns. Firms that are able to accumulate and acquire resources and capabilities that are rare, valuable, non-substitutable, and difficult to imitate will achieve competitive advantage over competing firms (Barney, 1991). Valuable resources and competencies are often available only from a partner, or from sharing their development with the partner. Alliances may enable firms to gain access to partners' high technology or share the high cost of developing new capabilities through research and development. Cooperation between firms can also permit the pooling of their complementary strengths so as to secure creative synergies (Child & Faulkner, 1998; Das & Teng, 2000). Some authors argue that it is best for a company to concentrate on activities which are directly related to its core competencies and that other non-core activities can be outsourced to other businesses for which those activities are core. Consequently outsourcing is often associated with collaborative behaviour (Stonehouse *et al.*, 2000).

Core competence theory stresses the importance of knowledge and organizational learning (Prahalad & Hamel, 1990; Kogut & Zander, 1992). Collaboration between partners is definitely an important avenue to and process of organizational learning. Hamel *et al.* (1989) believe that collaboration is a different form of competition and interfirm relations are largely competitive and governed by power and calculation. Through the study of 15 strategic alliances involving European, American and Japanese competitors, they highlight the tensions between collaboration and competition, as what they call "competitive collaboration". They suggest that cooperation has limits. A strategic alliance is a constantly evolving bargain whose real term goes beyond the legal agreement or the aims of top management. In addition, learning from partners is paramount. Successful companies view each alliance as a window on their partners' broad capabilities. Each partner believes it can learn from the other and at the same time limit access to proprietary skills. Furthermore, competitive collaboration provides a way of getting close enough to rivals to predict how they will behave when the alliance unravels or runs its course. By revealing a

competitor's management orthodoxies, collaboration can increase the chances of success in future head-to-head battles.

Table 3.1. The Dual Role of Strategic Alliances

Cooperation	Competition
▪ Economies of scale in tangible assets (e.g. plant and equipment).	▪ Opportunities to learn new intangible skills from partner, often tacit or organisational-embedded.
▪ Upstream/downstream of division of labour among partners.	▪ Accelerate diffusion of industry standards and new technologies to erect barriers to entry.
▪ Fill out product line with components or end products provided by supplier.	▪ Deny technological and learning initiative to partner via outsourcing and long-term supply arrangement
▪ Limit investment risk when entering new markets or uncertain technological fields via shared resources.	▪ Encircle existing competitors and preempt the rise of new competitors with alliance partners in "proxy wars" to control market access, distribution and access to new technologies.
▪ Create a "critical mass" to learn and develop new technologies to protect domestic and strategic industries. ▪ Assist short-term corporate restructuring by lowering exist barriers in mature and declining industries.	▪ Form a cluster of learning among suppliers and related firms to avoid or reduce foreign dependence for critical inputs and skill. ▪ Alliances serve as experiential platforms to "demature" and transform existing mature industries via new components, technologies or skills to enhance the value of future growth options.

Source: Lei (1993)

Lei (1993) also points out the risks associated with cooperation. Entering into an alliance can pose a considerable strategic risk for those firms that are unaware of how skills and ideas acquired from working with one set of technologies may be applicable somewhere in unanticipated ways. Numerous production and technology-based interrelationships have begun to blur once-distinct industry boundaries and lessen the rigidity of sharing manufacturing processes. Western firms, with few exceptions, have

been unable to utilize alliances to learn new skills as effectively as Japanese and other Asian partners. One critical reason is that senior management often fails to realize that collaboration and competition can go hand-in-hand when working with partners and cooperation can represent another form of unintended competition.

Table 3.1 attempts to capture some of the most significant dimensions of duality underlying cooperation and competition within the alliance mechanism. Along each dimension, there is a tension between potential benefits and costs. Successful companies may never forget that their new partners may be out to disarm them (Hamel *et al.*, 1989). Companies are not destined to become "hollowed out" once they understand the duality of alliances (Lei, 1993).

Chapter 4

Competitive Advantage and Strategy

> Competitive advantage is at the heart of a firm's performance in competitive markets. After several decades of vigorous expansion and prosperity, however, many firms lost sight of competitive advantage in their scramble for growth and pursuit of diversification. Today the importance of competitive advantage could hardly be greater. Firms throughout the world face slower growth as well as domestic and global competitors that are no longer acting as if the expanding pie were big enough for all.
>
> (Porter, 1985, p. xxi)

The concept of competition is essential in economics as well as in business management though various schools or perspectives provide somewhat different explanations. In business strategy, there are alternative views on competitive advantage, such as competitive position in the industry, benchmarking and best manufacturing practices, critical resources and competencies, and organizational learning. Amongst the various perspectives, Michael Porter's work has been most influential on competitive advantage, defining our understanding of competition and competitive strategy. Over the past two decades, the development of the RBV and core competences approach has attracted more and more attention from scholars on business strategy. Their emergence led to much of the reorientation in management and strategy thinking – from broad questions of corporate issues to the firm specific resources. The inquiry into the conditions for sustained competitive advantage defines one major research theme of the resource-based perspective along with diversification studies (Foss, 1997).

Strategic Positioning and Competitive Advantage

Porter's competitive advantage theory and the RBV are probably the most influential perspectives among various theories on competitive advantage. According to Porter (1980, 1985, 1996 & 1998a), a firm's performance is determined by the industry structure and profitability differences among competitors. The industry analysis concerns the competitive environment, using the "five-forces framework". It can indicate the potential profitability of the industry and assist in identifying the appropriate generic strategies to acquire competitive advantage. The essence of

competitive strategy is to search for a favourable competitive position in an industry. A firm achieves superior profitability in its industry by attaining either higher prices or lower costs than rivals. The sources of these higher prices or cost differences among competitors can be divided into two types: those due to differences in operational effectiveness and those due to differences in strategic positioning. Both operational effectiveness and strategy can best be understood by dividing firms into value chain activities. All companies must continuously improve operational effectiveness in their activities, but sustainable performance differences will most often depend on having a distinctive position. Strategy differences rest on differences in activities, such as the way that companies go about order processing, assembly, product designing, training, and so on. Sustainable competitive advantage depends on both tradeoffs of values that firms decide to offer and fit among numerous activities.

The Structural Analysis of Industries

The industry analysis concerns the large and sustained differences in the average profitability of industries. Competition in an industry is rooted in its underlying economics, and competitive forces exist that go well beyond the established combatants in a particular industry. Customers, suppliers, potential entrants, and substitute products are all competitors that may be more or less prominent or active depending on the industry (Porter, 1979).

The state of competition in an industry depends on these five basic forces. The collective strength of these forces determines the ultimate profit potential of an industry. The industry structure of "perfect competition" offers the worst prospect for long run profitability. The weaker the forces are collectively, the greater the opportunity for superior performance (Porter, 1979). The strength of the five forces varies from industry to industry, and can change as the industry evolves. In industries where the five forces are favourable such as pharmaceuticals, soft drinks, and database publishing, many competitors can earn attractive returns. But in industries where pressure from one or more of the forces is intense such as rubber, steel, and video games, few firms command attractive returns despite the best efforts of management (Porter, 1985). According to Porter (1979 & 1980), every industry has an underlying structure, or a set of fundamental economic and technical characteristics

that give rise to these competitive forces. A number of characteristics (elements) are critical to the strength of each competitive force. They are as follows.

Threat of Entry

New entrants to an industry bring new capacity, the desire to gain market share, and often substantial resources. The seriousness of threat of entry depends on the barriers present. There are six major sources of barriers to entry: economies of scale, product differentiation, capital requirements, cost disadvantages independent of size, access to distribution channels, and government policy. The seriousness of the threat of entry also depends on the reaction from existing competitors that entrants can expect. The incumbent firms may have used retaliation previously. They may possess substantial resources to fight back, including excess cash, borrowing power, productive capacity, or power over distribution channels. The incumbent firms may cut prices to keep market share, or the slow growth of an industry can affect its ability to absorb new arrivals.

Powerful Suppliers and Buyers

Suppliers can exert bargaining power on participants in an industry by raising prices or reducing the quality of purchased goods and services. Customers likewise can force down prices, demand higher quality or more service, and play competitors off against each other – all at the expense of industry profits. The power of each important supplier or buyer group depends on a number of characteristics of its market situation and on the relative importance of its sales or purchases to the industry compared with its overall business. A supplier group is powerful if it is dominated by a few companies and more concentrated than the industry it sells to; its product is unique or at least differentiated, or it has built up switching costs; it is not obliged to contend with other products for sale to the industry; it poses a credible threat of integrating forward into the industry's business; and the industry is not an important customer of the supplier group. A buy group is powerful if it is concentrated or purchases in large volumes; the products it purchases from the industry are standard or undifferentiated; the products it purchases from the industry form a component of its product and represent a significant fraction of its cost; it earns low profits, which create great incentive to lower its purchasing costs; the industry's product is unimportant to the quality of the buyers' products or services; the industry's product does not save the

buyer money; the buyers pose a credible threat of integrating backward to make the industry's product. A company's choice of suppliers to buy from or buyer groups to sell to should be viewed as a crucial strategic decision. A company can improve its strategic posture by finding suppliers or buyers who possess the least power to influence it adversely.

Substitute products

Substitute products or services limit the potential returns of an industry by placing a ceiling on the prices firms in the industry can profitably charge. Unless it can upgrade the quality of the product or differentiate it somehow (as via marketing), the industry will suffer in earnings and possibly in growth. The more attractive the price-performance trade-off offered by substitute products, the firmer the lid placed on the industry's profit potential. Substitutes not only limit profits in normal times; they also reduce the bonanza an industry can reap in boom times. Substitute products that deserve the most attention are those that (1) are subject to trends improving their price-performance trade-off with the industry's product, or (2) are produced by industries earning high profits. In the latter case, substitutes often come rapidly into play if some development increases competition in their industries and causes price reduction or performance improvement.

Rivalry among Existing Firms

Rivalry among existing competitors takes the familiar form of jockeying for position – using tactics like price competition, product differentiation, advertising battles, or increased customer services. Intense rivalry is related to the presence of a number of factors: competitors are numerous or are roughly equal in size and power; industry growth is slow, precipitating fights for market share that involve expansion-minded members; the product or service lacks differentiation or switching costs, which lock in buyers; fixed costs are high or the product is perishable, creating strong temptation to cut prices; capacity is normally augmented in large increments, which can disrupt the industry's supply-demand balance; exit barriers are high, which keep companies competing even though they may be earning low or even negative returns on investment; the rivals are diverse in strategies, origins, and "personalities", and often run head on into each other in the process. In addition, when an industry matures, its growth rate changes resulting in declining profits and (often) a shakeout. While a

company must live with many of these factors – because they are built into industry economics – it may have some latitude for improving matters through strategic shits. for example, trying to raise buyers' switching costs or increase product differentiation. or focusing on selling efforts in the fastest growing segments of the industry.

After assessing the forces in an industry, a strategist can identify the company's strengths and weaknesses to formulate the strategy. The crucial strengths and weaknesses from a strategic standpoint are the company's posture *vis-à-vis* the underlying causes of each force. There are a number of strategic approaches to five forces in an industry.

> Then the strategist can devise a plan of action that may include (1) positioning the company so that its capabilities provide the best defense against competitive force; and/or (2) influencing the balance of the forces through strategic moves, thereby improving the company's position; and/or (3) anticipating shifts in the factors underlying the forces and responding to them, with the hope of exploiting change by choosing a strategy appropriate for the new competitive balance before opponents recognize it. I shall consider each strategic approach in turn.
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> (Porter, 1979, p. 143)

Competitive Strategy

Porter has on many occasions pointed out the importance of distinction between operational effectiveness and strategy. His article "*What is Strategy?*" (1996) which explicates that distinction includes his latest thinking on competitive strategy. His recent works, such as the studies of Japanese companies (Porter, Takeuchi & Sakakibara, 2000) and the Internet in business (2001), are examples that he used to support his theory of competitive strategy further distinguishing the concepts of operation and strategic positioning.

> Operational effectiveness (OE) means performing similar activities *better* than rivals perform them. Operational effectiveness includes but not limited to efficiency. It refers to any number of practices that allow a company to better utilize its inputs by, for example, reducing defects in products or developing better products faster. In contrast, strategic positioning means performing *different* activities from rivals' or performing similar activities in *different ways*.
>
> (Porter, 1996, p. 62)

A large number of management tools and techniques have been employed to pursue productivity, quality and speed by companies. such as total quality management (TQM), benchmarking, time-based competition, outsourcing, partnering and reengineering. But many companies find themselves failing to translate the resulting operational improvements to sustainable profitability. The problems often lie in that these management tools take place of strategy. Differences in operational effectiveness are an important source of differences in profitability among competitors. Constant improvement in operational effectiveness is necessary to achieve superior profitability, but usually not sufficient. Porter has offered two reasons. Firstly, such competition produces absolute improvement in operational effectiveness, but leads to relative improvements for no one. Few companies can compete on the basis of operational effectiveness over an extended period, as there is a rapid diffusion of best practices. Porter *et al.* (2000) have illustrated that differences in operational effectiveness once at the heart of Japanese challenge to Western companies have failed many Japanese companies. Secondly, to imitate one another's improvements in operational activities, such as benchmarking, outsourcing to efficient third parties and TQM, can lead to competitive convergence where strategies converge and competition becomes a series of races down identical paths that no one can win. Such competition alone is mutually destructive. The danger is those management tools unwittingly draw companies toward imitation and homogeneity, and gradually managers have let their operational effectiveness supplant strategy.

Porter (1996) has stated, "Competitive strategy is about being different. It means deliberately choosing a different set of activities to deliver a unique mix of values." Porter explains that strategic competition can be thought of as the process of perceiving new positions that woo customers from established positions or draw new customers into the market. Strategic positionings are often not obvious, and finding them requires creativity and insight. New entrants often discover unique positions that have been available but simply overlooked by established competitors. Strategic positions emerge from three distinct sources. First, positioning can be based on producing a subset of an industry's products or services. It is variety-based positioning because it is based on the choice of product or service varieties rather than customer segments. This positioning makes economic sense when a company can best produce particular products or services using distinctive sets of activities. The second

basis for positioning is that of serving most or all the needs of a particular group of customers – needs-based positioning. It arises when there are groups of customers with differing needs, and when a tailored set of activities can serve those needs best. Some customers are more price sensitive, demand different product features, or need varied support and services. Differences in needs suggest that the best set of activities to satisfy them also differs. The third basis for positioning is access-based positioning, segmenting customers who are accessible in different ways. Access can be a function of customer geography or customer scale which requires a different set of activities to reach them in the best way. Porter points out that positioning is not only about carving out a niche. A position emerging from any of the sources can be broad and narrow. A focused competitor targets the special needs of a subset of customers. A broadly targeted competitor serves a wide array of customers, performing a set of activities designed to meet their common needs.

> Strategy is the creation of a unique and valuable position, involving a different set of activities. If there were only one ideal position, there would be no need for strategy. Companies would face a simple imperative – win the race to discover and preempt it. The essence of strategic positioning is to choose activities that are different from rivals'. If the same set of activities were best to produce all varieties, meet all needs, and access all customers, companies could easily shift among them and operational effectiveness would determine performance.
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> (Porter, 1996, p. 68)

A Sustainable Strategic Position and Trade-offs

According to Porter, choosing a unique position, however, is not enough to guarantee a sustainable advantage. A valuable position will attract imitation by incumbents. An imitator is likely to copy it by either repositioning itself to match the superior performer or seeking to match the benefits of a successful position while maintaining its existing position. However, a strategic position is not sustainable unless there are trade-offs with other positions. Trade-offs occurs when activities are incompatible. Trade-offs thus create the need for choice and protect against imitation.

Trade-offs arise for three reasons. The first is inconsistencies in image or reputation. A company known for delivering one kind of value may lack credibility and confuse customers in delivering another kind of value or two inconsistent things at the same time. Second, trade-offs arise from activities themselves. Different positions require

different product configuration, different equipment, different employee behaviour, different skills, and different management systems. Many trade-offs reflect inflexibilities in machinery, people, and systems. Third, trade-offs arise from limits on internal coordination and control. By clearly choosing to compete in one way and not another, senior management makes organizational priorities clear. Positioning trade-offs are essential to strategy. They create the need for choice and purposefully limit what a company offers. They deter imitations because imitators can undermine their strategies and degrade the value of their existing activities. Simultaneous improvement of cost and differentiation is possible only when a company begins far behind the current best operations and productivity practices. From the aspect of trade-offs, the essence of strategy is choosing what not to do. Without trade-offs, there would be no need for strategy.

Fit of Activities

Strategic positioning is also about how discrete activities relate to one anther. Competitive advantage comes from the way activities fit and reinforce one another. Fit locks out imitators by creating a chain that is strong as its strongest link. One activity's cost is lowered because of the way other activities are performed. One activity's value can be enhanced by other activities.

Porter (1996) suggested three types of fit. They are not mutually exclusive. First-order fit is simple consistency between each activity (function) and the overall strategy. "Consistency ensures that the competitive advantages of activities cumulate and do not erode or cancel themselves out. It makes the strategy easier to communicate to customers, employees, and shareholders, and improves implementation through single mindedness in the corporation." Second-order fit is activities reinforcing one another. Third-order fit is optimisation of effort. Coordination and information exchange across activities to eliminate redundancy and minimize wasted effort are the most basic type of effort optimization. Product design choices and coordination with suppliers or distribution channels may eliminate the need for some in-house activities.

> In all three types of fit, the whole matters more than any individual part. Competitive advantage grows out of the *entire system* of activities. The fit among activities can substantially reduces cost or increase differentiation. The competitive value of individual activities – or the associated skills,

> competencies, or resources – cannot be decoupled from the system or the strategy. Thus in competitive companies it can be misleading to explain success by specifying individual strengths, core competencies, or critical resources. The list of strengths cuts across many functions. and one strength blends into others. It is more useful to think in terms of themes that pervade many activities, such as low cost, a particular notion of customer service, or particular conception of the value delivered. These themes are embodied in nests of tightly linked activities.
>
> (Porter, 1996, p. 73)

Strategic fit among many activities is fundamental to sustainability of competitive advantage. It is harder for a rival to match an array of interlocked activities than it is merely to imitate individual activities. When activities complement one another, rivals will get little benefit from imitation unless they successfully match the whole system. Seeing strategy in terms of activity systems only makes it clearer why organizational structure, systems, and processes need to be strategy specific.

Porter has offered six principles for strategic positioning. Their full description is covered in Strategy and the Internet (2001). They can be summarized as:

1. A company must start with the right goal: superior long-term return on investment;
2. A company's strategy must enable it to deliver a value proposition, or set of benefits different from those that competitors offer;
3. Strategy needs to be reflected in a distinctive value chain;
4. Robust strategy involves trade-offs;
5. Strategy defines how all the elements of what a company does fit together;
6. Strategy involves continuity of direction – a distinctive value proposition that a company will stand for, even if that means forgoing certain opportunities.

The Resource-Based View

The Antecedents of the RBV

The RBV has been enthusiastically embraced in recent years by many scholars in strategic management. The RBV concerns firm resources and how they can result in differential performances between firms. Firms that able to accumulate and acquire valuable, rare and non-substitutable resources and capabilities can achieve

competitive advantage over competing firms. Given its focus on the firm itself and its appeal as a theory of competitive advantage, the RBV has become popular in the field of strategic management. Its influence can be seen in many scholars' works, for example, profitability and resource position (Wernerfelt, 1984), business strategy (Barney, 1986a), organizational culture (Barney, 1986b), competitive advantage and strategy (Barney, 1991; Grant, 1991), strategic alliances (Das & Deng, 2000), managerial rents (Castanias & Helfat, 2001), and international business (Peng, 2001).

The RBV was built on some early works of economics theories, such as the growth of the firm by Penrose (1959), Nelson and Winter's evolutionary theory of economics (1982), and industrial organization (IO) or economics. The relationship between the RBV and other branches of economics is well documented and discussed by various authors such as Wernerfelt (1984), Conner (1991), Mahoney and Pandian (1992), Foss (1997), and Barney (1991 & 2001a). Until the late 1980s, the RBV was characterized by a rather fragmented process of development. The earliest acknowledgement of the potential importance of firm-specific resources can be found in the work of economists, for example, Chamberlin and Robinson in the 1930s, which was subsequently developed by Penrose. Rather than emphasized market structures, these economists highlighted firm heterogeneity and proposed that the unique assets and capabilities of firms were important factors which gave rise to imperfect competition and attainment of supernormal profits (Fahy & Smithee, 1999).

Edith Penrose has provided insights into the nature and role of resources in the firm. For example, in *The Theory of the Growth of the Firm* (1959), she distinguishes resources from services, arguing that it is never resources themselves that are the "inputs" in the production process, but only the services that resources can render. This distinction may suggest the source of the uniqueness of each individual firm. She states that a firm is a collection of productive resources the disposal of which between different uses and over time is determined by administrative decisions. Firms utilize resources differently and the same type of resources yield different services when organized in different firms. Many scholars believe that Penrose's work has laid the intellectual foundation and the early exposition of the resource-based view. Rugman and Verbeke (2002) argued that Penrose indeed inspired many research questions in the resource-based field and shared many similarities with descriptive building blocks

of the resource-based view, but her premises were very different. She neither advocated, nor even viewed as critical in managerial practice, the use of resources to create isolating mechanisms against rivals and therefore as a tool to generate rents. She tried to rigorously describe the processes through which firms grow.

For Nelson and Winter (1982), firms can be seen as a hierarchy of practised organizational routines. Routines are intrinsically social and collective phenomena created and developed over time inside the firm. They are patterns of interaction that reside in group behaviour and some individual skills may reside in individual behaviour. Because of their complexity and tacit dimension, their creation and the development of organizational capabilities are a difficult and time-consuming process. Nelson and Winter argued that habits and routines act as relatively durable repositories of knowledge and skills. Routines may have the capacity to replicate through imitation, personal mobility, and so on. Imitation can be difficult and problematic. Routines are an example of firm resources and capabilities. Some authors, for example, Foss (1997) and Barney (2001a) point out that Nelson and Winter made an extremely convincing case that firms should be seen as essentially heterogeneous entities, characterized by their unique resource-bases. Rejecting equilibrium conditions and perfect information, the evolutionary theory is much closer to the RBV than to neoclassical economics in explaining competition and superior performance.

Kathleen Conner (1991) has made a comparison of the RBV and five schools of thought within industrial organization. The major streams of IO include the neoclassical perfect competition model, Bain-type IO, Schumperterian competition, and transaction cost economics. Her analysis indicates that a resource-based approach both incorporates and rejects at least one central feature of each of these IO-related theories.

Mahoney and Pandian (1992) have also examined the relationship between the RBV and industrial organization. They suggest that the resource-based approach is complementary to industrial organization analysis. While industrial organization focuses externally on the industry and product markets, the RBV focuses internally on the firm and its resources. Achieving competitive advantage requires both developing

and combining resources and positioning in the industry and adapting to the environment. The essential theoretical concept for explaining the sustainability of rents in the RBV is "isolating mechanism". The notion of isolating mechanism is an analogue of entry barriers and mobility barriers. The isolating mechanisms explain a stable stream of rents and provide a rationale for intra-industry differences among firms. The RBV is close to the "Harvard School" Mason-Bain-Porter framework in believing in the effectiveness of these isolating mechanisms.

In addition to economics theories, the RBV has also incorporated theories from the strategy field. The relationship between the RBV and the SWOT analysis (strengths-weaknesses-opportunities-threats) has been articulated by many scholars, for example, Wernerfelt (1984), Barney (1991), and Mahoney and Pandian (1992). The SWOT analysis has been a dominant framework in strategic management, conceived of by Kenneth Andrews (1971) in his *The Concept of Corporate Strategy*. It involves both the assessment of the external environment and internal conditions of the firm. Foss (1997) states that many of the changes that have taken place in the strategy field have been a matter of shifting attention between external and internal analysis, and it has been a characteristic of most approaches to strategy that they have primarily emphasized either an externally orientated perspective or an internally orientated perspective. Porter's five forces framework in 1980 was wholly orientated towards industry analysis, and had really next to nothing to say about firms' strengths and weaknesses. The increased interest in the strengths of individual firms has lead to the emergence of the RBV, and the article "*A Resource-Based View of the Firm*" by Wernerfelt in 1984 has become an important piece of the early works on the RBV.

Foss explained the origin of the RBV in the following way.

> Thus, the resource-based approach can claim honorable ancestors and equally honorable related contemporaries: it has a background in the mainstream of American management thinking, for example, via the Selznick, Chandler, and Andrews link. But it also connects to Chicago industrial organization theory and to transaction cost economics. And notions such as 'capabilities' and 'competences' – anticipated by Penrose's notion of 'services' – clearly imply links to organizational behaviour and organizational learning studies.
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> (Foss, 1997, p. 15)

The Major Contributions to the RBV

Competitive advantage is at the heart of strategic management. A major contribution of the resource-based model is that it explains long-lived differences in firm profitability that cannot be attributed to differences in industry conditions (Peteraf, 1993; Grant, 1991). Differences among firms in terms of information, luck (Barney, 1986a), and capabilities (Teece, Pisano & Shuen, 1997; Amit & Schoemaker, 1993; Grant, 1991) enable firms to generate rents. Firms' unique capabilities in terms of technical know-how and managerial ability are important sources of heterogeneity that may result in sustained competitive advantage. The RBV of competitive advantage examines the link between a firm's internal characteristics and performance. It is built on different assumptions about the firm and its resources from other models of competitive advantage, acknowledging heterogeneity (Penrose, 1959; Rumelt, 1984; Barney, 1991; Peteraf, 1993) and immobility (Barney, 1991; Peteraf, 1993) of firm resources. Some authors have suggested various conditions for achieving competitive advantage, such as value, rareness, non-substitutability and imperfect imitability (Barney, 1991), uncertain imitability and causal ambiguity (Lippmen & Rumelt, 1982; Reed & DeFillippi, 1990). Peteraf (1993) has proposed four conditions for achieving competitive advantage, namely resource heterogeneity, *ex post* limits to competition, imperfect factor mobility, and *ex ante* limits to competition. Peteraf suggests that resource-based theory has important implications for corporate strategy as well as single business strategy. Some authors have developed competency to explain performance and competitive advantage, for example, Selznick (1957) on distinctive competence, Prahalad and Hamel (1990) on core competence, and Teece *et al.* (1997) on dynamic capabilities.

Over the past decades, there has been a large and diverse collection of contributions in the areas of economics and strategic management that seek to either refine the concept of the RBV or use it as a framework for tackling conceptual and empirical questions (Fahy & Smithee, 1999). As a result, the different theories offered by many scholars present a demanding task for the literature review in this area. One characteristic of the resource-based view (or perspective) seems to be the fragmentation of the theory. The various contributions lack a single integrating framework (Grant, 1991; Fahy & Smithee, 1999). Foss in 1997 considered the RBV still as an emerging perspective.

and suggested that there had been a certain cumulative theory development. for example, a gradual refinement in the understanding of the conditions that resources must meet in order to yield rents. Foss has further stated that there are also many unsolved problems and issues in need of clarification. The RBV theorists use a number of different concepts such as resources, competences, capabilities, assets, and so on for what is often essentially the same things (Foss, 1997). The term competence is sometimes preceded by adjectives, core and distinctive, sometimes not, and sometimes used interchangeably with the term capabilities which, in turn, is used interchangeably with the term skills. To overcome this ambiguity, the label "resources" is best adopted as a general and all-embracing one, which can comprise tangible assets, intangible assets, and capabilities (Fahy & Smithee, 1999). Capabilities encompass the skills of individuals or groups as well as the organizational routines and interactions. Capabilities are a firm's capacity to deploy resources (Amit & Schoemaker, 1993), or the capacity for a team of resources to perform some task or activity (Grant, 1991). Some authors may distinguish resources and capabilities, and treat core competences or dynamic capabilities as another stream.

There are also deeper issues in need of clarification. Perhaps most fundamentally, there is little clarity and agreement as to how one actually goes on developing resource-based theories. On which disciplines should we primarily draw? Should economics still be a dominant source of inspiration or are there dangers associated with relying too much on economics (Foss, 1997)? Making things complex, some theories or schools within the RBV may share with the neoclassical theory of economics certain assumptions underlying propositions of the theories, for example, some approaches accept equilibrium and rationality under the conditions of competition theory, whilst others may reject them partially or substitute them with opposing ones such as entrepreneurship, bounded rationality, or asymmetric information. Peteraf has also explained the lack of agreement in the RBV as follows.

> In reviewing this work, one encounters numerous strands of research on a series of closely related topics. While each paper offers a distinct contribution, there is also considerable overlap of ideas. To the uninitiated this may be confusion. In part, this is because subtle variations in terminology across papers have made communication more difficult. But

> in addition, the underlying model seems somewhat disjointed, as if the ideas of these disparate authors have not fully coalesced into an integrated whole. While there is a general agreement as to the basic insights of the model, there are small disagreements over minor points.
>
> (Peteraf, 1993, p. 180)

No matter what approach taking within the RBV, one cannot shun the central issue of competitive advantage and rent generation. The key to competitive advantage could be, depending on theories, the attributes of resources, building and using core competences, entrepreneurship, or learning and innovation. One can hardly give a satisfactory answer to how to achieve competitive advantage unless he applies a specific theory of the RBV. Focusing on particular types and characteristics of resources, each theoretical approach or school can provide its own insights into competitive advantage and strategy. Within this context, there is a need to review divergent theories within the RBV and to clarify similarities and differences between them. Table 4.1 outlines the key concepts used and major theoretical contributions to the RBV by various authors from the 1980s to present. It does not attempt to chart the development of all relevant theories in the area, but simply summarizes the major and often cited works.

The resource-based view of the firm was first coined by Wernerfelt in 1984. He suggests that a resource is meant anything which could be thought of as a strength or weakness of a given firm. Resources can be defined as those tangible and intangible assets which are tied semi-permanently to the firm. Wernerfelt introduced the concept of resource position barriers, which are higher costs faced by firms acquiring a new resource compared to the costs enjoyed by firms that were first movers in creating and using a given resource. The general attractiveness of a resource, understood as its capacity to support a resource position barrier, is only a necessary, not a sufficient condition for a given firm to be interested in it. He has argued that firms need to find those resources which can sustain a resource position barrier, but in which no one currently has one. Firms have to look at resources which combine well with what they already have and in which they are likely to face only a few competitive acquirers. A general statement about the growth strategy is that in some sense it involves striking a balance between the exploitation of existing resources and the development of new ones.

Table 4.1 Key Concepts and Propositions of the Resource-based View

Concepts	Authors	Main Propositions and Contributions
▪ Resource position barriers ▪ Attractive resources ▪ Mergers and acquisitions ▪ Growth strategy	Wernerfelt, 1984	▪ Resource-based view can provide different immediate insights than the traditional product perspective ▪ Resource position barriers, analogous to entry barriers, indicate a potential for high returns ▪ A firm with a strong resource position can influence the acquisition costs or the user revenues of a firm with a weaker positions ▪ An acquisition can be seen as a purchase of a bundle of resources in a highly imperfect market ▪ Growth strategy involves striking a balance between the exploitation of existing resources and development of new ones
▪ Entrepreneurship or strategic competition ▪ Resource heterogeneity ▪ Uncertain imitability ▪ Isolating mechanisms	Lippman & Rumelt, 1982; Rumult, 1984	▪ Entrepreneurship and resource heterogeneity are central to business strategy, rejecting neoclassical theory of competition ▪ Isolating mechanisms can make competitive positions stable and defensible. Causal ambiguity is one isolating mechanism and limits competition by entry or imitation ▪ A firm's strategy may be explained in terms of the unexpected events in the environment that can create potential rents together with the isolating mechanisms ▪ A firm's stability and profitability fundamentally depend upon entrepreneurial activity
▪ Strategic factor markets ▪ Heterogeneity and imperfect mobility of resources ▪ Sustained competitive advantage	Barney, 1986a, 1991, 1995, 2001a, 2001b	▪ To seek above normal returns depends not only on implementing the strategies of imperfect product markets, but also of imperfect strategic factor markets ▪ RBV of competitive advantage is built on the assumptions of heterogeneity and imperfect mobility of resources ▪ Firm resources having the potential of sustained competitive advantage must have four attributes: valuable, rare, imperfectly imitable, and non-substitutable ▪ Integrating the RBV with the environmental analysis ▪ Applications of the RBV to other areas of management studies
▪ Asset stocks and flows ▪ Imitability ▪ Substitution	Dierickx & Cool, 1989	▪ Assets are distinguished as tradeable and nontradeable assets ▪ Asset stocks, which are 'built' or accumulated through a consistent time patterns of expenditures or flows, are strategic to the extent that they are nontradeable, nonimitable and nonsubstitutable
▪ Strategic industry factors ▪ Strategic assets ▪ Behavioural decision-making	Amit & Schoemaker, 1993	▪ Rent producing capacity (firms differing in the resources and capabilities they control) of strategic assets depends, in part, on their own unique characteristics as well as on the extent to which they overlap with the industry determined strategic factors

Concepts	Authors	Main Propositions and Contributions
		▪ Organizational rents can stem from investment decisions about strategic assets encountering uncertainty, complexity, and intrafirm conflict ▪ A multidimensional view for strategic assets combines industry analysis, the resource perspective and behavioural decision theory
▪ Conditions for sustainable competitive advantage	Peteraf, 1993	▪ The cornerstones of competitive advantage: resource heterogeneity, from which rents are generated; *ex post* limits to competition, which are necessary to sustain the rents: imperfect resource mobility, which ensures that the rents are bound to the firm and shared by it; *ex ante* limits to competition, which prevent costs from offsetting the rents ▪ The model has important implications for single business strategy as well as corporate strategy
▪ Theory of the firm ▪ Organizational routines ▪ Firm heterogeneity	Nelson & Winter, 1982; Nelson 1991	▪ Firms can be seen as a hierarchy of practised organizational routines and are essentially heterogeneous entities ▪ Because of complexity and tacit dimension, creation and development of organizational capabilities are difficult and time consuming ▪ Firms need to have a coherent strategy and to learn to develop the skills and resources needed for innovation and taking advantage of innovations
▪ Core competence ▪ Strategic architecture	Prahalad & Hamel, 1990	▪ Firms have certain core competences that span across products and businesses, change more slowly than products, and arise from collective learning ▪ Firms can achieve competitive advantage thorough creating and using their core competencies ▪ Diversified companies should develop a corporate wide strategic architecture
▪ Process, position and path ▪ Dynamic capabilities	Teece *et al.*, 1997	▪ Strategic dimensions of the firm are its managerial and organizational processes, its position and paths ▪ Organizational capabilities can provide competitive advantage only if they are based on a collection of routines, skills and complementary assets that are difficult to imitate ▪ Viewed in Schumpeterian competition, firms' capabilities to improve their distinctive competences or develop new ones play a critical role in shaping long-term competitive outcomes

Lippman and Rumelt (1982) have examined why some firms differ from their industry rivals in efficiency. They modelled entrepreneurship as the production of new production functions and generated firm heterogeneity as an outcome rather than a given. Their "uncertain imitability" approach ascribes intra-industry efficiency

differentials to the causal ambiguity inherent in many factors of production, abandoning the assumption of perfect information. The authors modelled entrepreneurs as rational maximizers with bounded knowledge to explain strategic or Schumpeterian competition. Rumelt (1984) explained the strategic firm as a bundle of linked and idiosyncratic resources and resource conversion activities. Business strategy was viewed as entrepreneurship that both depends upon and creates interfirm heterogeneity.

Rumelt (1984) extended the idea of uncertain imitability by positing that causal ambiguity is one of many "isolating mechanisms". In the pure theory of uncertain imitability, the isolating mechanism is causal ambiguity. The inability of economic agents to fully understand the causes of efficiency differences limits competition by entry and imitation. Reed and DeFillippi (1990) have further explained causal ambiguity and suggested three characteristics of competency for generating causal ambiguity, namely, tacitness, complexity and specificity. The isolating mechanisms also include, *inter alia*, specialized assets, switching and searching costs, consumer and producer learning, team-embodied skills, unique resources, special information, patents and trademarks, reputation and image, and legal restrictions on entry (Rumelt, 1984).

Barney discussed strategic factor markets in 1986. He has suggested that to seek above normal returns implementing the strategies of imperfect product markets is not sufficient. To enjoy above normal returns depends on imperfectly competitive strategic factor markets, through which the resources necessary to implement the strategies are acquired. He adopted an approach of defining resources to include all assets, capabilities, organizational processes, firm attributes, information, knowledge, and the like (1991). In the article of 1991, he addressed, in particular, the issue of resource heterogeneity and imperfect mobility as the basis for the RBV. To achieve sustained competitive advantage requires four attributes of resources: valuable, rare, imperfectly imitable, and non-substitutable. Imperfect imitability can result from unique historical conditions, causal ambiguity and social complexity. Barney also proposes, on several occasions (1991, 1995, 2001b), integrating the internal analysis with the environmental analysis when evaluating the sources of competitive advantage. Creating sustained competitive advantage depends on the unique resources

and capabilities that a firm brings to competition in its environment. Managers must look inside their firm for valuable, rare and costly-to-imitate resources, and then exploit these resources through their organization.

Dierickx and Cool (1989) have distinguished assets as tradeable and nontradeable. They developed a complementary framework to Barney's strategic factor markets to address the deployment of nontradeable assets. A metaphor of "bathtub" was used to describe asset stocks. Asset stocks are built or accumulated through a consistent time patterns of expenditures or flows. They are strategic to the extent that they are nontradeable, nonimitable and nonsubstitutable. The imitation of a particular asset stock is related to the characteristics of the process by which it may be accumulated. These characteristics include time compression diseconomies, asset mass efficiencies, interconnectedness of asset stocks, asset erosion, and causal ambiguity. The distinction between asset stocks and flows has an important implication for understanding performance differences among firms. The potential profitability is determined by the level of the stocks rather than simply the current strategic expenditures.

A multidimensional view for strategic assets provided by Amit and Schoemaker (1993) combines industry analysis, the resource perspective and behavioural decision theory. Strategic assets bestow the firm's competitive advantage. Rent producing capacity of strategic assets depends, in part, on their own unique characteristics as well as the extent to which they overlap with the industry determined strategic factors. The value of a firm's strategic assets extends beyond their contribution to the production process, and depends on a wide range of characteristics in terms of tradability, imitability, durability, appropriability, scarcity and complementarity. At the industry or product market level, certain resources and capabilities are subject to market failure, and have become the prime determinants of economic rents. The authors use strategic industry factors to refer to such industry conditions. Moreover, organizational rents can stem from investment decision-making about strategic assets when managers face uncertainty, complexity, and organizational conflicts.

Peteraf (1993) has developed a general model of resources and firm performance. It integrates various strands of research in the RBV and provides a common ground for

further work. She presented four conditions as the cornerstones of competitive advantage. They are resource heterogeneity, *ex post* limits to competition, imperfect resource mobility, and *ex ante* limits to competition. Resource heterogeneity creates Ricardian or monopoly rents; *ex post* limits to competition prevent the rents from being competed away; imperfect factor mobility ensures that valuable factors remain with the firm and that the rents are shared; *ex ante* limits to competition keeps the costs from offsetting the rents. Heterogeneity is the most basic condition; it is necessary for sustainable advantage underlying other conditions, but not sufficient. It is also recognized that the productivity of superior resources depends upon the nature of their employment and the skills with which a strategy based on resource superiority is implemented.

Nelson and Winter (1982) developed the evolutionary theory of economics (briefly explained in the early section). Their work has had great influence on some theories of the RBV such as competences and dynamic capabilities. The theory offered by Teece *et al.* (1997) sees a very similar approach. These authors point out that organizational capabilities can provide competitive advantage only if they are based on a collection of routines, skills and complementary assets that are difficult to imitate. Dynamic capabilities allow the firm to create new products and processes and to respond to changing market circumstances. Schumpeterian competition is a critical element for both evolutionary theory of the firm and dynamics capabilities. Both theories believe learning, developing distinctive competences, and innovations. Firms should have strategies to facilitate these processes.

What Determines Competitive Advantage of the Firm – Positioning versus the RBV

Competitive advantage is the central subject of strategic management and international business studies. Acquiring competitive advantage enables the firm to ultimately achieve superior performance. However, there is a lack of consensus amongst scholars as to what determines competitive advantage and how to achieve it. Theories differ in terms of the sources of competitive advantage, for example, whether superior performance takes the form of monopoly rents to protected market positions, or Ricardian rents to idiosyncratic firm-specific resources, or Schumpeterian rents to dynamic capabilities to renew advantages over time (Powell,

2001). In the development of management theories, strategic positioning and the RBV as the most influential perspectives for competitive advantage, have become the centre of the debate about the sources of competitive advantage. Many scholars began to question whether a firm's competitive position in the industry or its resources and capabilities fundamentally determine its competitive advantage and performance. Some scholars also hold different views about the relationship between the two perspectives and the possible way that they can be combined to explain competitive advantage.

In current discussions, a number of aspects can be identified, which show major differences of the positioning perspective and the RBV. Largely acknowledged in the literature, strategic positioning is orientated to the industry or the environment in which the firm operates, whilst the RBV concerns internal resources and capabilities of the firm. Strategic positioning emphasizes the industry level in the analysis; the RBV focuses on the firm as the unit of analysis. It is also understood that the industry analysis treats firms as homogeneous units, and in contrast, the RBV is based on the assumption of heterogeneity of the firm. However, the exact relationship between the two perspectives may be more complex than it seems to be at the first sight. The positioning perspective does not ignore operational activities at the firm level when formulating the positioning strategy in the industry. For the RBV, the core of sustainable competitive advantage hinges on the ability of the firm to prevent other firms in the industry from acquiring or imitating its valuable and unique resources. The configuration of operational activities is in essence about the way that resources are deployed and used in the firm. Therefore, the ostensibly clear and different two perspectives can have an intricate relationship, and the way that they are related to each other can be crucial to our understanding of competitive advantage and strategy.

A number of authors have discussed the relationship of the two perspectives for competitive advantage. Barney (1991 & 2001a) has positioned the RBV relative to the SCP paradigm in discussing competitive advantage. In spite of the fact that he is one of the leading scholars in the RBV, he does not reject the industry approach. Amit and Schoemaker (1993) explained strategic assets of the firm as sources of sustainable competitive advantage, combining the RBV, the industry analysis and behavioural decision theory. In the very first article of the RBV, Wernerfelt (1984) had spelled out

that the product market and firm resources were two sides of the same coin and ultimately they should work together to determine competitive advantage of the firm. Many other authors including Foss (1997), Priem and Butler (2001a & 2001b). and Mahoney and Pandian (1992), have also discussed the two perspectives for competitive advantage. Grant (1991) has suggested limitations of the positioning perspective for formulating competitive strategy. Moreover, Porter himself (1998a & 1998b) has explained his recent view on the positioning and resources for competitive advantage. In this context of the varied views, the following part will review and discuss some important works on strategic positioning and the RBV with a view to shedding light on the relationship of the two perspectives for competitive advantage.

SWOT Approach to the Positioning Perspective and the RBV

It is commonly acknowledged that the SWOT framework (Andrews, 1971) provides a basis for understanding the relationship of the positioning perspective and the RBV. Many scholars take the SWOT approach to explaining resources and the industry factors for competitive advantage. The RBV is considered as the analysis of strengths and weaknesses of the firm within the SWOT framework, while Porter's industry analysis is in the domain of the environmental opportunities and threats (Barney, 1991; Foss, 1997; Amit & Schoemaker, 1993).

Based on the SWOT framework, firms can obtain competitive advantages by implementing strategies that exploit their internal strengths, through responding to environmental opportunities, while neutralizing external threats and avoiding internal weaknesses. It is commonly understood that Porter and his colleagues' works have tended to focus primarily on analysing a firm's opportunities and threats in the competitive environment (Barney, 1991 & 1995). In particular, Porter's five forces model and *Competitive Strategy* (1980) for analysing industries and competitors are considered to have exemplified such an external approach to competitive strategy. Barney (1991) states that the analysis of the impact of a firm's environment on its competitive position, much of this type of strategic research has placed little emphasis on the impact of idiosyncratic firm attributes on a firm's competitive position. The environmental models of competitive advantage assume that firms within an industry are identical in terms of strategically relevant resources they control and the strategies they pursue, and the resources that firms use to implement their strategies are highly

mobile. In contrast, the RBV has two different assumptions about firms within an industry, *i.e.* heterogeneity of resources that firms control and imperfect mobility of resources across firms.

The environmental analysis is only half the story. A complete understanding of sources of competitive advantage requires the analysis of a firm's internal strengths and weaknesses as well (Barney, 1991 & 1995; Foss, 1997). Strengths and weaknesses are referred to as resources and capabilities (Barney, 1995). Managers must address important questions about the attributes of their resources and capabilities for sustained competitive advantage. Barney in principle acknowledges the SWOT framework for competitive strategy.

Taking the SWOT approach, some authors claim that the product market perspective and the RBV are complementary to each other, and they advocate the integration of the two to fulfil their potentials in strategic management (Mahoney & Pandian, 1992; Foss, 1997; Priem & Butler, 2001 & 2001b; Barney, 2001b). There is a duality between maximizing production given the resource constraints and minimizing resource costs given a desired production level (Wernerfelt, 1984; Mahoney & Pandian, 1992). While the two perspectives of the resource position of the firm and the product market should ultimately yield the same insights, one might expect these insights to come with differing ease, depending on the perspective taken (Wernerfelt, 1984). There have been limited attempts to integrate the RBV with the industry model, for example, by identifying resource values through characteristics of product markets, or determining different capabilities necessary to implement a strategy in an industry. In evaluating culture to be a source of sustained competitive advantage, Barney (1986b) points out that culture must enable a firm to behave in the way consistent with the firm's competitive position.

Complex Relationship between the Positioning Perspective and the RBV

The relationship between the positioning perspective and the RBV is often complex, and less clear-cut as the external perspective versus the internal one. Strategic positioning, as Porter (1996, 1998a & 1998b) points out, is not only about the analysis of industries and competitors, but also about the analysis of activities within the firm. At the same time, the RBV may extend beyond the internal domain of the firm to

examine the acquisition of resources in factor markets and the protection of resources against substitution and imitation by other firms.

According to Porter (1996 & 1998b), the performance of the firm, apart from industry factors, is attributed to operational effectiveness and positioning in the industry. The firm must constantly improve operational effectiveness by adopting the best practices and employing advanced technologies. At the same time, the firm must align its activities with its position in the marketplace. The most robust competitive positions often cumulate from many activities. Activities and the value chain provide a view of the firm as an interdependent system in which individual parts must be internally consistent.

The concept of factor market is used in the RBV with regard to the acquisition of resources. Barney (1986a) has discussed characteristics of strategic factor markets for firms to enjoy above normal returns. The product market refers to the industry where firms operate and implement their product market strategy. It contains, among other things, supplier and buyer factors. As the supplier conditions are part of the industry structure (Porter, 1979 & 1980), the factor market is in essence part of the industry structure in which firms are embedded. The acquisition of resources with particular attributes for sustainable competitive advantage cannot be independent of the industry conditions, and thus, the solely internal focus of the firm could miss important industry factors that may affect the acquisition of resources. It is acknowledged that the acquisition of resources is subject to imperfect factor market conditions (Barney, 1986a), or strategic industry factors (Amit & Schoemaker, 1993), and bounded rationality of investment decision-making by managers (Amit & Schoemaker, 1993).

Priem and Butler (2001a) point out that the RBV has made simplifying assumptions on the demand side – simplifying strategic analysis with an implicit assumption of homogeneous and immobile product markets. As the competitive environment changes, resource values may change. Thus, resource value is determined from a source exogenous to the RBV. Barney (2001b) has acknowledged that the value of particular resources depends on the specific market context in which they are applied. This view is also consistent with his early statement that not only firms are

intrinsically historical and social entities, but their ability to acquire and exploit some resources depends upon their place in time and space (Barney, 1991).

Although the environment has not been treated in detail, the RBV may in fact be helpful for the environmental analysis (Foss, 1997). The RBV could be helpful for understanding the nature of mobility and entry barriers since it directs attention to the resources that underlie these barriers (Foss, 1997; Grant, 1991).

Moreover, the value chain and resources are intimately linked within the firm. The value chain and configuration of activities may be considered as the way that resources are deployed and utilized within the firm, and the linkage of the value chain and resources may serve as a common ground for the two perspectives. Porter has stated:

> Strategy becomes the particular array of activities aligned to deliver a particular mix of value to a chosen array of customers. The configuration of each activity embodies the way that activity is performed, including the types of human and physical assets employed and the associated organizational arrangements. Competencies, then, become part of specific activities rather than abstract and disconnected from cost and buyer value.
>
> (Porter, 1998b, p. xviii)

According to Barney (1991), the introduction of the value chain by Porter (1985) can assist managers in isolating potential resource-based advantages for their firms, but the RBV pushes the value chain logic further, by examining the attributes that resources isolated by value chain analyses must possess in order to be sources of sustained competitive advantage.

Resources and Capabilities as Determinants of Competitive Advantage

Although many scholars accept the SWOT approach to the relationship of the RBV and the positioning perspective, scholars of the RBV mostly concentrate on resources of the firm in explaining competitive advantage, and argue that it is the resources rather than the industry or the environment that ultimately determine competitive advantage of the firm. Some authors, for example, based on statistical analysis, suggest that the firm level differences are more important than the industry level differences in explaining the performance of the firm. Barney emphasizes the four

attributes of resources as sources of sustained competitive advantage. Other authors stress isolating mechanisms and causal ambiguity (Rumelt, 1984; Reed & DeFillippi, 1990), non-tradable resources (Dierickx & Cool, 1989), and organizational learning (Nelson & Winter, 1982; Nelson, 1991; Kogut & Zander, 1992).

Grant (1991) has proposed a framework for formulating competitive strategy based on resource analysis. The framework is a five stage procedure for strategy formulation: analysing the firm's resource base, appraising the firm's capabilities, analysing the profit-earning potential of firm's resources and capabilities, selecting a strategy, and extending and upgrading the firm's pool of resources and capabilities. The author has explained, in particular, the relationship between the RBV and the industry analysis from his resource-based perspective.

Grant suggests that the environment analysis may not serve as a good basis for formulating strategy. Resources and capabilities can serve as the foundation for a firm's long-term strategy. This is because the starting point for the strategy formulation is some statement of the firm's identity and purpose – conventionally a mission statement. Typically the definition of the business is in terms of the served market of the firm.

> When the external environment is in a state of flux, the firm's own resources and capabilities may be a much more stable basis on which to define its identity. Hence, a definition of a business in terms of what it is capable doing may offer a more durable basis for strategy than a definition based upon the needs which the business seeks to satisfy.
>
> (Grant, 1991, p. 116)

In contrast to the industrial perspective emphasizing the attractiveness of an industry as a basis for superior profitability, Grant argues that the resource position of the firm is fundamental to the choice between cost and differentiation advantages, and between broad and narrow market scopes. Both cost and differentiation advantages depend on the possession of particular resources. For example, the ability to establish a cost advantage requires the possession of scale-efficient plants, technology, low cost materials and low wage labour. Similarly, differentiation advantage is conferred by brand reputation, proprietary technology, and an extensive sales and service network. Thus, business strategy should be viewed less as a quest for monopoly rents – the

returns to market power – and more as a quest for Ricardian rents – the returns to the resources which confer competitive advantage over and above the real costs of these resources.

A closer look at market power and monopoly rents suggests that market power too has its basis in the resources of firms. The fundamental prerequisite for market power is the presence of barriers to entry. Barriers to entry are based upon scale economies, patents, experience advantages, brand reputation, or some other resources which incumbent firms possess but which entrants can acquire only slowly or at disproportionate expense. Other structural sources of market power are similarly based upon firm's resources, for example, monopolistic price-setting power depends upon market share which is a consequence of cost efficiency, financial strength, or some other resources (Grant, 1991).

> The analysis of the rent-generating potential of resources and capabilities concludes that the firm's most important resources and capabilities are those which are durable, difficult to identify and understand, imperfectly transferable, not easily replicated, and in which the firm possesses clear ownership and control. These are the firm's "crown jewels" and need to be protected, and they play a pivotal role in the competitive strategy which the firm pursues. The essence of strategy formulation, then, is to design a strategy that makes the most effective use of these core resources and capabilities.
>
> (Grant, 1991, p. 129)

Strategic Positioning and Resources and Competencies

From the positioning perspective, Porter has offered his insights as to the resource and competency approach to competitive strategy. He has stated:

> Another school of thought asserts that factor market (input) conditions take primacy over industry competition in determining company performance. Again, there is no empirical evidence to weigh against the considerable evidence about the role of industry, and supplier conditions are part of industry structure. While resources, capabilities, or other attributes related to input markets have a place in understanding the dynamics of competition, attempting to disconnect them from industry competition and the unique positions that firms occupy vis-à-vis rivals is fraught with danger. The value of resources and capabilities is inextricably bound with strategy. No matter how much we learn about what goes on

> inside firms, then, understanding industries and competitors will continue to be essential to guide what firms should aim to do.
>
> (Porter, 1998a, p. xv)

Porter (1998b) points out that in the competition and strategy field, there has been a strong tendency to dichotomize external factors (industry structure and positioning) and internal ones (core competencies, critical resources). He criticizes contrasting positioning strategy and internal resources and competencies as missing the mark.

> It is simplistic to think that positions (product market competition) and supposedly more enduring internal skills, reputation, and organizational competencies can be disconnected. In fact, activities connect the two. Is a firm a collection of activities or a set of resources and capabilities? Clearly, a firm is both. But activities are what firms do, and they define the resources and capabilities that are relevant. Activities provide the connections between factor markets and product market positions. Activities are observable, operational, and directly connected to cost and differentiation. It is a particular strategy that makes most resources and capabilities valuable, and their value is diminished by a different strategy. If resources or capabilities are isolated from activities, strategy, and industry, companies become inward-looking. There is much to learn from thinking about a firm's stock of assets, but not in isolation.
>
> (Porter, 1998b, p. xix)

> Concentrating only on resources/competencies and ignoring competitive position runs the risk of becoming inward looking. Resources or competencies are most valuable for a particular position or way of competing, not in and of themselves. While the resource/competency perspective can be useful, it does not diminish the crucial need in a particular business to understand industry structure and competitive position. Again, the need to connect competitive ends (a company's position in the marketplace) and means (what elements allow it to attain that position) is not just crucial but essential.
>
> (Porter, 1998a, p. xvi)

Moreover, generic strategies can have implications for the role of resources in competitive success. For example, technology affects competitive advantage if it has a significant role in determining relative cost position or differentiation as it is embodied in value activities and involved in achieving linkages among activities. Culture has come to be viewed as an important element of a successful firm. Differentiation may be facilitated by a culture encouraging innovation, individuality, and risk-taking, while cost leadership may be facilitated by frugality, discipline, and attention to detail. Culture can powerfully reinforce competitive advantage if the

culture is an appropriate one (Porter, 1998b). Resources and strategic positioning are in fact inseparable. Different positions with their tailored activities require different product configurations, different equipment, different employee behaviour, different skills, and different management systems. Many trade-offs reflect inflexibilities in machinery, people, or systems. A company known for delivering one kind of value may lack credibility to deliver another kind of value or even undermine its reputation if it attempts to deliver two inconsistent things at the same time (Porter, 1996).

In summary, Porter's explanation of competitive strategy embraces both the industry conditions and firm factors. Strategy is about achieving a unity of the two elements bridging the division between firm internal activities and the external product market. Resources and competencies are not rejected by the positioning perspective, but contained and reframed within the activity-based analysis. Contrasting *Competitive Strategy* and core competencies/critical resources, as Porter (1998b) states, misses the mark and sets up a false dichotomy. After all, the positioning perspective is not about resources and capabilities. Barney may have offered useful insights here, in that the RBV simply pushes the value chain logic further, by examining the attributes that resources isolated by value chain analyses must possess in order to be sources of sustained competitive advantage. Also, if certain capabilities identified can facilitate or reinforce the competitive position of a firm, then the RBV may offer some valuable insights into how to develop these capabilities. In this respect, there is a possibility of incorporating the RBV into the activity analysis within the positioning framework.

The RBV certainly provides great insights into resources and capabilities in detail, but it is not yet in a position to reach the product market where the value of resources is ultimately determined and profitability of the firm is realized. This may be a major limitation of the RBV for competitive strategy. Grant's five-stage procedure for strategy formulation starting with resources and ending with resources, holding the proposition that the competitive position of the firm is fundamentally determined by its resources, is useful for adding understanding of resources for competitive strategy, but it appears to be giving rise to tautology, like some critiques of the RBV made by Priem and Butler (2001a & 2001b) and Powell (2001).

Finally, given the complex relationship between the positioning perspective and the RBV, the SWOT framework seems to be a bit too simplistic a way of treating them and characterizing their relationship. The SWOT approach may broadly be useful for understanding the RBV and the positioning perspective, but it does not accurately capture their relationship in greater detail, and such a way of interpretation as the internal analysis versus the external one could restrict understanding competitive strategy from either perspective.

Chapter 5
Sino-Foreign Joint Ventures in China

Sino-Foreign Joint Ventures

The Ministry of Commerce (MOFCOM) of China is the main government body administrating foreign investment in China. According to its department for foreign investment, Sino-foreign joint ventures are explained as follows:

> Sino-foreign joint ventures are also known as share-holding corporations. They are formed in China with joint capitals by foreign companies, enterprises, other economic organizations and individuals with Chinese companies, enterprises, other economic organizations and individuals. The main feature is that the joint parties invest together, operate together, take risk according to the ratio of their capitals and take responsibility of losses and profits. The capitals from different parties are translated into the ratios of capitals, and in general the capital from the foreign party should not be lower than 25%.
>
> (Invest in China, MOFCOM, n.d.)

The Sino-foreign joint ventures are among the first forms of China's absorption of foreign direct investment and they account for a great part of foreign investments. The Sino-foreign joint venture is governed by *The Law of the People's Republic of China on Chinese-Foreign Joint Ventures*. The law was first adopted in July 1979, and subsequently amended in April 1990 and March 2001. The law sets out the general principles governing the establishment and operations of joint ventures. It covers approval procedures, capital structure, equity contribution, management of joint ventures, foreign exchange, profit distribution, obligations of the partners of joint ventures, and settlement of disputes. The government also promulgated in September 1983 *The Regulations for Implementation of the Law on Chinese-Foreign Joint Ventures*, and made subsequent amendments to the Regulations in 1986, 1987, and 2001.

There are a number of other national and local laws and regulations which may apply to Sino-foreign joint ventures, covering specific areas such as taxation, foreign exchange, labour management, and so on. *The Industrial Catalogue Guiding Foreign Investment* issued by the central government has detailed specific industries and projects where foreign investments are encouraged, restricted or prohibited.

Furthermore, regulations of particular industries for foreign investment and China's agreement of its accession to the WTO are also applicable in various aspects to the establishment and operations of joint ventures in China.

A large volume of studies of Sino-foreign joint ventures have been conducted over the past two decades. The works cover various areas, such as establishment and management of joint ventures in general (Child, 1994; Tang & Ward, 2003), performance (Luo & Chen, 1997; Yan, 1998; Beamish & Jiang, 2002; Luo, Shenkar & Nyaw, 2001), ownership and control (Child, Yan & Lu, 1997; Child & Yan, 1999; Chadee & Qiu, 2001), human resource management and cross-cultural issues (Joynt & Warner, 1996; Tang & Ward, 2003), leadership teams (Li, Xin, Tsui & Hambrick, 1999), and partnerships (Child, 1994; Child & Faulkner, 1998; Gray &Yan, 1997).

Since there are many areas of research concerning Sino-foreign joint ventures, this part of the literature review will concentrate on a few salient issues of the joint venture. The author hopes the review can shed light on some important aspects of Sino-foreign joint ventures, which may help understand competitive advantage of Sino-British joint ventures in China. Specifically, the following section will discuss objectives of partners, control, performance, formalization, communication, and human resources in the joint venture.

Objectives of Chinese and Foreign Partners

Child (1994) states that the fundamental Chinese criteria for entering foreign joint ventures are (1) to absorb foreign capital, advanced technology and management skills and (2) to gain better access to export markets. It was also evident in some studies that the Chinese partner has a strong interest in achieving short-term profits. Tang and Ward (2003) have also noted that at a lower level Chinese firms may have further considerations such as greater managerial autonomy, higher salaries, and tax concessions.

Child (1994) and Tang and Ward (2003) have given the following two sets of reasons why foreign companies engage in foreign direct investment in China. Objectives of foreign partners can be (1) to access foreign markets, or (2) to secure a resource or basis for production not found elsewhere under the same favourable conditions. Child

has concluded that both sets of motives apply to foreign companies in China cases though they tend to vary somewhat in degree according to the source of foreign direct investment and the sector in question. The dominant motive for Western and Japanese corporations has been the prospect of gaining access to the Chinese market. Most Western investors have taken a long-term view that an early presence in China's market might lay the basis for a substantial market share and at the same time prevent international rivals from squeezing them out.

A recent survey of multinationals' alliances in China reported by McKinsey, however, shows that most foreign investors now judge the success of an alliance by its current profitability instead of by the longer-term strategic gains they used to pursue, such as learning how to operate in China, gaining access to its regulators, building market share or brand awareness, and developing an export manufacturing base. By contrast, Chinese partners often place a greater emphasis on acquiring Western management skills and production technology and on the secure employment that comes with foreign joint ventures (Kenevan & Pel, 2003).

The divergence of objectives between Chinese and foreign partners can cause conflicts and management difficulties in the joint venture. Child (1994) explained compatibility of partners' objectives in the following way:

> The willingness of foreign investors to commit capital and transfer technology to China, and to use local resources, is quite compatible with Chinese objectives. The foreign desire to produce for the Chinese market may present few problems if the joint venture's products are new to the country and/or if the market is growing rapidly. Equally, many foreign companies are happy to use China as a production base from which to export, particularly to developing countries and those of the former Soviet Union.
>
> (Child, 1994, pp. 228-229)

> On the other hand, the foreign partner's intention to safeguard its proprietary technology, to control the management of its investment and to import components or materials could clearly be in conflict with Chinese interests. Access to markets can also be the cause of serious dispute when this threatens the position either of Chinese producers or of the foreign partner's existing pattern of international business.
>
> (Child, 1994, p. 229)

Tang and Ward give the following suggestion about aligning the objectives of the partners.

> Given different aims between Chinese and foreign partners, the ideal combination might be conceived as one in which the Chinese side provides labour and materials at low cost, but of sufficient quality, with some access to the Chinese market, while the foreign side provides new technology and foreign exchange earnings. Striking such a balance requires careful negotiation.
>
> (Tang & Ward, 2003, p. 178)

Tang and Ward (2003) have offered several points regarding making joint venture arrangements when the two parties hold diametrically opposed preferences on the objectives. Small investments may be preferred to test the water; access to the large domestic market may well be the long-term aim; technology transfers may be approached cautiously because of fear of copying and spawning competitors; and wholly foreign owned ventures may be preferred to joint ventures for the greater control. Gradually phased paid-in capital offers a degree of protection in the event of the enterprise proving a disaster.

Child (1994) also pointed out a possible instance where one or both partners use a joint venture primarily as a platform from which to extract gains rather than look necessarily to its long-term development as a viable enterprise in its own right. The Beijing Jeep joint venture was one of such examples.

Control of the Joint Venture

Control is an issue associated with the joint venture partnership. Lu and Burton (1998) distinguish the precise boundary and broad boundary of international strategic alliances. The precise inner-boundary centres around the organizational structure of the alliance. The broad outer-boundary embraces both the alliance and the partner firms. In the case of equity joint ventures, partner firms as parents play stakeholder roles which benefit from the advantage of ownership, and inter-parent relationships determine the *de facto* control of the alliance. Although the international joint venture is an independent entity with its own structure and functions, its managerial authority is constrained by the *quasi*-hierarchies that extend from the parents.

Child (1994) has suggested that there are two channels of control as to the joint venture in China: external control and internal control. External control refers to government authorities expecting the joint venture to pursue policies which can benefit the local or national economy. Various regulations and relevant government authorities exercise such control in the joint venture, which can cover foreign currency transaction, imports and exports, business expansion, industrial relationship, and so on. Internal control refers to the control of internal management policies and practices within the joint venture. Representation on the joint venture board of directors can reflect the division of equity between partners. In the early joint ventures, the Chinese side most usually negotiated into the agreement management structures which divided responsibilities evenly between partners, so that each side's appointees "shadowed" the other. Some studies illustrated such a practice. The occupancy of key managerial positions to reflect the equity share may vary depending on country origins of the foreign partner. American partnered joint ventures often have a high proportion of mangers heading major departments. A high level of formal control appears to be a necessary condition for participation by that partner's managers in strategic decisions, at least in the earlier years of joint venture life (Child, 1994).

Child has also noted that American, European and Japanese investors have been mainly motivated by the prospect of access to the growing Chinese domestic market, and they have often invested on a considerable scale and entered into long-term joint venture contracts. Some cases suggest that the foreign partner may have the desire to manage the joint venture as a subsidiary within the overall network of the foreign company's global operations. Foreign partners may seek to retain control over proprietary know-how, not only to ensure the maintenance of quality standards but also to retain a strategic advantage.

Many joint venture partners wish to secure over 50% of the ownership. China's agreement on its accession to the WTO has defined the limit of foreign ownerships in several industries where many foreign companies are particularly keen to enter such as banking, insurance and telecommunications. However, 51% of the ownership or above may not assure control of the joint venture. There is an argument of the influence of resource contributions on the control structure (Child *et al.*, 1997). Tang

and Ward (2003) state that high technology input may secure foreign managerial control even where the foreign ownership is relatively small. Phasing in investment over an extended period of time can also provide incentives for the Chinese partner to continue to go along with the management strategy of its foreign partner.

Based on their studies of Japanese joint ventures in China, Isobe, Makino and Montgomery (2000) suggest that, for those foreign firms wishing to gain early mover advantages, it is more important to gain sufficient resource contributions from the partner rather than secure dominant control within the joint venture. The foreign firm that strictly pursues dominant control over its local joint venture partner may fail to gain its local partner's assistance for entry into a local market and, hence, miss the chance to gain early mover advantages.

Some other authors have also cautioned against partners pursuing dominant control in the joint venture. The studies on performance by Beamish and Jiang (2002) and Makino and Delios (1997) suggest that seeking a high majority ownership or a greater role in the joint venture can result in rising conflicts in control issues in the joint venture and lower performance. Their studies are explained in the next section on performance.

From a dual parent perspective, Luo *et al.* (2001) studied control and performance of joint ventures in China. Their study, however, shows that a parent's control over an IJV is a predictor of its satisfaction with the venture. While overall control executed by a foreign parent is important to its satisfaction with IJV performance, overall control is not associated with Chinese firms' satisfaction. Chinese partners seem to attach greater value to acquiring knowledge and skills from foreign partners than to overall control of IJV operations.

Performance

Assessing the performance of strategic alliances can be complex and problematic both in practice and in research (Olk, 2006; Reuer & Koza, 2000). Scholars may apply different criteria such as financial performance, goal achievement, partner relationship, and longevity and stability. Problem resolution or goal achievement can include, *inter alia*, profitability, market penetration, and technology acquisition (Gray,

2000). Some scholars use multiple measures (Luo & Chen, 1997). Olk (2006) has developed a model of performance measures which integrates commonly used performance indicators. Reuer and Koza (2000) point out limitations for using the joint venture as a unit of analysis, for the joint venture is often a means to an end rather than an end *per se*, and it is common for parent firms to have different objectives as well as payoffs. Cravens, Piercy and Cravens (2000) state that evaluation measures need to be tailored to the individual characteristics of the strategic relationship and the partners.

Some scholars have examined the performance of foreign invested enterprises in China including Sino-foreign joint ventures. Different measures are often used. For example, Luo and Chen (1997) investigated the influence of both business strategy and investment strategy variables on performance of IJVs in China. They employed multidimensional performance measures. The measurement corresponds to the strategic objectives and the role of the IJV, including efficiency, market growth, cost minimization and interpartner learning. The measurement has also taken other considerations of the IJV. Among the findings, of business strategy variables, product quality has a significant multivariate effect on an IJV's overall performance. R&D intensity and firm size have a moderate effect on a venture's overall performance, and advertising does not have a multivariate effect. Advertising can moderately and positively influence an IJV's market growth.

The study by Makino and Delios (1997) is concerned with overcoming local knowledge disadvantages faced by foreign firms. Based on a sample of 558 Japanese joint ventures located in Southeast and East Asia, they studied the relationship between local knowledge acquisition and performance. The performance variable was constructed from the JV's top Japanese manager's categorical assessment of its financial performance. They found a strong relationship between the presence of a local JV partner and higher performance. The finding suggests that a JV formed with a local firm can be a primary strategy over JVs formed with non-local partners and, perhaps, over a wholly owned subsidiary when a foreign firm invests in unfamiliar markets. However, parent experience was found to have a significant negative effect on performance in the presence of a local partner. An interesting result is the decline in performance that accompanies increasing parent experience in JVs established with

a local partner. As the foreign partner has a considerable amount of local knowledge. it may attempt to exercise greater control over the joint venture, and consequently this may increase conflicts with the local partner and lower the JV's performance. A JV's own experience is a primary factor influencing its performance.

This study provides some reasoning and evidence for acquiring a local partner. Firms are motivated to form JVs to ameliorate local knowledge deficiencies and to complement their existing resource base with a stock of local knowledge.

The study by Keneven and Pel (2003) shows that a venture's profitability increasingly depends on the Chinese partner's ability to provide an immediate competitive advantage, for example, by helping to find low-cost workers and providing access to privileged assets such as distribution networks in growing markets, operating licenses, factories, and land.

Beamish and Jiang (2002) examined the performance of about 3,000 Japanese subsidiaries in China including joint ventures in the period 1985-1999. The study shows a declining pattern of profitability of those firms in China. The authors employed subjective measurement of performance based on subsidiary managers' assessment of their business profitability. The authors suggest that both macro level locational factors and subsidiary level factors may explain the decline of the profitability.

Among the findings, first, subsidiary specific factors are more important predictors of performance than macro level economic and market conditions. Second, timing of entry was the most significant variable in explaining subsidiary performance. Other things being equal, for every two years of extra experience in China, a subsidiary could expect a 10% increase in the probability of generating profits. Third, there is a negative relationship between foreign parent firms' ownership level and subsidiaries' probability of profits. This cautions against the use of high majority ownership level, which is usually related to dominant foreign control of a subsidiary. High majority ownership may create unnecessary and ineffective dominant foreign control.

Luo (2001) takes a cooperative view of MNE-host government relations and theorizes resource commitment, personal relations, political accommodation. and organizational credibility as four building blocks for developing multinationals' cooperative relationship with host governments. His study of 131 multinationals' subunits in Southern China and Beijing indicates that the cooperative MNE-government relations have a significant and positive influence on multinationals' overseas performance measures such as financial return, market expansion, and asset efficiency. The author asserts that although the relations are not the sole determinant of operational success. cooperation with host governments represents a powerful predictor of performance variances.

Formalization

Unlike the Western management, Chinese management is often understood to be unsystematic and not geared towards performance. For example, it takes foreign managers time and patience to get their Chinese staff to appreciate the value of conducting meetings in a systematic and action-orientated manner (Child, 1994).

From the late 1980s, an increasing number of firms in the state sector began a process of moving towards formalization. Formalization is the introduction of a more systematic approach to the transmission of information and to defining the framework of managerial authority and responsibility. At the level of corporate governance, many state owned firms have adopted a company structure resembling that found in capitalist economies, complete with shareholders and board. At the internal level, the firms have drawn up explicit rules and procedures to guide the running of the company such as job descriptions, appointment procedures, promotion tests and grievance procedures (Tang & Ward, 2003). The firms engaged in joint ventures may be better positioned for establishing a more systematic management approach, but the extent of formalization that joint ventures have adopted varies. Larger firms tend to have developed formal systems more comprehensively (Child, 1994; Tang & Ward, 2003). American and European companies tend to introduce formalized systems for transmitting key information and for defining the framework of managerial authority and responsibility. The systems are defined in writing, standardized and operated on a regular basis (Child, 1994). The studies by Child suggest that American partners were more vigorous in introducing standardized techniques and procedures. They generally

placed considerable emphasis on the use of marketing techniques and on the establishment of a formal system for managerial responsibility and reporting. In contrast, formalization was less developed in Sino-Japanese joint ventures, where the Japanese partner attempted to fashion Chinese work behaviour through creating organizational cultures with strong collective norms.

According to Tang and Ward (2003), however, the convergence with the western practice may be less complete than it appears at first sight. The rules may appear similar, but their application differs. With a distinction of formal rationality and substantive rationality, one can recognize the importance of the person interpreting the rule in the Chinese context. Formal rationality entails the impersonal application of a rule applying equally to all within its scope. Substantive rationality is distinguished by a desire to judge each individual case on its merits, with the rule serving merely as a rough guide in the hands of the person who should take full account of the specifics of the situation.

> Where all societies, institutions and organisations contain elements of both types of rationality, in China the balance has traditionally leaned more heavily than in the West toward substantive rationality and in many ways continues to do so. In such an atmosphere, the introduction of formal rules into a firm may serve not to replace the cultivation of personal ties and conflict between cliques, but for the rules to be pressed into the service of theses cliques.
>
> (Tang & Ward, 2003, p. 92)

Moreover, some foreign partners press for the introduction of formal and recorded procedures, and this may partly overcome communication problems and help exercise their control of the joint venture. Control depends on communicating instructions and monitoring performance, which may be evaded by attempts to misinterpret orders or to hide or distort unfavourable feedback (Tang & Ward, 2003). Kenevan and Pel (2003) state that one of the critical factors for foreign investors is the way they monitor their ventures. However, through their study, they conclude that companies with successful ventures are more likely to give them informal lines of communication, for example, by scheduling regular gatherings to assess their operational performance and by resolving issues outside of board meetings.

Chinese Organization and Communication

The Chinese partner is usually a state-owned enterprise and retains the characteristics of state-owned enterprises. Child (1994) and Tang and Ward (2003) have pointed out that the managers of Chinese state-owned enterprises are accustomed to looking for top-down initiative and approval. The vertical emphasized establishment is not conducive to willingness by managers and employees to accept responsibilities outside a narrowly prescribed field, let alone to take initiatives. Nor does it encourage good communication or a broad corporate perspective. Child has noted institutional arrangements in relation to enterprises and communication in the joint venture.

> Paradoxically, a fundamental change in outlook is much the more difficult to bring about, particularly when existing ways of thinking are reinforced by institutional arrangements and their attendant ideology and when managers therefore must seriously consider the acceptability of new thinking to those in more powerful positions.
>
> (Child, 1994, p. 255)

> Language poses problems for communication between foreign managers and Chinese staff. In some joint ventures, three languages are in use: Chinese, English (which is the foreign language most Chinese have studied) and foreign partner's language. Even though the language barrier can be reduced by using good and trusted interpreters and working with other support staff possessing a language capability, it does reinforce the isolation of the foreign manager from informal communication with Chinese staff. It also means that foreign managers depend heavily on Chinese staff for communicating information both up and down the organization, at least on a day-to-day basis.
>
> (Child, 1994, p. 257)

> This is one aspect of a wider problem of communication and information flow within Chinese organizations which foreign managers confront when they enter into collaboration with them. Because the jobs and units within them are highly specialized, people working there tend to take a narrow view of their roles. Add to that vertical orientation which has been acquired from a centralized system and the Chinese tendency to regard information as a personal privilege, then one has the seeds of a major problem.
>
> (Child, 1994, p. 258)

Tang and Ward (2003) explain, in the following way, the competitive aspect of the joint venture partnership with regard to information and communication.

> Hiding information plays just as much as a key role in business as does sharing it. Given that strategic partners are likely to have conflicting as well as shared interests, it is not surprising to find them concealing information from one another. Each may harbour hopes of going it alone after mastering the partner's secrets. Each may hinder the other acquiring knowledge precisely for this reason. Barriers to information flow are thrown up as a result; making use of whatever material lies ready to hand, including language. Such barriers effectively stand in the way of establishing solid control over the enterprise, for power depends on the effectiveness of channels of communication. This is why power is so intimately bound up with administration, which is essentially the processing of information.
>
> (Tang & Ward, 2003, p. 196)

Human Resource Management

Foreign enterprises enjoy the legal freedom to hire staff for their enterprises as they see fit, choosing staff on the open market or selecting those available from their Chinese partner (Tang & Ward, 2003). However, there are various problems of human resource management in the joint venture. Differences between foreign and Chinese personnel practices can appear in a number of areas within the joint venture such as control of staff, salary scheme, recruitment, training, and so on (Tang & Ward, 2003; Child, 1994). The introduction of foreign approaches to human resource management has not been successful in many areas such as systematic schemes for appraisal, promotion and career development (Child, 1994). In particular, in the early days of the opening up, many foreign partners experienced pressures from local labour bureaux to retain employment and/or against wage differentials. Nowadays, many foreign companies may find the situation changed.

Hendryx (1986), who was the director of China Operations for Otis Elevator Company, suggested that establishing effective decision-making was a solution to many problems, which required foreign managers to win greater autonomy for the board and to limit the role of bureaucracy. Effective use of manpower would require having freedom to set up meaningful incentive systems and to employ people in right positions.

The work by Li *et al.* (1999) has important implications for human resource management in joint ventures. The authors focused on the effectiveness of leadership

teams in international joint ventures in China. They suggest that in those successful joint ventures, the top management group is typically an integrated team rather than simply a group or two factions. They have proposed a number of ways to improve the leadership team in terms of leadership composition, process (communication and decision making), structure (role definition), incentives, and leader's behaviours.

Contrary to conventional wisdom about unlimited supplies of low cost workforce and overstaffing, some foreign enterprises have actually faced recruitment difficulties in China, as reported in newspapers in recent years. Tang and Ward note such problems with joint ventures.

> For many successful joint ventures, a more pressing problem than overstaffing is the need to find and retain talented and qualified staff in an environment where the supply falls far short of the burgeoning demand. This has led to many ventures facing increasing wage pressure as they try to retain those staff with sought after skills. Here, the labour contract has become a means not of freeing the enterprise of unwanted workers, but of attempting to attach workers more closely to the firm. A number of enterprises, both foreign invested and domestic, have been experimenting with providing low cost mortgages for ten-year periods in the hope that the prospect of foreclosure will deter leaving.
>
> (Tang & Ward, 2003, p. 199)

China Country Specific Factors

It is vital to understand that the Chinese market has many special characteristics that make it a challenging place to do business (Walters & Samiee, 2003). Emerging economies, like China, pose even greater theoretical and practical challenges since the rapid changes taking place increase uncertainty for international firms operating there (Luo *et al.*, 2001; Child & Tse, 2001). In any IJV, the foreign and local parents are placed at a different geographical and cultural distance from the venture. The foreign parent is more vulnerable to local environment contingencies and may have greater difficulty assessing changes in the local environment (Luo *et al.*, 2001).

Location specific factors are an important issue in the study of international joint ventures as well as of FDI. As we have covered earlier certain aspects of laws and regulations concerning Sino-foreign joint ventures, this section will review a number

of salient country specific factors discussed in the literature, including market and competition, regional protectionism, and institutions which are idiosyncratic to China's context.

Market and Competition

There are disparities within and between provinces and regions across China. Apart from differences in natural endowments, there are major disparities in economic performance, infrastructure, and the standard of living in the country (Walters & Samiee, 2003; Wei, 2000). Disparities can also be indicated in regional comparisons of knowledge variables such as R&D input and output, FDI, education, and information (Walters & Samiee, 2003). The geographical distribution of Sino-British joint ventures in China (Li & Clarke-Hill, 2004) can corroborate such differences of the investment conditions as well as of FDI flows across the country. Therefore, China generally should not be regarded as a single, homogeneous market (Walters & Samiee, 2003).

The distribution system can present a challenge for foreign companies in China. For many goods, for example, consumer electronics and pharmaceutical products, distribution channels are fragmented and distributors do not have the same scale or reach as those in the US and Europe. Distribution of goods across regions can be difficult, and regional protectionism may also exacerbate the problem. It is critical for firms to learn about the market and distribution networks. Reported by *The Financial Times*, to get around the distribution problem in China, Sony distributes its notebook PCs through hundreds of stand-alone shops and sales counters in consumer electronics malls. Setting up its own distribution network has helped boost Sony's share of China's notebook PC market from just 1% in 2002 to more than 8% today (von Morgenstern, 2006, January 10). Carmakers are also putting much more emphasis on distribution networks in China. They need to create a broad network of dealers who know how to explain the benefits of their models to customers, get them close to the purchase, and service them once they have bought a car (Dyer, 2005, November 7).

As acknowledged, markets in China are characterized by intense competition in many industries. The toughest competitors are often local enterprises. In some industries, heavily subsidized state enterprises are able to obtain support from local banks and

governments, which in turn make over production and aggressive discounting possible (Walters & Samiee, 2003).

Some Chinese firms have also proved to be more effective than their foreign competitors in developing products and marketing strategies appropriate for the Chinese market. Also for MNEs, competition from other foreign suppliers, along with the widespread problem of counterfeiting, can result in losses even when the challenge from local competitors is relatively weak (Walters & Samiee, 2003).

The reform towards the market system has given both local and foreign firms more freedom to pursue their own business strategies. Child and Tse noted differences between local and foreign firms in pursuing their strategies.

> Foreign firms are accustomed to pursue a differentiation strategy based on superior design, quality, and strong brand appeal. Until recently, however, they could not take effective legal action against brand piracy because of institutional limitations. Most Chinese firms are using pricing strategies to compete. They acquire internationally standardized production technology, capture cost savings through large-scale production, and pass these savings on to consumers by offering products that match consumer budget constraints. Some of them replicate this strategy to gain market share and to enter other developing economies.
>
> (Child & Tse, 2001, p. 12)

Moreover, MNEs have different approaches to investing in China. Some may focus on building long-term strategic positions, while others may emphasize making profits and balancing short-term and long-term gains. Yan (1998) strongly advocates that MNEs pay attention to the short-term profits and learn to adapt to the market conditions in China. With some interesting cases of the 1980s and 1990s including Ericsson, Kodak (compared with Fuji), Tingyi, and Volkswagen (compared with Peugeot), the author argues that short-term success is the best litmus test in China for companies as they continue to monitor the external environment, to influence the competitive landscape, and to adapt their responses to opportunities and threats.

Ericsson was successful in taking advantage of demographical features and advertising campaigns. Kodak had learned from Fuji about the market and consumers, and it made substantial amounts of investment in distribution channels and out

competed Fuji in China. Volkswagen established good relationships with government authorities and targeted commercial customers and taxi companies after it entered China. As a result, its joint venture achieved impressive growth and profits from the 1980s to 1990s. Tingyi built its success on its knowledge about the customer needs of convenient noodles. All in all, these companies understood the environment and adapted quickly to the shifting market. Yan (1998) suggested that they paid attention to the short-term profits and were able to create critical mass to achieve scales and reduce costs.

Regional Protectionism

As China has 34 provinces, autonomous regions and special administrative municipalities, there exist great disparities across the country and regional protectionism is not uncommon across provinces, regions and cities. Some literature has addressed this issue. Walters and Samiee (2003) state that regional protectionism flourishes in China, as provincial and city authorities have developed market entry barriers that are designed to support local firms at the expense of their competitors based in other regions. For example, product standards for taxis are often manipulated to ensure that only vehicles produced at a local plant fulfil the specified requirements. Corporate capital equipment purchasing plans often must be endorsed by local bureaucrats who likely favour local equipment suppliers. These authors suggest that the basis of local protectionism arises from the usual misconceived notions that this supports local employment and *guangxi* relationships developed over many years between local businessmen and officials. Successful local enterprises as tax "cash cows" may reinforce the tendency of officials to support local firms over competing firms from other regions.

They also believe that protectionist forces are likely to remain strong in many Chinese local markets, irrespective of the country's membership in the WTO. "Thus, even when manufacturing takes place in the mainland, there may be significant, locally driven trade barriers that need to be surmounted when firms market in 'distant' regions." (Walters & Samiee, 2001, p. 101)

Child and Tse (2001) suggest that local protectionism is a limiting factor for institutional reform in China, which can impede achieving economies of scale and

scope. With decentralization and privatization, central government has delegated authority to lower level government units including provincial, city, and village governments. The authors note:

> The process of decentralization has not been smooth. Central government has not been able to find effective institutional mechanisms to ensure that local initiatives are prudent and consistent with national interests. It is common to find frequent changes of policy by the central government and resistance to such policies by local governments.
>
> (Child & Tse, 2001, p. 8)

China's Transition and Institutional Change

Child and Tse (2001) have explained institutional change as the central and most consequential contextual aspect of China' transition. "Institutional change in China is highly complex because in this formerly closed, state-dominated system, institutions have developed into a massive inter-dependent, multi-level network whose logic of operation depends as much on political influence and personal relationship as on concern for efficiency." (Child & Tse, 2001, p. 6) The institutional reform has been consciously experimental resulting in multiple systems of business ownership and governance (Boisot & Child, 1996, cited in Child & Tse, 2001).

China is becoming a more attractive place for MNEs as the government continues the reform and to develop the market system. For MNEs, institutional change, i.e. marketization, privatization and integration into the world economy, can imply that their consideration of whether to form joint ventures and their choice of partners will be determined less by their ability to work with the government and more on how the partner firms complement each other and the ability of the joint entity to develop sustainable competitive advantages (Child & Tse, 2001).

China's transition is not deterministic in nature but involves an interplay between a field of forces operating at different system levels.

> China is intrinsically complex by dint of its size and internal variation. This complexity is being amplified by the way that its leaders are addressing transition. As noted, they are endeavouring to change the country's institutional legacy through a policy of disequilibrium and non-

> linear progression intended to accommodate basic strains within the system, especially between the goals of reform and social stability. The inability to apply a simple linear model of transition means that international firms need new tools to function in dynamic and complex environments. The challenge for their managers is how to model non-linear complexity and analyze its implications.
>
> (Child & Tse, 2001, p. 18)

> For firms operating in China, their ability to enact local environmental conditions will clearly be a function of factors such as their global reputation, and their skill at generating political goodwill. Smaller firms may not have the resources, standing or experience to adopt this policy, and will hence tend to rely more heavily on coping with China's complex environment through the assistance of partners.
>
> (Child & Tse, 2001, p. 19)

Child and Tse have predicated, with China's entry into the WTO and its associated institutional developments, firms are likely to adopt a longer-term perspective towards operations in China. This will motivate them to consider equity rather than non-equity based modes with larger investment commitments. Statistics of MOFCOM indicate in recent years continuous investments in joint ventures and, in particular, rising investments in wholly foreign owned enterprises. In the meantime, although the central government pledges to fulfil China' WTO commitments, there is still a presence of significant inertia in the Chinese institutional structure. Local support in the implementation of the agreement may not be forthcoming (Walters & Samiee, 2003). The central government faces a daunting task, especially, to protect intellectual property rights (IPR), albeit some limited progress being made. A lack of effective protection of IPRs can have a negative effect on FDI activities, in particular, R&D related foreign investments. For example, MNEs may not want to pursue their subsidiaries' localization by transferring components to domestic suppliers due to concern about technology (Eberhardt, McLaren, Millington & Wilkinson, 2004).

Child and Tse (2001) point out that China "has to be understood in its own terms as a political economy rather than just a large marketplace. Its transition has quite distinctive institutional characteristics, and these can inform the endeavor to construct more context sensitive theories of international business." (p. 19) The authors also advocate employing multiple perspectives when theorizing about China's contexts for

international business. An institutional analysis of the country's transition can be fruitful.

Sino-British Joint Ventures and Host Country Factors

Over the last decade, China has remained as one of the largest recipients of foreign direct investment in the world. Joint ventures have been a major form of investment used by overseas firms. They have attracted a great deal of interest from scholars who study foreign direct investment in China.

As the most studies of Sino-foreign joint ventures focus on certain aspects of the joint venture, often related to partnerships, there is limited literature on the patterns of foreign joint ventures in China, especially of joint ventures with the foreign partner from a particular country. There is also a lack of systematic information regarding the formation of IJVs, for instance, IJVs formed by UK firms (Glaister, Husan & Buckley, 1998). Some studies on FDI in China suggest that there are differences in FDI distribution in terms of geographical location, industry sector, and ownership structure. These differences can indicate varying investment conditions and economic activities in the country as well as different investment strategies pursued by foreign firms (Broadman & Sun, 1997; Wei, 2000).

A study by Li & Clarke-Hill (2004) on Sino-British joint ventures provides an overview of the patterns of investment made by British firms and their Chinese partners. The study is based on the data of 551 Sino-British joint ventures formed over the period from 1983 to 1996.

Geographical Distribution

China covers a large geographical area and consists of 34 provinces, autonomous regions, special administrative regions and municipalities. There are great disparities across provinces, regions and cities in terms of natural resources, population, industry mix, level of economic development, and infrastructure.

The study shows that Sino-British joint ventures widely spread in 25 provinces, autonomous regions and municipalities. The number of joint ventures and their investment vary significantly across the regions.

In terms of total investment by Sino-British joint ventures, Jiangsu tops the list with US$5556 million. Fujian, Hebei and Shanghai follow it with investment values of some US$3000 million. These four regions account for 47% of total investment. Hainan and Shanxi have only US$5 million and US$8 million respectively. The data show that the remaining 9 provinces and autonomous regions mostly in central and western China have no recorded Sino-British joint venture activity. The pattern predominantly indicates that the eastern (coastal) region is the major destination of investment by British firms and their Chinese partners.

The geographical distribution of Sino-British joint ventures is consistent with the general pattern of foreign investment in China. By the end of 1998, the eastern region had received about 88% of total FDI in China. The central and western regions had received about 9% and 3% respectively (MOFTEC). This pattern of FDI had not changed significantly from the early stages of the reform. Wei (2000) identified several factors that contributed to the leading role of the coastal provinces in attracting FDI. They include preferential policy treatment, locational advantages, globalization and decentralisation of power. The economic data show that from 1992 to 1996 GDP growth in the eastern region was higher than in other regions, with Jiangsu and Guangdong in the lead. Market growth and size are considered as important factors especially for market seeking investment. The eastern region has, in general, better-developed infrastructure, more productive economies, a well-trained labour force, closer linkages with the central government and foreign countries, in particular the neighbouring Asian countries. These characteristics have also been traditional economic factors of FDI location, particularly important for efficiency seeking investment. The concentration of FDI in coastal provinces may also be due to the efforts of local provinces in promoting inward foreign investment. They have obtained more decision making power through decentralisation, marketization, globalization, and uneven development policies (Wei, 2000).

In tandem with the economic conditions and the local business promotion, Chinese government policy has played a central role in shaping the distribution of foreign investment in China. Firstly, the government opened the Special Economic Zones (SEZs) in the south of China in the early stage of the reforms. The investment areas then gradually expanded to other coastal cities, provincial capital cities and the

economic-technology zones in the interior regions. Secondly, the preferential treatment allows foreign-invested enterprises to enjoy tax-exempt status for a certain period of time or reduced-rate taxation in the SEZs, and in economic and technology zones designated by the State Council. Thirdly, the investment policy also has an objective of promoting export and this may give advantage to those designated zones and cities in the coastal regions in attracting foreign investment.

The investment policy should be viewed in the context of the development strategy of the economic reforms. Wei (2000) suggested that the regional policy was influenced by the "ladder-step theory" – a Chinese version of the growth pole and inverted-U theories. China, as a developing country, should concentrate its resources in the more developed coastal region, which is similar to a higher step; gradually the emphasis of development will be shifted to the central and western regions, and the diffusion of the coastal development will stimulate the development of the interior.

Jiangsu province is a good example for FDI and Sino-British investment. It ranks first in terms of total investment of Sino-British joint ventures, and hosts a large number of firms in textiles, chemicals, electrical equipment, real estate and business services, food, and non-metallic materials industries. The province is located in the coastal area with its historical ties to Shanghai and its increasing linkages with foreign countries. It has a relatively small proportion of state owned enterprises (SOE) in its economy. Its dynamic non-state sector, particularly township and village enterprises (TVEs) has contributed to its rapid growth (Wei, 2000; Jacobs, 1999). Moreover, local governments and enterprises have gained greater autonomy in investment decision-making. Local governments also pursue active preferential polices in the approval of foreign investment, tax relief, tariff reduction on imports, and the retaining of exchange earnings (Wei, 2000). The Kunshan Zone in Jiangsu illustrates effective business facilitation measures taken by the local government. The local authorities have used its natural advantages creating a physical and administrative environment that helps promote foreign investment (Ellman, 1998).

However, there is a difference in the geographical concentration of investment between Sino-British joint ventures and FDI in general. Jiangsu tops the list of the investment by Sino-British joint ventures, followed by Fujian and Hebei. In

comparison, the general pattern of FDI shows the largest amount of investment in Guangdong followed by Jiangsu, Fujian and Shanghai as in 1997 and 1998. This may be partly due to the discrepancy of the measurement of total investment of Sino-British joint ventures and FDI from overseas sources including other forms of investment. Despite this measurement problem, another two factors are important in explaining the difference. Firstly, locational patterns of FDI in China clearly relate to the source composition of FDI. Hong Kong investors prefer south China, especially Guangdong, mainly due to policy incentives, geographic proximity and cultural linkages. Taiwan investors prefer Jiangsu, Guangdong, Fujian and Shanghai. Investment projects from the US and other western countries prefer major economic centres and regions, such as Shanghai, Beijing, Tianjin, and the coastal provinces (Wei, 2000). Secondly, some investing countries and regions, particularly in Asia, have become a dominant source of FDI in China, and their choice of location may have influenced the geographical pattern of investment. Hong Kong alone accounted for over 50% of total FDI in China by 1996 and 1997 (MOFTEC).

Sectoral Characteristics

In the study, Sino-British joint ventures are classified into 24 broad sectoral categories according to the standard industrial classification (92).

The food sector (food products and beverages), the chemicals sector (chemicals, chemical products and man-made fibres), and the real estate, renting and business activities sector have the highest percentages both in terms of the number of joint ventures and investment value. There are also a large number of firms in electrical and optical equipment, but their investment value is relatively low. The utility sector (electricity, gas and water) has a small number of firms but has a high investment value. In contrast, agriculture (agriculture, hunting and forestry), fishing, mining, leather (leather and leather products), wood (wood and wood products), petroleum products, wholesale and retail (also including repair of vehicles, and personal and household goods), and hotel and restaurants have the lowest percentages both in terms of the number of firms and investment value.

The further examination reveals the following details of the industrial activities. About 25% of firms in the chemicals sector produce household chemical products and

23% produce pharmaceutical products. In the category of real estate and business services, more than half of the joint ventures are involved with real estate and property development. Many firms are involved with economic and financial information services, consultancy and advertising. Some firms also provide computer software and hardware services. In the sector of electrical and optical equipment, about one third of the firms manufacture computers and communications equipment.

The basic industrial structure and the trend of investment of Sino-British joint ventures are in agreement with the national economic situation. The larger proportion of investment in the sectors of food, chemicals and electrical equipment by Sino-British joint ventures could be attributed to the high-speed growth of secondary industry (including mining, manufacturing, utilities and construction) and the government industrial policy on foreign investment. Before the reforms, China's economy was characterised by heavy industry and disproportionate and lagging agriculture and light industry. The reforms have brought change to the industrial structure. Guo (2001) pointed out that the imbalance in industrial structure in the early period of the reform was somewhat mitigated by fairly rapid development of tertiary industry in the 1980s, but in the 1990s the high speed growth of secondary industry once again made the structural discrepancy obvious.

The above sectoral pattern of investment is largely consistent with the general industrial characteristics of capital flow in the world. The industries of food, beverages, chemicals and pharmaceuticals, electronic and electrical equipment were the most transnational among the world's top 100 firms (UNCTAD, 1998).

In respect of policy, the government formulated in 1995 *The Interim Regulations on FDI Directions* and *The Industrial Catalogue Guiding Foreign Investment*. The regulations and catalogue classified foreign investment projects into four categories: encouraged projects, restricted projects, prohibited projects, and permitted projects (not listed in the catalogue). The Industrial Catalogue highlighted priority industries alongside the principles of structural adjustment and the introduction of advanced technology. The projects to encourage foreign investment mainly include agricultural new technology and agricultural comprehensive development, energy project, transportation, vital raw materials, high-tech projects, and technological upgrading of

traditional industries. The regulations may underscore the bigger proportion of investment in those industries by joint ventures, which fall in the encouraged categories.

The data analysis shows that the utility sector has a small number of joint ventures but high investment value. Several factors may help explain this. Firstly, this sector was under-developed before the reforms. Naughton (1995) noted that in the reforms the robust economic growth increased the need for government investment in public goods and infrastructure. The result was the pressure on the government to concentrate investment on infrastructure provision and strategic industrial sectors, such as energy. Secondly, the natural resources sector and utilities were dominated by state ownership. They were usually large SOEs and exhibited economies of scale (Naughton, 1995). They required a large amount of investment. Thirdly, the government industrial policy has been encouraging foreign investment in infrastructure, energy and technology enhancement throughout the reforms. This is reflected in the preferential treatment of FDI and the Industrial Catalogue, including these projects as items to be encouraged for FDI.

Agriculture, fishing, mining, leather, wood, petroleum products, wholesale and retail, and hotel and restaurants have the lowest percentages both in terms of the number of firms and investment value. Several factors may explain the low investment in these sectors. Firstly, secondary industry has experienced a fast growth disproportionately to primary and tertiary industry (Guo, 2001), and thus leaving investment in agriculture and service sectors behind. Secondly, the industries including, *inter alia*, petroleum, refining, logging, utilities, have the biggest share of SOEs in gross output, and they were non-competitive sectors (Naughton, 1995). SOEs have been undergoing restructuring since the industrial reform in the 1980s, and foreign investment was channelled to some of these sectors later in the further industrial reform. Thirdly, oil refinery had been restricted for foreign business before new rules were set out in China's recent WTO agreement. Finally, the government had largely restricted foreign investment in the retail sector. Since 1992 the State Council decided to launch trial operations of foreign-invested commercial retail businesses in a few major cities and the SEZs. In late 1996 there were two joint venture chain stores approved involving a Dutch company and a Japanese consortium (Kahal, 2001).

In contrast to limited investment in retail distribution and hotel and restaurant business, there is a large amount of investment in real estate and business services. The large investment value in these areas may be due to the classification of the data based on the SIC(92), for they cover many specific sectors at the lower levels, and thus their combined investment value can be large at the aggregate level. Moreover, the data also show that there is no investment in some sectors, such as banking, insurance and telecommunications. This was due to the restrictions imposed by the government. The further opening of these sectors was drawn in China's WTO agreement.

The study also shows a characteristic of the industrial composition in three municipalities (Beijing, Shanghai and Tianjin). All these municipalities have at least 22% of Sino-British joint ventures in real estate and business services and have at least 15% in electrical equipment. Most firms in these sectors are engaged in providing economic and financial information, consultancy, and computer hardware and software services, and manufacturing electronic, telecommunications and computer related products. In contrast, other regions have much lower percentages of joint ventures in these sectors. The industry composition is more evenly distributed in those regions, or in some cases reflects the local, traditional industry base. There may be a propensity that the three municipalities are more likely to attract some types of investment, which require a higher content of skills, knowledge-based assets and technology.

China's regulatory framework was undergoing significant changes with its entry into the WTO. When the improved regulatory regime becomes commonplace and the market becomes more liberalized, the economic determinants are likely to exercise greater influence than ever before on foreign investment, alongside regulations and business facilitation measures. More importantly, the distinctive combination of locational advantages, including human resources, infrastructure, market access, economic level, knowledge, and innovative capacity, can be critical for foreign investment corresponding to strategies of MNEs.

PART 2

Methodology

How to conduct a management research project may depend on the issues to be investigated in the research and the objectives to be achieved. It may also depend on the theoretical perspective that the researcher takes and his philosophical position in the social sciences. Methodology is an integral part of the research; it is like an architect's blueprint for a building. Methodology sets out a structure and procedures of an enquiry and the way that data are collected and analysed. The essential part of methodology is research design which is to ensure that the evidence collected enables the researcher to answer research questions as unambiguously as possible.

This part of the thesis will address methodological issues of the research on Sino-British joint ventures. The research on Sino-British joint ventures in China is concerned with competitive advantage of Sino-British joint ventures and the strategies used to acquire competitive advantage. The subject can concern a number of key themes: competitive advantage and strategy, strategic alliances and partnership, and host country conditions. The aim of the research is to explain how Sino-British joint ventures acquire competitive advantage in China and why some joint ventures are competitive while others are not.

In the light of the research questions and objectives, the author has developed a conceptual framework for investigating competitive advantage and strategy of Sino-British joint ventures. The framework is developed based on theoretical perspectives, including strategic positioning, the RBV, and theories of strategic alliances and FDI. It posits that characteristics of the joint venture and host country conditions may interact with or influence the positioning and resource and capabilities of the joint venture, consequently the joint venture's acquiring competitive advantage. The conceptual framework is to provide guidance for subsequent empirical studies.

Given the nature of competitive strategy being distinctive and the need for a contextual consideration of the joint venture, the research employs case study strategy

to conduct empirical enquiries. Five in-depth cases are investigated. The research design addresses rationale of the research, case selection, data collection, and data analysis.

The structure of the methodology part is as follows: Chapter 6 will explain research questions, theoretical rationale, and the conceptual framework for the research on Sino-British joint ventures. Chapter 7 concerns the research strategy. It will explain the case study design, including case selection, data collection, single case analysis, and multiple case analyses. The chapter will also address some relevant methodological issues of the study of Sino-British joint ventures.

Chapter 6
Theoretical Rationale and Research Framework

Research Questions

The research of Sino-British joint ventures is responding to the increasing competition among firms in today's China. MNEs often encounter intense competition in the Chinese marketplace from local firms as well as from other MNEs with which they may have been competing elsewhere in the world. For joint ventures, this business reality highlights the need for understanding the business environment and devising effective strategy to compete with local firms and other foreign invested enterprises. In this context, the research of Sino-British joint ventures is to investigate how Sino-British joint ventures compete in China and to explain why some joint ventures are competitive and others are not. In other words, the research intends to undertake a detailed examination of the causes that might lead to competitive advantage of the joint venture. In this light, the main issues to be investigated can be formulated into the following research questions:

1. How does the Sino-British joint venture operate in China?
2. How does the Sino-British joint venture exploit location specific advantages in China such as local economic and legal conditions to help achieve competitive advantage?
3. How does the partnership influence the joint venture acquiring competitive advantage?
4. Why has a particular Sino-British joint venture gained competitive advantage and achieved superior performance in China, and/or a particular Sino-British joint venture not?
5. What are the commonalities among those joint ventures that have competitive success and/or among those that have competitive failure?

Question 1 is about the way that Sino-British joint ventures operate in China, and is of descriptive nature. Answering this question will enable the author to gain a general idea about the joint venture and its business activities. Question 2 concerns the distinctive environmental factors in China, which may interact with the joint venture's

operation and strategy, consequently affecting its competitive advantage. Firms may exploit favourable locational conditions when engaging in international production. Question 3 concerns characteristics of the joint venture as distinguished from other forms of business and foreign investment. The way that the joint venture operates and competes in the marketplace may very much depend on the cooperative relationship between the partners. Question 4 searches for various causes of competitive success or failure of a particular joint venture in China. It seeks a comprehensive explanation of the joint venture embracing major factors that may underlie competitive advantage and strategy of that joint venture. Question 5 is to extend the explanation of a particular joint venture to other comparable cases. Answering this question aims to arrive at generalizing those successful joint ventures and unsuccessful ones and to offer some implications for managing joint ventures in China. By searching answers to these questions, the research aims to explain competitive advantage and strategy of Sino-British joint ventures and to advance the understanding of Sino-foreign (British) joint ventures and their competitive strategy.

Theoretical Rationale and Conceptual Framework

The literature review in Part 1 has reviewed some major theoretical perspectives that can be employed to study Sino-British joint ventures. These perspectives concern competitive advantage, strategic alliances, host country conditions for international production, and Sino-foreign joint ventures. They can be used to provide a theoretical basis for empirical studies of Sino-British joint ventures in China.

Regarding the literature on competitive advantage, many scholars have recognized that competitive advantage can derive from both the distinctive positioning and the possession of valuable resources by the firm. According to strategic positioning profitability of the firm is determined by the industry structure, the firm's operational effectiveness and its position in the industry. The essence of competitive strategy is to search for a favourable position in the industry. Sustainable competitive advantage depends on both tradeoffs of the values that the firm decide to offer and fit among business activities. The emergence of the RBV has led to the reorientation in management and strategic thinking from broad corporate issues to firm specific resources. The RBV suggests that firms possess individual resources and their differential performance is fundamentally due to the heterogeneity of resources each

firm owns. The firms that are able to accumulate and acquire rare, valuable and non-substitutable resources and capabilities will achieve competitive advantage over competing firms. Alliances may enable the firms to pool their resources and to achieve this objective.

While strategic positioning concerns the firm's position in the marketplace and its configuration of activities, the RBV focuses on the internal aspects of the firm. In spite of their different approaches, strategic positioning and the RBV may ultimately yield the same insights into competitive advantage and strategy. Distinctive positioning and unique resources may be seen as complementary, and they may work together to determine competitive advantage. Performing value chain activities in line with the positioning requires particular sets of resources and capabilities. The value of resources and capabilities is specific to a position or strategy of the firm, and depends on the specific market context in which they are applied. Valuable resources and capabilities can facilitate or reinforce the competitive position of the firm. The combination of these two perspectives can provide a theoretical framework for analysing competitive strategy of Sino-British joint ventures.

Joint ventures are a form of strategic alliances. Various theories are applied to strategic alliances, including, *inter alia*, transaction cost economics, international strategy theory, and strategic management theory. They can cover the forms, motives, management, performance and interfirm cooperation of strategic alliances. Given that strategic alliances can be used to enhance a firm's competitive position on the market and to achieve a new configuration of activities as well as to share or transfer skills and resources between the partners, the research on Sino-British joint ventures can thus incorporate theories of strategic alliances into the study of competitive advantage. Motives for forming the joint venture, resource provisions by partners, and cooperative relationship between partners may have an effect on the competitive strategy of the joint venture.

Theories of international production can cover MNEs and FDI. As a general framework, the eclectic paradigm explains the levels and patterns of international production activities, and can incorporate locational factors into the analysis. Based on this paradigm, the UNCTAD has set out three sets of factors regarding the host

country determinants of FDI. They are the policies of host countries, the proactive measures countries adopt to promote and facilitate investment, and characteristics of their economies. Locational theory of FDI for developing countries can further provide insights into the host country factors and government policies for FDI.

Through economic reforms over the last two decades, the Chinese economic system has undergone major changes from a centrally-planned economy to a market-orientated economy. The macroeconomic environment, industrial reform and strategy, liberalization of foreign investment and trade, and regional development are amongst the most important factors influencing business activities in China. Given China's distinctive economic and social environment, the host country determinants can be seen as having significant influences on joint ventures' activities.

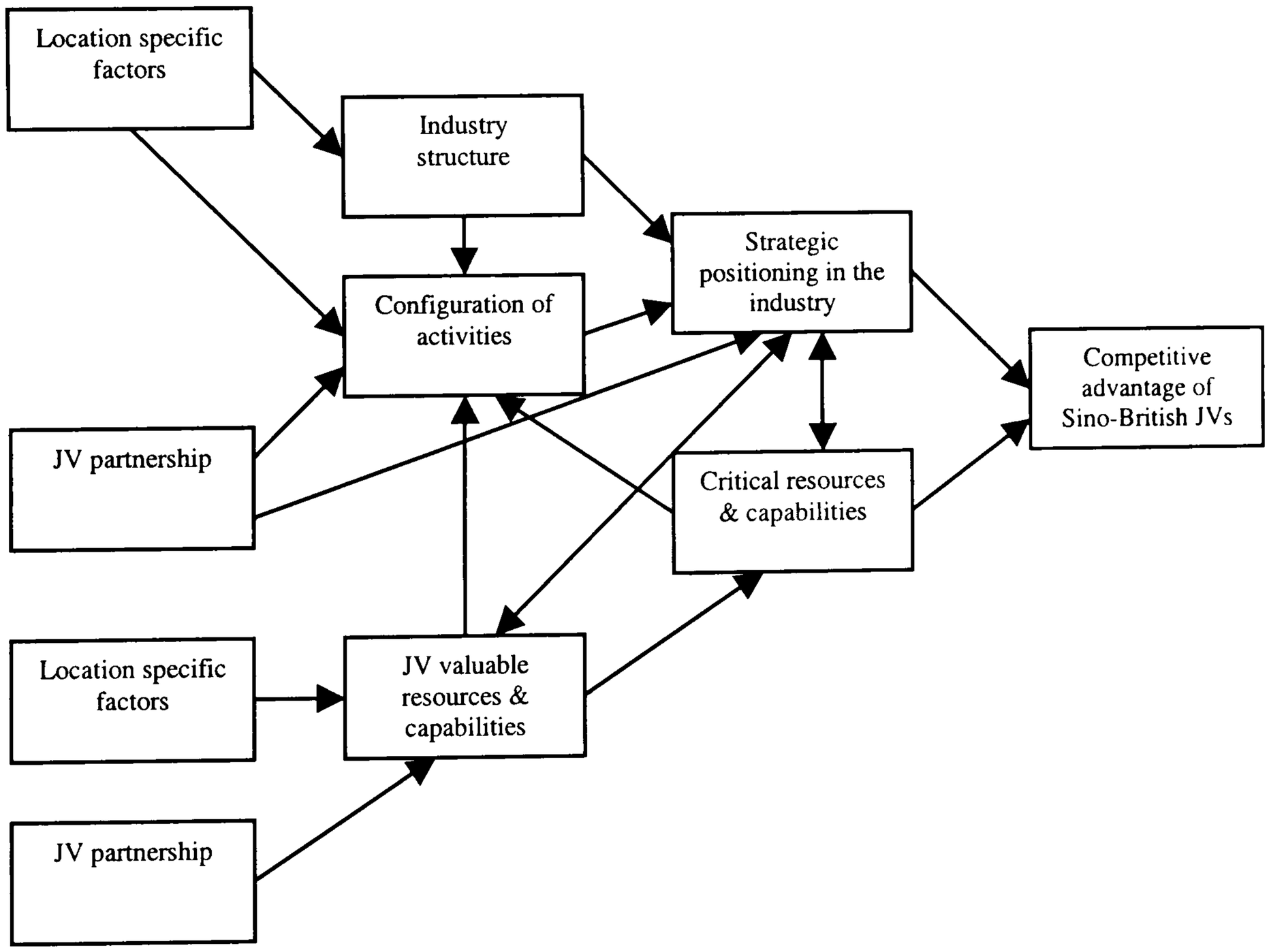

Figure 6.1 Conceptual Framework for Sino-British Joint Ventures in China

The above perspectives can lay the theoretical foundations of the research on Sino-British joint ventures embracing the multi-dimensions of positioning, firm resources, partnerships, and locational factors. The general approach to the study of Sino-British joint ventures is shown in Figure 6.1 The Conceptual Framework. Competitive advantage and strategy can be analysed from both strategic positioning and the RBV. The research concerns the overall competitiveness of the joint venture versus its competitors in the marketplace. Strategic positioning and the RBV may provide different explanations for competitive success or failure of the joint venture. Within the joint venture, the research concentrates on how the joint venture partnership can be interacting with the positioning and the alignment of resources. Some relevant theories of strategic alliances can be usefully incorporated into the analysis of competitive advantage and strategy. In the meantime, the research takes into account location specific factors in the analysis in order to provide insights into the joint venture's strategy and operations in China. Successful joint ventures may have effectively exploited location specific advantages in achieving and upgrading their competitive advantage.

By synthesizing the different theories, this conceptual framework seeks to overcome theoretical limitations of a single perspective and thus to provide an overarching view of the joint venture. The framework is used to guide empirical studies of how valuable resources and capabilities are deployed in operational activities and facilitate the positioning of the joint venture. It would be desirable if the empirical studies could shed light on the attributes of resources as sources of sustained competitive advantage in relation to the positioning. Incorporating various factors of joint venture partnerships and host country conditions into strategic positioning and the RBV, the framework can illustrate the mechanisms that are working to lead to competitive advantage of the joint venture. Competitive advantage may come from many things, but it is determined by the internal relationships amongst them.

The framework also defines broad categories of relevant data for empirical research. The data required of Sino-British joint ventures are informed by the theories as discussed above and in the previous chapters of the literature review. Sino-British joint ventures can thus be conceptualized and operationalized into the following

categories of data to be collected. They can be constructs or variables pertinent to the empirical studies.

Industry Characteristics – industry growth, supply and demand, firms and competition, suppliers, customers, and substitute products

Positioning – products, cost advantages, customers, distinctive characteristics, and positioning tradeoffs

Operations – operational process, discrete activities, and fit among value chain activities

Resources – valuable assets, knowledge, management skills, technology, patents, reputation, capabilities, and organizational culture

JV Partnership – partner objectives, resources provided by partners, cooperation (and competition), parent networks, and management models

Locational Advantages – policy framework (FDI, industrial, and other relevant regulations), economic determinants (market, physical infrastructure, input materials, human resources, distribution system, business networks, technology and innovative capacity), and business facilitation (administrative institutions and local government support)

Competitive Advantage – long-term financial performance, achievement of objectives, distinctive position in the industry, resource attributes, and operational effectiveness

Chapter 7
Research Strategy

Multiple Case Studies of Sino-British Joint Ventures

The case study approach is a useful way of doing research in social science. Scholars have varied views about case study. According to Stake (1994), the case study is not a methodological choice, but a choice of object to be studied. A case study may be undertaken because the case itself is of interest (intrinsic case study). A case study may also be undertaken to provide insight into an issue or refinement of theory (instrumental case study). With less interest in one particular case, researchers may study a number of cases jointly in order to inquire into the phenomenon, population or general condition (collective case study). It is not the study of a collective but an instrumental study extended to several cases.

Case study is one of the research strategies in social science (Yin, 2003a; Eisenhardt, 1989). Other research strategies include experiment, survey, archival analysis, and history analysis (Yin, 2003a). Yin has pointed out that the case study is not just for exploratory research. There can also be descriptive and explanatory case studies. He suggests that the case study is a preferred strategy when the research question is posed to answer how and why, the research does not require control of the behavioural events, and the research is about the contemporary events. The case study can include quantitative evidence. Yin defines a case study as an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. The distinctive need for case studies arises out of the desire to understand complex social phenomena.

A single case can reflect the uniqueness of the phenomenon. Yin has stated that a single case can be used to determine whether a theory's propositions are correct or whether some alternative set of explanations might be more relevant (Yin, 2003a). Multiple cases can increase generalizability, reassuring that the events and processes in one well-described setting are not wholly idiosyncratic. At a deeper level, the aim is to see processes and outcomes across many cases, to understand how they are

qualified by local conditions, and thus to develop more sophisticated descriptions and more powerful explanations (Miles & Huberman, 1994). According to Yin, if the researcher has the choice (and resources), multiple case designs may be preferred over single case designs. Analytical benefits from having two or more cases may be substantial. Analytical conclusions independently arising from even two cases will be more powerful than those coming from a single case alone. In the varied circumstances, to arrive at common conclusions from two or more cases, will have expanded the external generalizability of the findings.

Case studies can be used for developing theories. Many social scientists have pointed out this, such as instrumental case study for refinement of theory (Stake, 1994), testing theory and developing a theoretical framework (Yin 2003a), and building grounded theory (Strauss & Corbin, 1998). Eisenhardt (1989) has suggested that theories developed from case study research are likely to have important strengths like novelty, testability, and empirical validity, which arise from the intimate linkage with empirical evidence.

For the research on Sino-British joint ventures, the case study can be a preferable approach to the study of competitive advantage and strategy of the joint venture. The research is primarily interested in how the joint venture competes in China and why some joint ventures possess competitive advantage and others not, as illustrated by the research questions in the previous chapter. In the light of the research questions, case studies can serve the explanatory purpose for the joint venture study. Second, the host country conditions are pertinent to the investigation of competitive advantage of the joint venture, and in this respect, the case study can help explore those complex issues of the joint venture in relation to the contextual conditions in China. Moreover, each case can be unique in its own right. Competitive strategy *per se* is about being different and has a distinctive nature for each firm. The uniqueness of a single case may thus be crucial to the understanding of competitive strategy. In this context, the case study can help illustrate how competitive strategy is devised and operates under individual circumstances of the joint venture.

Moreover, the research aims to provide insights into competitive advantage of the joint venture and to lead to theory building or refinement of the conceptual

framework. In taking the multiple case design, the research seeks to arrive at more robust findings by covering the joint ventures that operate in different geographical locations and sectors. Each individual case consists of a "whole" study, which can reveal idiosyncratic characteristics of the joint venture and relate to the specific context in which the joint venture operates. The cross-case analyses, based on the study of the individual cases, can make manifest any consistent and contrasting results, and shed light on the common characteristics of the joint ventures in China. Especially, from the perspective of theory building, the multiple case designs will enable the researcher to produce a better theoretical framework for competitive strategy of the joint venture.

As the case study method allows investigators to retain the holistic and meaningful characteristics of real-life events (Yin, 2003a), the multiple case studies of Sino-British joint ventures may enable the researcher to explore some underlying elements embedded in systems and processes and contingent on specific conditions, which may help explain competitive advantage of the joint ventures. To uncover them may require an in-depth examination of the joint ventures' history, activities, management, and their interactions with their daily business settings in China. In this respect, the case studies are likely to serve as a useful means for understanding the real-life events of the joint ventures.

Case Study Design

Chapter 6 has stated the research questions and the major propositions about competitive advantage of Sino-British joint ventures. The conceptual framework developed based on them proposes that competitive advantage and strategy can be examined from the firm's positioning and resources. At the same time, joint venture partnerships and locational factors can have a bearing on the positioning and resources of the firm and are thus necessary elements to be investigated in the research. The conceptual framework can be employed in the case studies of joint ventures though the case study often takes different approaches such as inductive approach and development of grounded theory. The framework can be applied in the case studies on the following grounds.

The framework can define the scope of the research and specific areas where to look for relevant evidence for the case studies. It is thus to help the research have a focus along with the research questions and to guide the case studies for data collection and data analysis. The conceptual framework can also serve as a uniform framework for individual case studies and provide a theoretical basis for cross-case analysis.

The task of the case study researcher is fundamentally theoretical (de Vaus, 2001). Yin (2003a) has pointed out that the role of theory development, prior to data collection, is one point of difference between case studies and related methods such as ethnography and "grounded theory". Typically, these related methods deliberately avoid specifying any theoretical propositions at the outset of an inquiry. Yin stresses that theory development as part of the design phase is essential for case studies, whether to develop or test theory. The theoretical propositions about causal relations – answers to "how" and "why" questions – can be extremely useful in guiding case study analysis.

> Rather, the simple goal is to have a sufficient blueprint for your study, and this requires theoretical propositions, usefully noted by two authors as "a [hypothetical] story about why acts, events, structure, and thoughts occur" (Sutton & Staw, 1995, p. 378). Then, the complete research design will provide surprisingly strong guidance in determining what data to collect and the strategies for analyzing the data. For this reason, theory development prior to the collection of any case study data is an essential step in doing case studies.
>
> (Yin, 2003a, p. 29)

The unit of analysis is Sino-British joint ventures as a business organization. The joint venture is treated as a single business entity in the research, which suggests the partners within the joint venture are not treated separately as subunits of analysis. However, in studying the joint venture, the research examines the overall partnership (or cooperation) and its roles in the competitiveness of the joint venture. The relationships with their parent companies will be examined, where relevant, in the context of the joint venture's operations. The contextual information about a case can be useful in establishing a boundary within which to understand causal relationships and processes.

The research on Sino-British joint ventures is explanatory in nature and emphasizes theory building from the cases (Eisenhardt, 1989; Yin, 2003a; de Vaus, 2001). As de Vaus states, the research begins with research questions and basic propositions, then examines empirical evidence, and ends up with a more specific theory or set of propositions as a result of examining actual cases. The basic propositions and conceptual framework of Sino-British joint ventures underpin the single and multiple case studies; in return, the case analyses should lead to the development or refinement of the initial framework for the joint venture. The explanations intend to reflect some theoretically significant propositions concerning competitive advantage, positioning, critical resources, configuration of activities, and the like.

The cross-case analyses are to ascertain commonalities among individual cases and identify the key factors that explain competitive success and failure of the joint venture. The analyses may provide an opportunity to refine or extend the theoretical propositions when disconfirming the relationships across the cases. In revealing varying or contrasting characteristics of the joint ventures, they may also give a possibility of discovering new and emerging issues.

Case Selection

The multiple cases are selected from the assembled joint venture database. The selection of the joint venture cases is not based on representative sampling, but rather on the characteristics of individual cases and their potentials for theorizing (Eisenhardt, 1989) in the analysis. The selection relies on a more purposeful process in which examples are chosen for their particular qualities (Denscombe, 2002). As the research takes the explanatory approach, the selection of joint ventures is dealt with in the light of their relevance to theories. The theories and conceptual framework for Sino-British joint ventures are informative and help determine the criteria for the case selection, by which the author can appreciate the significance of the selected cases in relation to the theories of international production, competitive advantage and joint ventures, and apply the findings to other similar situations.

The author first conducted case screening based on some relevant information about joint ventures obtained from public sources. Three criteria were used in the screening process in terms of exemplar Sino-British joint venture, industry, and geographical

location. The author then identified about 18 joint ventures as prospective cases for making contacts and gaining access to the company. After a period of intensive contacts, 5 joint ventures were finalized for the case study and the author gained access to the companies. The details of the selection criteria are explained as follows.

Exemplar Sino-British joint venture

In order to build a model applicable to explaining Sino-British joint ventures, the author purposefully consider the cases that may be typical or exemplar of Sino-British joint ventures as understood in general. This suggests that what is found in one case is likely to appear in other cases. To establish this, the case selection considers the extent of similarity in terms of the joint venture partnership. Such joint ventures may be formed by a large or medium British MNE, or a large or medium MNE of British origin, with a Chinese company, usually a state owned enterprise. Non-British partner might have a bearing on the joint venture in terms of operations and management. The results from the study of these typical cases are assumed to be informative about the joint ventures' competitive advantage and strategy.

The selection of exemplar Sino-British joint ventures underlines their theoretical relevance. Theories of international production explain MNEs' activities in a foreign country. Joint ventures are one form of FDI undertaken by MNEs, especially common in China. The study of joint ventures formed by MNEs is thus relevant to and fits into the theories in explaining such FDI activities in China. The exemplar joint ventures may distinguish themselves from other types of joint ventures. Some evidence suggests that many Sino-British joint ventures were formed by small businesses, including overseas Chinese businesses and some businesses registered in British Virgin Islands. They are often private entrepreneurs and of smaller scale. Their investments also tend to be relatively small. The joint ventures formed by these enterprises can have different characteristics from those joint ventures formed by MNEs in general.

Industry

In general, there are sectoral characteristics associated with FDI flows. The study of the investment patterns of Sino-British joint ventures (Li & Clarke-Hills, 2004) shows that some industries in China have seen large amounts of investment and a large

number of joint ventures, such as food and beverages, electrical equipment including IT and communications, chemicals and pharmaceuticals, and real estate and business services. This investment pattern is largely in line with the general industrial characteristics of capital flows in the world. The industries of electronics and electrical equipment, chemicals and pharmaceuticals, automotives, food and beverages, and telecommunications were considered the most transnational among the world's top 100 firms (UNCTAD, 1998). The case studies can thus take into account the industry as a criterion and select cases in those industries where most FDI occurs in China.

At the same time, industry conditions can be relevant to competitive strategy of the firm though they are largely ignored by the RBV. The exploration of the positioning and the RBV in Chapter 4 suggests that acquisition and deployment of resources cannot be independent of the industry conditions. The joint ventures selected in those industries are likely to exhibit different characteristics associated with the industry. This allows a comparison of the joint ventures along the industry dimension across the cases.

Geographical Location

MNEs may seek a particular location in order to exploit advantages of the location when engaging in FDI activities. Different FDI activities may require different location specific advantages. Therefore, the geographical location of joint ventures is considered as a relevant and useful criterion for the case selection. In particular, China is a vast country with over 30 provinces, autonomous regions and municipalities. There are great disparities across provinces, regions and cities in terms of natural resources, population, industry, level of economic development and infrastructure. The east and central regions accounted for approximately 86% and 9% of the accumulated FDI in China by the end of 2004 (Invest in China, MOFCOM, 2005, October 19). The ratios have remained more or less unchanged over the past many years.

In the light of the geographical variations, joint ventures are selected in the major investment zones or industrial regions in the east and central regions of China. The

Table 7.1 Selection of Cases of Sino-British Joint Ventures in China

Joint venture cases	Exemplar joint venture, partnered with a British MNE	Industries with a relatively large amount of FDI	Investment zones or regions with varied locational conditions
AstraZeneca Wuxi	Partly British and partly Swedish, headquartered in London	Pharmaceuticals	Wuxi Industrial and investment zone
ERM China	MNE, headquartered in London	Environmental protection – consultancy services	Shanghai City
Shanghai Marconi	British company Marconi	Telecommunications Equipment	Shanghai City
GSK Chongqing	MNE partly British and partly American, headquartered in London	Pharmaceuticals	Chongqing City
YARACO	British company BP	Chemicals	Wanshou county, Chongqing

east region, especially the Yangtze River Delta, has one of the fastest economic growth rates in China. It is a major destination of FDI flows into the country and has assembled a large number of MNEs. Moreover, the selection of cases in terms of geographical location also takes into account of the practicalities of travelling and data collection. The cases which are concentrated in a few major investment zones or regions, for instance, in the Yangtze River Delta, could save many long distance travels in China and meet the financial constraints.

Table 7.1 shows the selected cases in terms of the partnership, industries and geographical locations. The partnership indicates that the joint ventures are formed by MNEs, British or partly British through M&A activities. Two cases are in the pharmaceutical industry, and this allows a direct comparison between them. One case is selected from the chemical industry; one case is selected from the telecommunications industry; one case is a consulting firm in the environmental protection industry. As the consulting firm ERM is in the services sector, the case may have distinct characteristics from those in the manufacturing sector. The environmental service industry was newly developed in China from 1990, and has been rapidly developing in recent years. The consulting firm and the telecommunications firm are located in Shanghai. The pharmaceutical firm

AstraZeneca is located in Wuxi. Wuxi lies within the Yangtze River Delta, and is particularly interesting, as local government has successfully developed an industrial district to attract MNEs. Two cases are in the inland area, Sichuan Province. Sichuan is covered by the Western Development Strategy of the Chinese government, and economically less developed in the country. One case GSK is in Chongqing city. Chongqing was newly designated as an autonomous municipality along with Beijing, Shanghai, and Tianjin. It is the biggest autonomous municipality in China in terms of the geographical area and population, and governs many counties. The other case YARACO is in a county within the Chongqing administrative area.

Both the industry and locational criteria may support the selected cases as being exemplars of Sino-British joint ventures. This is because those industries indicate significant MNEs' activities in general, and MNEs' investments tend to concentrate in those major investment zones or economic and industrial regions in China, a pattern formed from the early period of FDI activities in the country. At the same time, both different industries and varied locational conditions across China imply differing characteristics of the joint ventures associated with the industry and the location. Therefore, the selected cases allow the study of typical Sino-British joint ventures with varying or diverse characteristics, and this can be conducive to cross-case comparisons of the typical cases. Any emerging characteristics or possible contrasting outcomes may offer opportunities for learning and discovering new issues, and ultimately help develop or refine the theoretical propositions.

Data Collection

The research of Sino-British joint ventures requires both a database of Sino-British joint ventures in China and specific data of particular joint ventures in the multiple case studies. Data collection has been a demanding task for the research on Sino-British joint ventures. The main problem was a lack of information of such joint ventures during the early stage of the research when building the database, and the then available data were fragmented and lacked accuracy. The author tried to search for the information in 2001 from various sources including government or government sponsored organizations and some publications. The organizations include:

- British Embassy in Beijing, Commercial Section
- British Chambers of Commerce in China
- China-Britain Business Council (CBBC) in London
- Trade Partners UK, Information Centre
- Ministry of Foreign Trade and Economic Cooperation (MOFTEC) of the P.R. China in Beijing, the Computing Centre (The MOFTEC was renamed as the Ministry of Commerce in 2003)

The principal publications and directories are:

- British Business in China 2000/2001/2002 – Directory of British Chambers of Commerce in China, EFP International
- Foreign Companies in China – Yearbook 2000/2001, Commercial Intelligence Services
- D&B Major Corporations in P.R. China 1999/2000, Vol. 1 Foreign Companies and Joint Ventures, Dun & Bradstreet
- A list of UK JVs in China, CBBC
- Sino-British joint ventures in China, MOFTEC, the Computing Centre

Although the author obtained a fair amount of information about Sino-British joint ventures in China, the different pieces of the information have not been coherent and they are not ready for use. There are a number of major problems with the data. First, there could hardly be a list of Sino-British joint ventures including all the existing joint ventures obtainable from appropriate organizations and publications. This may be due to the fact that British firms operating in other countries are not required to register with the UK government about their overseas operations. The company list provided by the business organizations is usually their own membership. For example, *British Business in China 2000, 2001* and *2002* are ones of the best sources of information, but they are limited to the membership of British Chambers of Commerce in China. Second, the information complied by those organizations is classified under certain categories which do not meet the needs of our research. The various publications, for example, *Foreign Companies in China*, and *D&B Major Corporations in P. R. China*, classify companies, for example, by their origin of country, industries, geographical locations in China, and forms of investment. They

include foreign companies who have operations in China, and various forms of investment, such as representative office, joint venture, whole owned subsidiary, and so on. It is practically impossible to bring together those companies who have the British origin and are joint ventures. Third, a list of Sino-British joint ventures obtained by the author lacks details of the companies, such as address, contact people, investment value and industry. Many of those companies are operated by small private businesses, and some of them are based on British Virgin Islands. It is hard to track and verify their details from other sources. Fourth, the information about joint ventures is often inaccurate or out of date. This may be caused by a few factors, such as missing data in registration with Chinese local or central government or in the compiling process, subsequent change of the joint venture to a wholly owned enterprise or termination of the joint venture, being registered but not actually set up due to a lack of funding, and so on. For these reasons, to obtain sufficiently reliable data about Sino-British joint ventures was a major challenge in the initial stage of the research.

In the process of collecting the information and assembling the database, the author gradually gained better knowledge of Sino-British joint ventures, especially after obtaining the data from the MOFTEC. The data from the MOFTEC are comprehensive, covering name, address, contact persons, investment value, registration and operation dates, and British partners. The establishment of joint ventures in China must be approved by and registered with the MOFTEC of the central government or regional governments depending on the investment value. At the same time, there is an increase of information available from Chinese government about foreign MNEs' investments and operations in China. Since 2003, one of the useful services provided by the Ministry of Commerce allows users to search for foreign enterprises on its official website, by specifying certain criteria, for example, country of origin, form of investment, year of establishment, location in China, industry, and investment value. Details of the sought joint venture are then provided. The MOFCOM (or the MOFTEC) and *British Business in China 2001/2002* form the primary sources of information to assemble the database for Sino-British joint ventures.

The data used for the multiple case studies are collected from three sources: public sources, interviews, and company documents. The public sources are mainly the reports by various newspapers and business organizations, companies' websites, speeches by government officials, and business directories. The information from the public sources is very useful for the case selection and it also forms the basis of semi-structured interviews with the companies. The public sources can give external perspectives (except companies' websites), and some reports often provide up-to-date information about the companies. As the secondary sources of information, they can usefully complement the interviews and company documents for the case studies.

In 2003, the author conducted interviews with the selected five Sino-British joint ventures in China. The interviews were semi-structured with questions formulated based on the conceptual framework developed in the early stage of the research. The interviews were to collect data to answer the research questions about competitive advantage and strategy of joint ventures in China. The interview questions are grouped in five categories: (1) general situation of the industry in which the joint venture operates; (2) joint venture's position in the industry; (3) resource provision of the joint venture; (4) partnership within the joint venture; (5) locational advantages. A sample of the questions is provided in Appendix A. All the interviews are essentially based on the same set of questions, but there are slight variations between the interviews with different companies, in terms of specific issues discussed during the interviews, which are related to the individual company's own operations and context, or prompted by the discussion in the interview. Three to four interviews were conducted with the management of each company, including managing directors and managers. For some companies, interviewees also include senior consultants (in the case of ERM) and company secretaries or assistants (in the cases of GSK and YARACO). The interviews lasted between 45 minutes and 90 minutes. They were recorded with the consent of the interviewees.

The majority of the company documents were obtained from the companies during the visit, and some by post and emails. The company documents include general information and introduction to the company, internal employees' training materials, internal reports, and annul reports. The information contained in the documents is in general of non-confidential nature though some information is not publicly available.

Company documents can provide accurate and detailed accounts of the company's operation, such as products, services, operational process, figures, company structures, and technical names. They are especially useful when combined with the interviews as the data from the two sources are often complementary and can be triangulated.

Data Analysis

A number of distinguished authors have proposed various strategies and techniques for data analysis. To analyse the data, the research applies some of those strategies and techniques, such as data reduction proposed by Miles and Huberman, analytic strategy (relying on theoretical propositions) by Yin, model development and cross-case synthesis by Miles and Huberman, Yin and Eisenhardt, and theory building by Eisenhardt and Yin.

The data collected from the different sources are processed at two levels: descriptive and explanatory levels. Within-case analysis involves detailed case descriptions, which are central to the generation of insights. The primary questions of *what* is going on and *how* things are proceeding call for a reasonable accounting of the phenomena observed (Huberman & Miles, 1994). The overall idea is to become intimately familiar with each case as a stand-alone entity (Eisenhardt, 1989). Case descriptions may help identify the appropriate causal links to be analysed (Yin, 2003a) and highlight the importance of theory in the case studies (de Vaus, 2001). The research can then move from telling a "story" to locating key elements and building a theory or model (how the variables are connected and they influence each other) (Miles & Huberman, 1994).

In order to produce a case description, the data are selected and condensed through a data reduction process (Huberman & Miles, 1994; Miles & Huberman, 1994). Firstly, the relevant data from company documents and public sources are selected based on their relevance to the research questions. As they may appear in many different documents and files, the selected data are typed and compiled into a single text labelling the sources. Then, the interviews are transcribed from audiotapes into texts, including translating Chinese conversations into English. The different sources of evidence are corroborated, and this allows the triangulation of the data to establish

converging lines of inquiry. The notes made during the visit to the companies are also helpful to the transcribing and compiling processes. Small amounts of data are quantitative, and those figures that were obtained verbally in the interview, where necessary, are verified by the documents. When discrepancies occur, especially related to the industry conditions, the author opts the use of the most recent data, which can better reflect the rapid change of the economy in China.

The data reduction process also involves producing summaries of long materials and defining codes based on the identical subjects. In order to synthesize and dissect the data meaningfully, codes are defined based on the content of the data. An alphabetical coding system is developed to give clear and operational definitions of chunks of text, usually sentences and paragraphs. Appendix B shows the coding system. The first level codes are assigned to broad categories of concepts used in the research, for example, industry characteristics, positioning, resources, and so on. The second and third levels codes are assigned under the broad categories to indicate detailed properties of those concepts. This coding system is applied consistently during the data analysis.

The reduced set of data is ordered by themes (or concepts), and then written up as the detailed narrative description of each case – stories, events and settings – and in some cases supplemented by diagrams. The five case descriptions (in Part 3 of the thesis) provide a basis for the subsequent analyses and drawing conclusions. Although the data collection was guided by the research questions, the case description is in principle structured by the themes which characterize the joint venture, unfolding events, and the distinctive context.

On the basis of the case descriptions, within-case explanations are developed (in Part 4 of the thesis) relying on the conceptual framework. The uniform framework is used to guide the analysis of the case evidence. The theoretical propositions help focus attention to certain parts of the data and ignore other irrelevant parts contained in each case story. The pinnacle of the analysis is to establish causal relations and search for the sources of competitive advantage of the joint venture in order to answer how the Sino-British joint venture competes in China and why some joint ventures are successful.

The specific techniques used to explain each individual case include producing activity system models proposed by Porter (1996) and casual networks (Yin, 2003a & 2003b; de Vaus, 2001). The activity system can illustrate the company's operations and how the activities are organized. The causal network can bring together dependent and independent variables and their relationships into a coherent picture (Miles & Huberman, 1994). Informed by the conceptual framework, the case study develops the causal network to examine the way in which those elements (industry, positioning, activities, partnerships, and so on) can underlie competitive advantage of the joint venture. The above techniques seek to derive some plausible causal explanations from the case evidence. Resources and capabilities of each case are analysed by applying the conceptual framework and theoretical propositions about resource attributes, competitive advantage, partnerships, and locational factors.

The synthesized analysis examines the relationship between activities and resources in each case. The author has identified the activities and resources which are considered critical to the joint venture's operations and competitive advantage. The following factors are taken into account in identifying both activities and resources of the joint venture. First of all, a particular activity or resource can be informed by the case data themselves. The case may indicate that a particular activity or resource is significant for the company's operation or distinctive to the company. For example, the case description of AstraZeneca suggests that the product portfolio, process and people are three key elements for the company's success, which were explained by the manager during the interview. The company's product portfolio and human resources are thus identified as critical resources. Its main manufacturing activities are thus included in the activity category. In the case of Shanghai Marconi, communication skills and language are identified as among those resources or capabilities relevant to the case. Secondly, as the nine categories of value chain activities (Porter, 1985) can contain many discrete activities, the author can select significant activities by taking account industry characteristics. For example, input materials can be a significant factor for the chemical industry. The author takes account of this factor in the analysis of YARACO, which is consistent with BP's strategy of selecting the partner and the location. The way that input materials are procured and transported can have an impact on the cost position and the configuration of activities of the joint venture. For pharmaceutical companies, their success usually depends on a portfolio of profitable

brand name drugs, R&D (Rugman, 2005), and protection of the patents and trademarks. Finally, value chain activities and resources can usually be classified into more specific discrete activities and resources at a lower level. For example, AstraZeneca's production consists of liquid production and dry production. Liquid production includes sterile solutions, oral solutions and aerosols. Dry production includes tablets and capsules. Each of these production activities can be further divided into different activities based on machines operated or operational procedures. Human resources can be classified into various groups based on their skills, knowledge, job descriptions, and the like. In the case analysis, the levels of the classification are determined by whether they can provide sufficient information for understanding the relationship between resources and activities of the joint venture. The levels of the classification may at the same time depend on the available case data.

Some scholars have distinguished two approaches to multiple case studies: variable-orientated analysis and case-orientated analysis (Miles & Huberman, 1994). The variable-orientated approach focuses on the correlation between the variables and finding themes that cut across cases. It is good at finding probabilistic relationships among variables in a large population, but has difficulties with causal complexities. The cross-case analysis of the 5 joint ventures takes the case-orientated approach. This approach considers each case as a whole entity, looking at configuration, associations, causes and effects within the case, and only then turns to comparative analysis of a number of cases. It is good at finding specific, concrete, historically grounded patterns common to small sets of cases (Ragin, 1987, cited in Miles & Huberman, 1994).

The main techniques used for cross-case analysis include identifying the similarities between the cases based on the within-case analysis of the joint ventures. The characteristics of the competitive joint ventures and uncompetitive joint ventures are compared within each group to derive commonalities in respects of the positioning, configuration of activities, and deployment of resources. The comparisons are also made in respects of partnerships and locational factors in relation to the positioning and resources of the joint ventures. The analytical techniques also include producing key variable matrices, shown in Chapter 14. The key variable matrix can display how

the different cases are related (or associated) to particular variables ordered by intensity, for example, to what extent the competition in the industry, partners' cooperation, and local government support could influence operations and competitive advantage of each joint venture.

Validity Issues Concerning Case Studies

Validity

Some scholars emphasize establishing validity of research in order to ensure the quality of the research undertaken. Spenser, Ritchie, Lewis and Dillon (2004) have identified many explanations of validity and its many meanings. De Vaus (2001) uses internal validity to refer to the extent to which the structure of a research design enables the researcher to draw unambiguous conclusions from the results. A central task of research design is to structure the study so that ambiguities of the findings can be minimized. Yin (2003a) suggests that internal validity is about establishing causal relationships, and construct validity is about establishing correct operational measures for the concepts being studied. Spenser *et al.* (2004) suggest that a number of methods can be used to enhance the credibility of claims, which include triangulation, using links between data and analysis, and negative cases. To enhance the validity of the case studies, the research on Sino-British joint ventures has taken the following measures.

First, the research employs theoretical propositions to guide the case studies from data collection to data analysis. The extant theories of positioning and the RBV can provide a basis for ascertaining the relationships between various factors underlying competitive advantage. The joint venture partnerships and locational factors are then incorporated into the analysis. The early section of case design has explained that theories can be used to establish causal relationships.

Second, to enhance the (construct) validity of the case studies, the research uses different methods of data collection including public sources, interviews and company documents. The multiple sources of evidence are one way of establishing converging lines of enquires. The author also ensured clarity of concepts for the issues investigated during the interviews. As the interviewees are of the management level

(or senior management) and have good knowledge of business and management, the issues asked during the interviews can be easily conveyed to them. Where necessary, the author specified concepts or used examples to clarify.

Third, in the data analysis, the research seeks to establish clear links between data and interpretations. For example, the analysis of the positioning of a joint venture is based on its products or a range of its products, its customers or the segment of the market it serves, and specific operational activities that the company performs. The analysis of partnerships relies on, for example, the management structure, decision-making, management style, communication between the partners, and language barriers where evident. There are naturally some variations in the use of the evidence due to distinctive characteristics of the individual cases. For example, the language barrier is evident in the Shanghai Marconi case but not shown in AstraZeneca and ERM cases. Some techniques explained for data analysis can increase the validity of the case studies. Above all, developing the coding system (including the operationalization of concepts) and producing activity system models from data are useful methods of connecting data with interpretations.

Moreover, within-case analysis seeks to establish an analytical context where the analytical commentary is linked with the data. For example, in the case of AstraZeneca China, the specific interpretation of the industry conditions about substitute products is based on the possible threat of counterfeit drugs and inappropriately controlled generic drugs on the market, as acknowledged by the management, in the context of the country conditions. Patents as a valuable resource and isolating mechanism from the RBV are also discussed in this specific locational context.

Generalization

External validity is the extent to which results from a study can be generalized beyond the particular study. The critical question is whether the research results are likely to apply more widely (de Vaus, 2001). Survey research is based on statistical generalization, whereas case studies are based on analytical generalization. In analytical generalization, the investigator strives to generalize a particular set of results to some broader theory (Yin, 2003a).

Researchers can compare the similarities and differences between the cases and judge whether the findings from one case are applicable to another. As each joint venture has its unique characteristics and context, the author focuses on commonalities of the joint ventures which have achieved competitive advantage and of those which have not. The cases of AstraZeneca China, ERM China and YARACO clearly represent successful joint ventures in achieving competitive advantage. The multiple case analyses indicate certain common characteristics of their operations, such as efficient production activities (or service delivery), effective marketing and sales, good coordination between various value activities, distinctive positioning in the marketplace, and the possession of some valuable resources. In comparison, Shanghai Marconi and GSK Chongqing had relatively poor performance. Their main problems appear to point out to the configuration of activities and the deployment of resources to support the operations. Chapter 14 provides detailed explanations of some common characteristics of the joint ventures. However, it should be noted that AstraZeneca China is a unique case: it operates more like a subsidiary of AstraZeneca rather than a joint venture, and thus its partnership cannot be applied to other joint venture contexts. Moreover, the generalization of the five cases is likely to reflect the characteristics of the typical Sino-British joint ventures formed by large MNEs, as ascribed by the case selection criteria based on the location, industry and partnership.

As the research of Sino-British joint ventures is explanatory in nature and seeks theory building, the multiple case studies may enable analytical (or theoretical) generalization (Spenser *et al.*, 2004). Theoretical generalization can be understood as generalizing from a case to a theory through the application of analytical concepts or theoretical ideas (Seale, 1999). In our research, the conceptual framework has guided the case analyses in respects of strategic positioning, resources, joint venture partnerships, and location specific factors. The multiple case studies intend to reflect some theoretically significant propositions concerning those aspects of joint ventures. Therefore, they can be used to build theories or extend theories from the emergent issues arising from the cases. Such generalization can be distinguished from testing relationships between variables of existing theories. The extended propositions may offer new insights and form the basis for their refinement and further testing. Chapter 15 illustrates the extensions of some theoretical ideas drawn from the cases for advancing the understanding of joint ventures and competitive advantage.

PART 3

Case Data

This part of the thesis presents the case data. Chapters 8-12 provide the descriptions of 5 Sino-British joint ventures. The case data come from three sources: public sources, interviews, and company documents. The data from the public sources are mainly used to supplement the data collected from the interviews and company documents, supplying some background and up-to-date information. The interviews with company management form the core materials of the case description as they directly address the research questions. The company documents provide some useful details about the company's operation and also help triangulate data from the other two sources. The case descriptions were produced through data reduction, coding, and finding themes. Chapter 7 has explained the data collection and processing in detail.

Chapters 8-12 report the cases of AstraZeneca China Manufacturing Plant (the pharmaceutical industry) in Wuxi, ERM China (the environmental consultancy) in Shanghai, Shanghai Marconi (the telecommunications industry), GSK Chongqing (the pharmaceutical industry), and YARACO (BP's joint venture in the chemical industry) in Chuanwei, Chongqing.

Chapter 8
AstraZeneca China Manufacturing

The New Manufacturing Plant in Wuxi

On 28 April 2001 a grand ceremony was held in Wuxi, a beautiful city in Jiangsu Province, for the opening of a pharmaceutical manufacturing plant. It was AstraZeneca China Manufacturing Plant, a joint venture between AstraZeneca and the Wuxi Hi-tech Industrial Development Administrative Commission and the Wuxi Pharmaceutical Bureau. The plant had actually started the operation about half a year ago, but this opening event was significant for AstraZeneca and Wuxi. Among some 300 people attending the ceremony were AstraZeneca's CEOs and regional executives for Asia and China, as well as senior leaders from the Wuxi Municipal Government, the State Drug Administration, and the Jiangsu Pharmaceutical Administration, and the like (AstraZeneca, News).

This brand new pharmaceutical plant is the largest project of AstraZeneca in Asia with an investment of US$134 million. It is one of the biggest investment projects by pharmaceutical multinationals in China. The plant has the world-class facility and is one of the best among AstraZeneca's more than 30 manufacturing plants worldwide (AstraZeneca Pharmaceutical Co. Ltd).

The manufacturing plant is located in the Wuxi New District, an industrial zone of 38 square kilometres. The Wuxi New District was developed during the last decade and has become a favourable place for investment (Wuxi New District International Advisory Committee). The New District hosts hundreds of companies and factories, including many well-known MNEs, such as Kodak Eastman, Sony, Nikon, Panasonic, General Electric, and AstraZeneca.

AstraZeneca's business activities in China can trace back to the 1980s. Astra of Sweden set up a joint venture in Wuxi in 1993. In 1994 Astra established Wuxi Pharmaceutical Co. Ltd. with the joint venture restructured into a wholly owned manufacturing plant of Astra. In 1994 Zeneca Group plc. of the UK established Zeneca Pharmaceutical Co. Ltd. in China. The merge between Astra and Zeneca

worldwide in 1999 led to the merging activities of these two companies in China. As a result, the two companies formed AstraZeneca (China) Pharmaceutical Co. Ltd. and created a new joint venture in Wuxi – AstraZeneca Manufacturing Plant (AstraZeneca, About Us; HR Manager, AstraZeneca China Manufacturing, personal communication, November 4, 2003).

The manufacturing site covers 96,000 square metres of total area, with the construction floor space of 36,000 square metres. World-class facilities, such as hygienic production area with advanced equipment, modern injection solution plant, well-equipped laboratories, fully automatic high-bay warehouse, and reliable utilities, and effective management ensure that the plant is able to supply the market with high quality products. The plant is to supply the China market on time and to contribute to AstraZeneca China's overall business by having an efficient production and supply chain (AstraZeneca Pharmaceutical Co. Ltd).

AstraZeneca China

AstraZeneca (China) Pharmaceutical Co. Ltd. is headquartered in Shanghai. It has branch offices in 15 cities across China. In addition to its manufacturing plant in Wuxi, AstraZeneca has a research centre in Shanghai – the Clinical Research Centre (East Asia). AstraZeneca China has about 1200 employees working in the manufacturing, sales and marketing, and clinical research of new products. The company cooperates with many industries and introduces new drugs to the China market. It has achieved a rapid business expansion in China (AstraZeneca, About Us).

The parent company AstraZeneca has its corporate headquarters in London and its R&D Headquarters in Sweden. AstraZeneca is one of the world's leading pharmaceutical companies with the sales in over 100 countries, 32 manufacturing sites in 20 countries, and major research centres in 5 countries. It combines its global capabilities with established relationships in local markets, and focuses on responding quickly and effectively to its customers' changing needs. AstraZeneca provides innovative and effective medicines designed to fight diseases in six important therapeutic areas: cancer, cardiovascular, gastrointestinal, infection, neuroscience and

respiratory. Its investment in R&D ranks number two amongst pharmaceutical companies in the world (AstraZeneca, About Us).

AstraZeneca China's major objective for its operations in China is to gain China's pharmaceutical market. AstraZeneca China has been expanding rapidly in China since it began the operation. Its financial performance has been very strong. It achieved the sales of RMB 1 billion in the China market during the first ten months of 2003, and the total sales could reach RMB 1.2 billion for the whole year. Compared with other similar pharmaceutical companies (MNEs) in China, it ranks fifth in terms of the total revenues, which include both prescription drugs and over-the-counter (OTC) drugs. In terms of prescription drugs only, its sales are almost at the same level as those of GSK in China, ranking first or second. The growth rate has been exponential. The company achieved 50% of the revenues growth in the first ten months of 2003 compared with the same period of 2002. According to the company's forecast its annual sales can reach US$1 billion in China in ten years (Manager, AstraZeneca China Manufacturing, personal communication, November 4, 2003).

The Pharmaceutical Industry in China

The pharmaceutical industry in China has experienced the rapid development and high growth in recent years. It is estimated that the industry can triple its present sales in 2010, and by then China will become the fifth largest market in the world. Accompanying this rapid development of the industry, the Chinese government has promulgated some new regulations for the pharmaceutical industry and its reform. The general trend is that the industry is gradually converging with the international standards and practices (Manager, personal communication, November 4, 2003).

There are about 6,000 pharmaceutical manufacturing companies in China. There are 16,500 wholesalers and distributors, 115,000 pharmacies, and 196 chain stores. Professional pharmacists are required for pharmacies and some posts in pharmaceutical companies (AstraZeneca China).

Some large domestic state owned enterprises are important players in the industry. They largely produce generic products (Production manager, AstraZeneca China Manufacturing, personal communication, November 4, 2003). Many multinational

pharmaceutical corporations have entered China and set up operations in many parts of the country such as GSK, Johnson & Johnson, AstraZeneca, Bayer and Roche.

Only when issued with the license of Good Manufacturing Practice (GMP)[1] by the local or State Food and Drug Administration (SFDA) can pharmaceutical companies begin manufacturing products. AstraZeneca China was also granted a GMP certificate by the EU in 2002, and thus it can now export its products to the EU markets. It also exports its products to Southeast Asia. As its business is expanding rapidly in China, AstraZeneca China primarily focuses on the China market. The Wuxi Manufacturing Plant is the only production site of the company in China, and it supplies about 85% of its total sales in the country. The rest of 15% of products are imported from AstraZeneca's manufacturing plants in other countries (AstraZeneca Pharmaceutical Co. Ltd.; Manager, personal communication, November 4, 2003). The imported products are in general those drugs used for cancer treatment and anaesthesia. These categories of drugs are required to be manufactured separately with independent plants (Production manager, personal communication, November 4, 2003).

Competition is very intense in the pharmaceutical industry in China. This is mainly due to the facts that same drugs may be manufactured by different companies, many domestic manufacturers make generic products, and there are also a lot of counterfeit products on the market. For instance, when AstraZeneca registered the patent for a particular drug, its generic version had already been produced by some manufacturers in China. For a few drugs AstraZeneca faces competition from GSK or other MNEs. Counterfeit products can appear frequently on the market, and they pose a serious problem for pharmaceutical companies in general. The violation of IPRs is still common in China. Advertising medical products is regulated by *the Drug Administration Law* in China. AstraZeneca China strictly complies with the regulations and it advertises its products in medical journals. Some domestic pharmaceutical companies may ignore the regulations (HR manager, personal communication, November 4, 2003).

Healthcare regulations in China are an important factor that can influence pharmaceutical companies' business. Patients, if they fall within the public health systems, can have prescription drugs free, and thus this group of patients have more

incentives to have prescription drugs than those who must pay privately. Pharmaceutical companies have been keen on having their medicines admitted to the prescription lists of hospitals and clinics. The entry into the list can often help increase the sales. Normally this is done through a bidding process with healthcare providers in different cities and provinces. Entering anther city or province can sometimes prove to be very difficult. AstraZeneca China spares no efforts for the bidding. It has a department dealing with this task. Furthermore, AstraZeneca China is closely monitoring the healthcare reforms in the country, and prepared to respond to changes swiftly. It also actively develops the relationship with the government pharmaceutical authorities. A pharmaceutical expert of AstraZeneca China was once invited to Beijing to give seminars at the State Drug Administration. The company could then take advantage of such an event to exert somewhat influences on the government policy (HR manager, personal communication, November 4, 2003).

Product, Process and People

Product Portfolio as Cornerstones

AstraZeneca has the greatest strength in its product portfolio. Its powerful product portfolio includes many world leaders and a range of high potential therapies. It covers six therapeutic areas: cancer, cardiovascular, gastrointestinal, infection, neuroscience, and respiratory. Many products in these areas have a leading position in the world. Its position of anaesthesia products can rank number one in the industry worldwide. Because its patents of some products were due to expire, the company had been in a process of portfolio transformation and launching new products. The portfolio transformation was approaching completion by the end of 2003. AstraZeneca continuously innovates and searches for new medicines to maintain and strengthen its leading positions in products. AstraZeneca has a strong R&D pipeline in the industry, including a number of significant innovations. It spends US$11 million worldwide on R&D every working day. The overall product portfolio of AstraZeneca China could be the strongest amongst pharmaceutical manufacturers in China (AstraZeneca Pharmaceutical Co. Ltd.; HR manager, personal communication, November 4, 2003).

The overwhelming majority of the products sold by AstraZeneca have been developed by the company and possess patents, except a very small number of products that come from other pharmaceutical companies. AstraZeneca has bought those products to supplement its own product portfolio (HR manager, personal communication, November 2003).

Five dosage forms are being manufactured in the Wuxi plant including tablets, capsules, oral solutions, aerosols and injectable lyophilised powder, providing effective medicines in important areas of healthcare. Some leading products of AstraZeneca are as follows:

Cardiovascular	Plendil, Betaloc, Imdur
Gastrointestinal	Nexium, Losec IV, Losec MUPS, Losec Caps
Respiratory	Pulmicort, Bambec, Bricanyl, Bricasol, Rhinocort
Anesthesia	Diprivan, Naropin
Oncology	Casodex, Zoladex, Arimidex, Iressa
Neuroscience	Serequel

Plendil, Betaloc, Imdur, Losec IV, Losec MUPS, Losec Caps, Bambec, Bricanyl, Bricasol are locally manufactured in Wuxi. Today about 85% of products sold by AstraZeneca in China are manufactured in the Wuxi plant. In the future this number will continue to grow with the arrival of new products for the China market (AstraZeneca Pharmaceutical Co. Ltd.; AstraZeneca China, Innovation).

Integrated Operational Process

The company's whole operational process is well configured to achieve efficiency. The process consists of three major functional areas: clinical trials, manufacturing, and sales and marketing. The clinical testing of a particular medicine is conducted at the Clinical Research Centre in Shanghai. The new drugs developed in the R&D are to be tested at this Centre. After the trial approval the company begins the manufacturing of the drug at the Wuxi plant. Sales and marketing is then carried out in Shanghai, with the International Sales and Marketing Organization (ISMO) of AstraZeneca (Production manager, personal communication, November 4, 2003).

AstraZeneca established the Clinical Research Centre in Shanghai in 2002, responsible for the drug testing for mainland China, Hong Kong, Taiwan and South Korea. The Centre is a constituent part of AstraZeneca's global R&D, coordinating clinical trials of drugs for those regions of East Asia. The Centre also provides training and supervision on the global scale and supports AstraZeneca's global clinical data management. This Centre is the only establishment for clinical research by multinational pharmaceutical companies in China (AstraZeneca, About Us).

The manufacturing process itself is organized through 8 departments: Planning and Purchasing, Warehousing and Distribution, Liquid Production, Dry Production, Quality Assurance/Quality Control (QA/QC), Engineering, Process Development and Technology Transfer, and Administration and HRM. Planning is made based on the sales forecasting, and then purchasing materials takes place. The next stage is the warehousing of the purchased materials. The department also controls the products and their distribution. Liquid Production makes sterile solutions, oral solutions and aerosols. Dry Production makes tablets and capsules. QA/QC is a system to ensure that the products meet the required standards. This department assists the whole manufacturing process. The Engineering Department is responsible for technical areas and safety related to the facilities and machinery and performs maintenance and repair. Process Development and Technology Transfer is to examine and improve the existing production systems, and also to introduce technologies for manufacturing new products and transfer of their production to this local plant. Administration and HRM provides administration and needed human resources to the whole plant (Production manager, personal communication, November 4, 2003; AstraZeneca China, We, April 2003).

The manufacturing activities are closely coordinated. There is a weekly meeting for managers of those departments to discuss production and arising issues. In addition, the company has recently installed a new IT system – SAP. The SAP system enables better access to information, and helps better coordinate and integrate different departments through the data management in the manufacturing process (Production manager, personal communication, November 4, 2003).

Through the ISMO the products are distributed and marketed in 15 offices across the country. The products are sold through wholesalers and distributors. Medicines cannot be sold directly to hospitals or pharmacies. Wholesalers then distribute the products to pharmacies (for OTC) and hospitals. Distribution channels are often complex in China and can represent a problem area for foreign companies. As there are tens of thousand distributors in China, AstraZeneca China usually uses the first-tier distributors and sometimes the second-tier distributors. Those distributors to be selected must have good reputation and practices. The company has a target of building the best sales force (Production manager, personal communication, November 4, 2003).

As a joint venture, AstraZeneca China can determine the prices of its products, but subject to some regulations and restrictions set out by Chinese government. The prices of AstraZeneca's products are higher than those of the similar products manufactured by domestic companies in China. For pharmaceutical companies investment in R&D is a very significant cost factor. In addition, AstraZeneca invested US$134 million in building the world-class Wuxi Manufacturing Plant. In the manufacturing process, there are two significant cost drivers – materials and labour. The prime materials are expensive as they are imported from Sweden. Supplementary materials are relatively cheap, and are usually supplied by some domestic manufacturers in China (Production manager, personal communication, November 4, 2003).

AstraZeneca has developed partnerships with those Swedish suppliers as they supply materials for AstraZeneca's many manufacturing plants across the world. Over the years AstraZeneca China has also forged stable relationships or partnerships with those Chinese suppliers. The suppliers to be chosen must meet company's requirements as well as the criteria set by GMP. The supply chain relationships are stable and on the long-term basis (Production manager, personal communication, November 4, 2003).

Building Strong Workforce

AstraZeneca China has a strong team of workforces. The company has strengthened the management team after the new CEO took office in 2002. It recently recruited a few high calibre people for some key positions. Workforces are considered as one of the most important resources. The company has recruited talented people from Wuxi

and the adjacent areas. For ordinary positions AstraZeneca China can in general take on employees with a plenty of choices, but for some key and specialized positions it does need make some efforts to find the most suitable people. Ms. Du, HR & Administration manager commented, "we have done pretty well in recruiting and retaining people. Recently some pharmaceutical companies in Shanghai are said to be closing down, and we can easily attract and recruit some talented people from those companies. And very few employees themselves want to leave the company. The leaving rate is about 2-3% on average. And most of them have gone abroad to study."

AstraZeneca China strives to be the most attractive company to work for in the pharmaceutical industry. The company offers very competitive salaries and benefits as well as opportunities for training and self-development. Employees can develop their own skills and capabilities greatly working with the company. After a training programme, for instance, an employee said, "we become more objective in analysing problems and issues. We understand more on the constant change philosophy and have improved our adaptability to changes". The company also pays attention to communication between different departments and employees. Employees are given chance to express their ideas and suggestions, for instance, through employee forums and internal publications (HR Manager, AstraZeneca China, personal communication, November 4, 2003).

A Special Partnership

The joint venture was formed with the Hi-tech Industrial Development Administrative Commission of Wuxi New District and the Wuxi Pharmaceutical Bureau. The Chinese partners have provided valuable support to the set-up of the joint venture and its operations. They helped manage and deal with the relationships with government authorities and administrative matters. For example, when Astra and Zeneca merged in 1999, the Chinese partners helped to sort out those administrative and difficult matters involved with their merge in China. The Chinese parties are not engaged in any form with the management and operations of the joint venture. And they have no equity in the joint venture, either. The Chinese partners mainly aim to attract foreign investment to develop the local economy. AstraZeneca provided all the capital and other resources for the joint venture. In practice, the joint venture is managed and operated as an independent company. Therefore, the "joint venture" is merely an

official name for the business entity rather than for its real operations (HR manager, personal communication, November 4, 2003).

During the early period of the economic reforms and opening up in China, foreign companies were required to set up joint ventures in the country. Since wholly owned foreign enterprises were legally permitted in 1986, some MNEs have set up independent companies in China. And in recent years there seems to be an increasing number of wholly foreign owned companies, especially as China's economy becomes more open and the country had joined the WTO in 2001. In the 1980s and 1990s, when Astra and Zeneca began their operations in China, they might have a need of a Chinese partner to help manage the operations. At the initial stage of operations, foreign companies usually lack knowledge about the Chinese market and need a local partner to help deal with difficulties and also manage relations with government authorities (HR manager, personal communication, November 4, 2003).

A Valued Member of the Local Community

> AstraZeneca China Mission: to develop, supply and market innovative drugs of high quality within our prioritised therapeutic areas in China. We are determined to conduct our business responsibly, strengthen our long-term commitment to China and become a partner of choice.
>
> (AstraZeneca China, Commitment)

AstraZeneca CEO Sir Tom McKillp says, "Corporate responsibility is not an add on extra – it is an integral part of all that we do and I am determined that we will continue to be a company that is welcomed as a valued member of the global community". *AstraZeneca Corporate Responsibility Policy* states: "Our activities impact not just on the patients we serve and our investors but also on our employees and on society as a whole. Our continued long-term success depends on our ability to integrate successfully our financial obligations with our social and environmental responsibilities."

The Wuxi Manufacturing Plant aims to maintain the highest possible standards of Safety, Health and Environment and measures its performance against strict criteria. The plant has passed both the China GMP inspection and EU GMP inspection. In addition to the green area provided on site, aggressive targets are also set for the

minimization of waste and energy usage. The manufacturing site devotes 58% of its total area to green space (AstraZeneca Pharmaceutical Co. Ltd.). One of the important reasons that the company chose the Wuxi New District for its production site is that this place has an excellent environment. The site was chosen not only for its business investment but also its ecological conditions. The new production site seeks to use the natural resources most efficiently, to minimize the impact on the environment, and to provide the healthy and safe working environment for its workforces. The site was designed and constructed in the light of the company's environment policy as well as in compliance with the regulations of environmental protection in China. The environment policy has been integrated into the operational systems, such as QA/QC, Process Development, Liquid and Dry Productions, Warehousing and Administration (AstraZeneca, News; Production manager, personal communication, November 4, 2003).

With 92% of its workforces coming from the Wuxi region, the company has made contributions to the creation of employment for the region, raising the living standards and the regional economic development (HR Manager, AstraZeneca China Manufacturing). The Manufacturing Plant is acknowledged as one of the major tax-payers in Wuxi. It was awarded by the local government in 2002 as "Model Foreign Invested Enterprise" and "Tax Contribution Award" (AstraZeneca China, We, April 2003). Some senior officials, including Wei Jianxing from the Political Bureau of the Central Government, party secretaries of Jiangsu Province and Wuxi, and mayor and vice mayor of Wuxi have visited the company. The Chinese leaders highly praised the company.

AstraZeneca China has collaborated closely with distinguished academic institutions on drug development in order to improve R&D capabilities of local partners. In addition, AstraZeneca has been an important medium for knowledge transfer in the local medical community. The company allocates significant resources to educating Chinese medical professionals on the latest clinical findings and international best practices. (AstraZeneca China, Partner of Choice)

In April 2001 AstraZeneca China signed an agreement with Shanghai Jiaotung University for cooperation on genetic research of mental illness (AstraZeneca, News,

April 10, 2001). In 2003 AstraZeneca announced the set-up of AstraZeneca Institute in China with the aims to support the continuing medical education and to promote clinical medical development.

The Manufacturing Plant actively participates in activities in the local community. For example, in April 2003 it took part in the ceremony of one-year founding of the Wuxi Charity Hospital and completion of its new outpatient building. The company donated some assets and drugs worth RMB 51,000 in value (AstraZeneca China, We, April 2003).

At the Heart of the Regional Development

For the leaders of Wuxi, attending an opening ceremony of a manufacturing plant was probably not once in a blue moon. Hosting MNEs in the Wuxi New District is part of their strategies for the local economic development. The Wuxi New District was developed in the last decade, and it already possesses favourable conditions for global manufacturing. By the end of September 1993, the New District had utilized an accumulative foreign investment of US$3.7 billion. 40 of the top 500 MNEs in the world have invested in the New District in 50 projects. An agglomeration of manufacturing is emerging there, which includes machinery, LCD, telecommunications, micro-electronic products, artificial intelligence related equipment, chemicals, and pharmaceuticals. The New District has brought together 34 R&D centres of the enterprises. The New District also has Wuxi University Science Park, business set-ups for returned overseas Chinese students, industrial parks and vocational college. It has thus assembled about 15,000 professionals and technical people, amongst whom 1000 have master's and doctoral degrees (Director, Wuxi New District Administrative Commission).

The New District has a built area of 38 square kilometres, with another 100 square kilometres under development. Over RMB 6 billion has been invested on the infrastructure. Environmental protection is given attention and incorporated into the development. The green space covers over 9 million square metres, forming ecological zones. The major facilities already constructed include International Hospital, accommodations for foreign expatriates, Yangtze River Club, Science and Technology Exhibition Centre, a custom point, a distribution service centre, and a tax-

free communal storage. An airport is at present under construction (Director, Wuxi New District Administrative Commission).

For AstraZeneca Manufacturing Plant, to find itself in Wuxi apparently has something to do with its history, as acknowledged by the company. Astra had manufacturing in Wuxi before it merged with Zeneca in 1999. Apart from the historical reason, the choice of Wuxi was due to the development in the Wuxi New District to a large extent. The favourable investment conditions there were not least important. For instance, it is necessary that the company find talented and needed people from the local area. For most positions, AstraZeneca can find suitable people in Wuxi with plenty of choice, except for a few key and specialized positions. It was reported (the company news) that the good environmental (ecological) conditions in the New District were also an important factor taken into account by AstraZeneca China when choosing the site, in respect of the company's environment policy. In addition, the local government has given MNEs supports, such as dealing with administrative difficulties.

The efforts made by the local government in the past decade have approved to be successful in attracting foreign investment and building the manufacturing base in the New District. The new measures outlined in the development strategy include, among others, enhancing the internationalization of the New District, improving the distribution system and related distribution services, improving human resources management, and improving government services for business. These measures aim by creating the excellent business environment to develop the New District into the manufacturing base for MNEs, as envisaged by the local government (Director, Wuxi New District Administrative Commission).

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[1] GMP refers to Good Manufacturing Practice Regulations. GMP regulations require that manufacturers, processors, and packagers of pharmaceutical products take proactive steps to ensure that their products are safe, pure, and effective. There are national GMP regulations and international GMP regulations (e.g. EU GMP).

Chapter 9
ERM China

Meeting the Environmental Needs in China

Environmental protection has become a global issue in today's world. Degradation of the environment can result in costs of economic growth and damage to social development. It presents a serious development challenge, especially for developing countries. To achieve sustainable development requires, on the one hand, promoting better policy and regulatory and institutional frameworks, and on the other hand, harnessing the role of markets and the private sector in promoting sustainable development. It is also necessary to facilitate the partnership between the public and private sectors and civil society to resolve environmentally sensitive issues (The World Bank, 2001 & 2003). ERM China (Environmental Resources Management) has epitomized such a partnership in the private sector in promoting good environmental management. It serves as a bridge between the government and multinationals in China (ERM China).

ERM China is a privately operated and managed firm providing environmental, health and safety (EHS) consulting services in China. ERM is one of the world's leading providers of environmental consulting services with over 30 years history, operating in 37 countries and employing over 2,400 staff. ERM works globally and locally providing solutions for a wide range of specific environmental needs, from understanding the implications of climate change to advice on oil spill clean up. ERM China was the first international firm providing EHS consulting services registered in the country. It was established in 1995 as a joint venture with the Chinese Research Academy of Environmental Sciences (CRAES) - the major technical and policy think tank of the Sate Environmental Protection Administration (SEPA). It has experience of working with multinationals, local industries, government and development agencies. With offices in Beijing, Guangzhou and Shanghai, ERM China provides consulting services in many parts of the country through its resident consultants. It has about 80 staff delivering a wide range of environmental consulting services for multinationals operating in China (ERM China). Since its operations in China, the company has achieved satisfactory results for the consulting services. Its average

annual growth rate of profits is between 10 and 20 percent. It has also extended its operation to many parts of China (Managing Director, ERM China, personal communication, October 31, 2003).

As the China has witnessed the rapid economic development in the last two decades, the environmental issues become increasingly a serious concern for the nation. To enjoy the benefits of the economic growth and achieve sustainable development, the country must manage social, economic and environmental problems and opportunities accompanying the process of the industrialization and urbanization. The government has taken steps to rapidly extend regulations and promote sustainable development from conceptual knowledge to management practice. The private and public sectors need to work hard to keep up with the rapidly changing regulatory and cultural environment while applying their own corporate values of responsible care. Within this context, ERM China provides both technical and strategic support to multinational enterprises in China (ERM China).

Targeting the MNEs in China

Acting as a channel between MNEs and Chinese authorities as ERM China pronounced, the company has been targeting multinational companies in China. ERM China has worked with multinationals from many countries in various fields of the environmental protection, such as environmental impact assessment (EIA), M&A advisory services, risk and social assessments, and site investigation. Environmental issues such as air pollution and discharge of hazardous waste are dealt with by incorporating them into the whole process of the project and decision-making (ERM China; Managing Director, personal communication, October 31, 2003).

There are two major driving forces in the environmental protection industry. The one is the requirements by the government. Over the past few decades the Chinese authorities have promulgated various laws and regulations for environmental protection. The existing environmental laws and regulations are regarded well developed and comprehensive. The other is the internal need for EHS coming from organizations and business firms themselves. Good EHS practices can be important for them in respects of their reputation, business operations and organizational culture. MNEs usually take the lead in implementing the environmental laws and regulations

in China. Their EHS standards are often higher than those set by Chinese environment authorities, in line with their corporate requirements and standards. They want to be confident, for instance, labour standards within the plants meet their global requirements. If they purchase from local suppliers, there is a need to ensure that appropriate codes of health, safety and other practices are being observed (Managing Director).

In contrast, many or most domestic firms have difficulties in implementing the national laws and regulations. This may be due to their financial constraints or lack of awareness of environmental protection and EHS issues. It is not unusual that many Chinese firms say, "simply have no need to do those things". Economic and bureaucratic balance of power between local and national officials and in different regions can often create conflicts of interests. The result is that the enforcement of the laws and regulations at local levels often remains a serious problem (Managing Director).

The environmental industry in China grows rapidly in recent years, particularly in those more developed regions in the east and the south. The annual growth rate is over 15 percent in the Ninth Five-Year Plan period (1996-2000) according to *The Tenth Five-Year Plan for the Development of the Environmental Protection Industry* (the State Economic and Trade Commission, 2001). Despite the rapid development, the competitive market has not yet been established for the industry. Unfair competition and local protectionism are widespread. The Tenth Five-Year Plan states that a macro-regulation system and competitive market mechanism are to be installed to encourage healthy development of the industry. The guidelines also encourage the development of environmental services enterprises and strengthening of their management of social issues.

As a global company and through its operations, ERM has developed good and long-term relationships with its clients in many parts of the world. It is likely to attract and maintain those business clients even in China. With its strengths in technical expertise and consulting profession, ERM China can offer high quality services to its clients. Dr. Wang, Managing Director of ERM China stated, "the services delivered by ERM China are of very high quality. The standard of our work is as high as that of ERM in

any parts of the world." Particularly, the company has remained independent and neutral in the services provision, no matter whether it is making risk assessments or issuing certificates. Being binding to the laws and fair to clients are essential. This has been a crucial factor for clients to avoid a possible occurrence of likely liabilities in the future. A senior consultant made a comment (personal communication, November 6, 2003), "we don't want to be seen as too close to government authorities or any party. Clients want our service delivery neutral and objective. If we covered up something in our assessment, they would likely incur liabilities in the future and their business could suffer."

The economic and business environment in China is an important factor influencing ERM China' operations in the country. As large amounts of FDI flow into the country, ERM China can enjoy good business opportunities. As it serves only MNEs in China, any significant fall of FDI and MNEs' activities can have an impact on its consulting business. ERM China sees mainly two avenues for the business. It targets MNEs as soon as they enter China. Investment projects need consulting services on EHS issues, such as site investigation, EIA and risk assessment, and compliance with the relevant national laws and regulations. Most of Fortune 500 MNEs that have investments in China are ERM China's clients. Secondly, after having developed the business relationship, ERM China can often continue its consulting services with them in their operations or be involved in their future business (Managing Director, personal communication, October 31, 2003).

There could be two tendencies in the industry, which can concern ERM China's consulting services. The one is the potential threat associated with MNEs' strategy of localization. While localizing, they can become more inclined towards the practices adopted by Chinese domestic firms, and move away from international practices and standards. As they "go native", ERM China could lose these clients. So, its strategy is to target them as soon as they begin to enter China. The company hopes, with the consulting services already rendered, to maintain good customer relationships and retain the future business. The other tendency is that some Chinese firms could move towards international practices and standards. As the western management concept and new technologies are introduced, there can be a likelihood of their changing the way of thinking and practices. Some domestic firms could become more sensitive to

EHS issues, and be gradually gravitated towards the international standards and practices, particularly if they form foreign partnerships and move to the global markets. If so, this group could become the potential clients for ERM China (Senior Consultant, ERM China, personal communication, November 6, 2003).

Customized Consulting Services

There are a few thousand firms operating or involved in the environmental industry in China. About 80% consulting firms in the industry carry out engineering work or providing equipment. Most consulting services are provided by those firms that are specialized in engineering and machinery. They set up a division to conduct some related consulting work. They usually focus on those clients in the public sector or domestic firms. Unlike them, ERM China is specialized in consulting services and does not provide any engineering work or equipment. It offers technical and strategic advice or solutions (Managing Director, personal communication, October 31, 2003). The services can be delivered throughout the whole project, consisting of strategic studies and due diligence, planning and design, construction, commissioning and operations. They cover wide areas, including regulatory services, due diligence and site investigation, remediation, environmental (and social) impact assessment, corporate strategy and advisory services, risk management, social strategy, and environmental engineering (ERM China).

For example, with no site clean up legislation as yet in China, foreign investors must be proactive in their approach to remediation and their negotiations with authorities. ERM China worked on a comprehensive site investigation programme for a UK based property development company to facilitate a negotiation on environmental criteria for land use transfer and to provide advice on appropriate procedures and criteria for remediation. ERM China has conducted an environmental site assessment for a French company at its proposed joint ventures sites in China. It also worked with a major US pharmaceutical company to perform sewer testing at its sites in Guangdong and Jiangsu provinces. Through its operations in China, ERM has developed working relationships with numerous Chinese companies, such as Chinese oil and gas companies, CNOOC, Sinopec, and PetroChina. It is thus in a position to assist foreign companies with their Chinese deals. As ERM has a strong position in EIA in China with access to EIA certified by SEPA and capabilities to provide turnkey EIA

services, many leading multinationals and international organizations, for example, ABB, BASF and the World Bank have selected ERM for EIA serves. Air quality has been a key issue of concern throughout the Asia Pacific region with many cities experiencing unprecedented levels of pollution. Concerns about the impact on human health are widespread. ERM is a leading practitioner in this field and was commissioned for the development of a meso-scale air quality model for Hong Kong, and impact assessment for major new coal and oil-fired power stations in China (ERM China).

Many services offered are turnkey projects. With its expertise in different industries, ERM China can design and deliver the whole project with its teamwork. Projects have a life cycle. A team is organized to design the project from strategic studies and due diligence to monitoring its operations, and maybe to restart another cycle when the project or facilities are to be decommissioned at the end of the life. The services are often tailor cut to suit the needs of individual clients by offering the best possible solutions. For example, in pollution control ERM can provide the facility owner with tailored advice on cleaner production. Requirements in the oil industry are different from those in the car industry (Managing Director).

ERM China is particularly strong in making risk assessments. With its experts in various industries it is able to gain an insight into a company's management and operation systems. The assessment report is to provide the client with advice on or solutions to relevant issues, with an objective of improving the company's management systems rather than merely to solve some EHS issues. These assessments are regarded highly valuable (Managing Director; Consultant).

A Pool of Knowledge and Expertise

ERM recruits local experts with international experience and expatriate staff familiar with the local business environment. The resident teams in China are also able to draw upon the company's global and regional resources whenever required. With offices in Guangzhou, Shanghai and Beijing ERM China has, for example, over thirty domestic and international professionals specialising in M&A advisory services, and over twenty specialist consultants in environmental site assessment. The team is a blend of international consultants drawn from Europe, North America and Australia and highly

skilled local consultants. Working with its global network of ERM offices and with other partners, ERM China can mobilize its teams of technical and management specialists and apply its worldwide methodology and standards. The chairman of ERM stated, "The objective of ERM's restructuring in 2001 was to create a unified global entity, that would be seen as the consultancy of choice by clients, able to meet their environmental, social and risk management needs locally and globally. The platform for our growth is our existing offices, our ability to collaborate across 37 countries and our enduring relationships with our key clients" (ERM's Annual Review 2003).

The company's global approach integrates more than 30 disciplines including engineering, physical science, social science, environmental health science, risk, economics, planning, and management (ERM, ERM Services). ERM prides itself on its technical expertise in the core environmental disciplines. Its M&A team combines this with senior professionals form a variety of business backgrounds, including industry, corporate finance, management consultancy, economics, accounting, law and corporate strategic planning. The result is a unique mix of management and technical experience, enabling it to provide the business application of technical information. Unlike management consultancies, ERM is deeply rooted in technical strength (ERM). Its global knowledge and expertise gives a potential for innovation in China. Some of advanced techniques, or new technology available in the developed countries, can be applied creatively to the Chinese market and adapted to the local needs to help improve the standards, which in turn may help expand the industry (Managing Director, October 31, 2003).

ERM China has worked with multinationals and leading Chinese companies of various industries. The extensive experience of working with them in many parts of China has contributed to its local expertise, such as building a significant knowledge database of the country's complex regulatory regime and geological aspects for site investigation; understanding the needs of other due diligence partners – internal EHS management, process specialists, lawyers, financial advisors and investors for M&A advisory services; understanding the social issues of concern to stakeholders and making social assessment from the national perspective (ERM China).

Combining technical know-how with engineering, planning and management expertise, ERM can provide design consultation and suggest mitigation solutions to reduce environmental impacts. Its social strategies combine international experience on social issues with local knowledge and capabilities. ERM places a strong emphasis on involving business staff in social assessments. Being localized, ERM China can bring a thorough understanding of local regulatory systems and cultural sensitivities – where appropriate, it can integrate social and health impact assessments into the EIA process – to ensure the solutions satisfy both regulators and stakeholders alike (ERM China).

ERM's site investigation teams in China include, geologists, hydrogeologists, risk scientists, engineers and remediation specialists in a mix of disciplines which ensures a process that provides essential information and avoids redundant data gathering. The company continues to develop and evaluate emerging site characterization and interpretive technologies, particularly interested in those methods that offer high quality data while reducing time and costs. On site sample analysis and data interpretation, for example, enables "real time" decision-making without the need for additional or alternative tasks (ERM China).

ERM provides services in water and wastewater treatment, air and wastewater compliance monitoring, and operation and maintenance of pollution control facilities. It applied integrated advanced process design and sound operation and maintenance. Its team has specialist capabilities to delineate and clean up soil and ground water contamination in China. It also has extensive experience in developing practical hazardous waste disposal strategies, thorough knowledge of Chinese and international hazardous waste regulations, and close contacts with hazardous waste disposal facilities in China (ERM, Hazardous Waste Management).

ERM China's Workforce

> "Our success depends entirely on our people. We added over 50 employee shareholders this past year. We continue to build on our partnership principles which we see as a key driver to enabling our staff to develop their full professional potential," announced by Peter Regan, Chief Executive, ERM.
>
> (ERM's Annual Review 2003, p. 5)

"ERM China can be said to possess the best human resources in comparison with other firms in the industry", said Managing Director. "Our workforces are of very high calibre. This does not necessarily mean that every member is the best, but the team organized as a whole is outstanding and the best. The company values its human resources and organizes training for the staff to make them abreast with development in the industry. The consultants and specialists have excellent knowledge and extensive experience in their fields. They have either been educated or received training abroad."

As a consulting firm in the environmental protection industry, ERM China possesses not only the business professionals that are required for any consulting firms, but also technical experts and scientists. "Not only to be a businessman, but you have to be really an expert. Suppose you are talking to a client, for example, about the treatment of wastewater and the potential risk. If you don't know the area well, after a few words they will discover it. How can they ask you to do the job?" A remark made by a consultant.

ERM China recruits two types of people. The one type is experienced professionals who have been working in the environment consulting industry. They normally fit into an important position in the company. The other one is talented young people with a background in technology and science, especially those who demonstrate good potential to learn new knowledge. The company provides on job training for new employees. Also due to the mode of teamwork for projects, people need to be multi-skilled. For example, a consultant with the background in science had taken a MBA course to learn business management. People work in different teams and on different projects, and with their rich experience they are able to manage a whole project independently from the beginning to the end, which involves marketing, organizational and managerial skills, technical expertise, and so on. Every year ERM China organizes a holiday training programme in one place in China for three or four days. People from different offices gather to learn and have a chance to share knowledge and experience with each other. The company also conducts group training for key client management – to retain important clients - and this involves management and expertise from different countries (Project Manager, ERM China, personal communication, November 6, 2003).

ERM China's knowledge and expertise are the combination of the east and the west. The staffs are in general from China, but the company applies its international standards and experience to delivering services to every client in China. ERM China often has foreign experts working in China. Through its global network and management, it can mobilize its workforce on the international scale (Project Manager, ERM China).

ERM China has a distinct organizational structure from that of many firms and organizations (see Figure 9.1). At the top is the managing director. Under the director are three groups: Environmental Site Investigation & Remediation (ESIR), Corporate Advisory Services (CAS), and Environmental & Social Impact Assessment (ESIA). There is also a division of Finance. They are located in Shanghai head office. Beijing Office and Guangzhou Office are also responsible for the managing director. Under this level projects are managed and conducted by the groups or Offices. A team may be organized or reorganized timely with people from different groups or Offices. The makeup of the mix is based on the requirements of a specific project, often with a

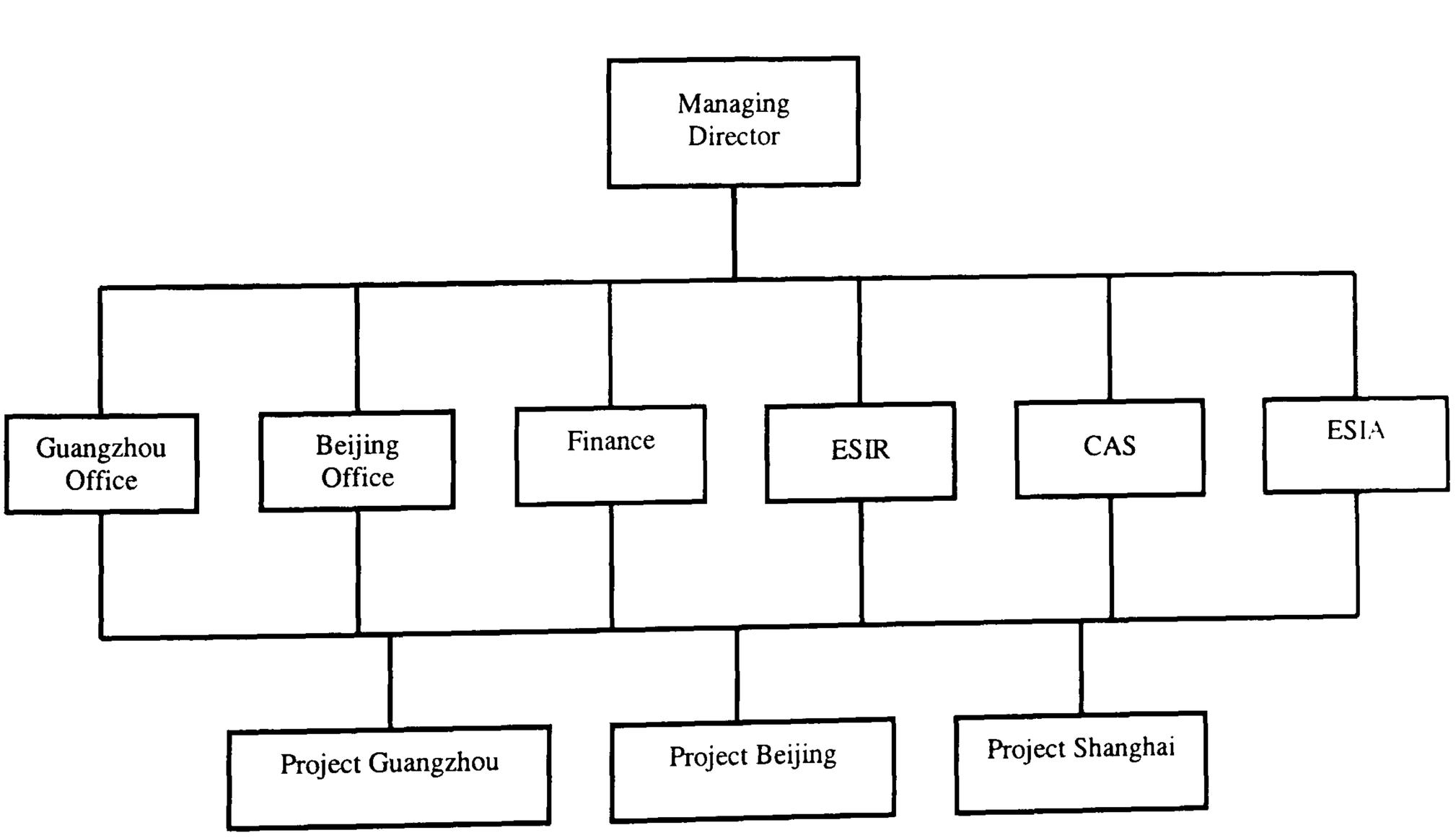

Figure 9.1. ERM China's Organization Structure

blend of young and old people, and professionals and expertise in certain technical areas. Beijing Office is more involved with projects in the north of China, and Guangzhou Office in the south of China. Shanghai head office generally takes up business in the east of China. If a project requires the expertise in a very special area not available in ERM China, then an expert can be transferred from ERM's offices in Hong Kong, Australia, Europe or other parts of the world (Senior Consultant).

JV Partnership and Unique Position

ERM positions itself as a global firm rather than based in one particular country. ERM based in the US and ERL based in the UK merged in 1987. ERM has acquired many firms in various countries. In 1994 ERM set up a JV in Beijing with CRAES by acquiring another firm. In 1996 it set up its office in Shanghai and later in Guangzhou. In 2002 when the JV agreement came to an end, ERM created an independent firm ERM China which succeeded the JV. Shanghai became the head office (Managing Director, ERM China; Senior Consultant, ERM China).

ERM had developed a good partnership with CRAES over the years. Since the end of the JV partnership, ERM China has maintained the good working relationship with CRAES. In the past partnership, ERM had provided mainly knowledge and technical expertise combined with its management systems and worldwide experience. The recruitment of the staff in China and management decisions were determined by the ERM. Technical expertise and the ability to mobilize global resources, in particular, human resources, are important resources of the ERM. The Chinese partner, CRAES had provided local knowledge and management of relationships with government authorities. With this arrangement of the partnership, ERM did not have to adopt the local industry practices and standards, but simply applied its existing systems and standards which ERM had practised worldwide in the industry. In essence, the partnership provided ERM China a platform to conduct consulting services in China in ERM methodology (Managing Director).

On the other hand, ERM China presents itself as a localized international firm. With its extensive experience of operations in China - including its involvement with the major Chinese projects, such as gas pipelines from the west to the east - the professional qualifications its personnel possessed, and its strong consulting

capabilities, ERM China was in 2002 granted the access to a Class "A" EIA Certificate certified by SEPA, and it became the only international consulting company processing the access to this type of certificates. An American company has obtained access to a similar kind of certificates, but having some limitations. ERM China has thus the capability to provide turnkey services for the preparation and approval of Chinese EIAs (Managing Director, ERM China). Not surprisingly, ERM China regards itself acting as an EIA manager to liaise between multinationals and Chinese environmental authorities and local institutes to expedite project implementation and avoid misunderstandings. Skills and objectives of local Environmental Protection Bureaus (EPB) and departments vary considerably, and conflicting interests between government agencies often exist. ERM China provides clients with an ongoing negotiation platform to ensure compliance with regulatory requirements while protecting project interests (ERM China). Few firms in the environmental industry can easily achieve this (Managing Director, ERM China).

> Rapid evolution of environmental policies in China and inconsistent enforcement in different regions and industries have been a continuing challenge to business planners and EHS managers. The changing regulatory environment means large unforeseen costs can suddenly become a reality.
>
> (ERM, Regulatory Services)

As a research institute and think tank for SEPA, CRAES owns various types of expertise and is well positioned to understand government policies on the environment. This partnership has been especially helpful for ERM gaining an insight into the direction and likely changes in policies and regulations. To be able to foresee some possible changes and incorporate them into the solutions delivered to clients, can be part of the innovation for ERM China. Moving ahead of the time and offering long-lasting solutions can give it the competitive edge over other firms in the industry (Managing Director, ERM China).

Chapter 10
Shanghai Marconi

Shanghai Marconi was established in 1996 as a joint venture between Marconi and Shanghai Railway Communications Equipment Factory (SRC), a state-owned manufacturer of telecom equipment under the Ministry of Railways. The company was originally set up as Shanghai GPT, joint venture between GPT – part of Marconi – and SRC. In February 2001, Marconi plc renamed Shanghai GPT to Shanghai Marconi Communications Equipment Co. Ltd. – Shanghai Marconi for short. The move was to promote the Marconi brand as a world-class supplier of telecommunications equipment in the Chinese marketplace (Marconi, February 9, 2001).

Shanghai Marconi has over 100 employees in China. It provides its customers with advanced network solutions encompassing transmission, access, switch and network management as well as technical services. The products Shanghai Marconi supplies in China are mainly manufactured in Marconi's factories in the UK. Its customers include, among others, the power industry, the Ministry of Railways, and the telecommunications sector in the country. The markets of power companies and railways served by Shanghai Marconi are small, with each accounting for no more than 5% of its total market. The most important customers are telecommunications carriers such as China Netcom, China Telecom and China Unicom. These companies need telecommunications equipment to build and upgrade their infrastructure and networks (Director, Operation Dept., Shanghai Marconi, personal communication, November 6, 2003).

During the first three or four years after the establishment, Shanghai Marconi was developing very rapidly with good performance. With Marconi's successful Synchronous Digital Hierarchy (SDH) technology, the company has won some significant contracts in China (Director, personal communication, November 6, 2003), for example, the communications networks for northwest railway lines, the communications networks for Shandong Power Bureau (Marconi, July 27, 2000), Dongguan Power Project and the project of power transmission from the west to the

east in China (Marconi, July 11, 2000). Marconi's SDH equipment is the core of many of China's major network developments, including one of the longest SDH optical fibre links in the world, running 3,000 kilometres from Shanghai through Wuhan to Chongqing (Marconi, July 11, 2000). Marconi's equipment also plays a key role in upgrading Beijing's fixed and mobile communications infrastructure (Marconi, February 9, 2001).

The telecommunications industry has slowed down in China since 2003. Investment in the communication is greatly reduced. Some domestic communications companies, for example, China Netcom and China Telecom, had carried out restructuring to meet the market conditions. As the market becomes tough, Shanghai Marconi, like many other companies, faces great challenges in the industry in China, in the once fast growing and most promising market (Director, personal communication, November 6, 2003).

Technology Bubble and Telecommunication in China

Since the stock market (technology) crashed in 2000, the telecommunications industry has experienced a severe downturn worldwide. That impact still lingers on the industry even today. The industry will unlikely witness once again the double-digit growth of the 1900s if there is any substantial growth in the future. Worldwide, many technology companies were incurring heavy losses and cutting jobs. Marconi plc nearly collapsed in the aftermath of the technology bubble burst. The company survived only through a financial restructuring arrangement under which creditors forgave £4 billion of debt in return for majority ownership of the company (Director, personal communication, November 6, 2003; Marconi Annual Report and Accounts 2002/3).

Accompanying the accelerating development of technology, IT and the Internet have transformed people's ways of communicating and replaced some traditional communications equipment. The advancement of technology has also enabled the communications capacity to increase massively, tens of times if not hundreds of times. In other words, the present communication demand will not soon absorb the over capacity that has been generated. The overall situation is a great reduction of

capital expenditure in the telecommunication (Director, November 6, 2003; Marconi, Prospectus, 2003).

The similar things are mirrored in China. China had constructed a grand scale of communications infrastructure in the 1980s and 1990s; the development of the communications networks began to slow down in 2003. The Chinese market has become more difficult though the situation is less serious than in the western countries. Some MNEs such as Nortel Networks and Ericsson had hardly made any profits in China until the recent time (Director, personal communication, November 6, 2003).

As technology has enabled the equipment to possess enormous capacity and the growth of demand is very limited, firms in the telecommunications industry seem to face very difficult market conditions (Marconi, Prospectus, 2003). Some areas of the telecommunication are close to the maturity, for instance, switch equipment. The previous rapid development of the telecommunication in China has to a great extent met the demand of urban areas, and thus the market is often limited to some customers connecting to the main networks and upgrading systems (Director, personal communication). There seem to be some improvements in the industry lately. Some firms may have benefited from the development of broadband networks and mobile services, which call for carriers to invest in additional infrastructure (Dickie, January 19, 2004; Nuttall, October 21, 2003).

The countryside certainly has the potential for development, but the development could be slow as those places cover vast areas and long distance. Any development there can be costly. There also lacks capital for the investment, and people living in rural areas often have few needs for communications services. Under the Western Development Strategy, Chinese government has allocated substantial amounts of resources to the western regions, especially in infrastructure construction. The government also encourages businesses to invest in various projects there. China Railway Communication (CRC) had started projects in some of those regions in 2001. James Wang, vice president of Marconi China, Asia Pacific said, "The telecommunication development in China's north-western region is still in its infancy.

But this situation is changing rapidly while CRC invests in this backbone project, in which Marconi will deploy its leading edge network infrastructure technology".

In spite of the difficult situation in the industry, some industrial experts have a good expectation for the Chinese market. The Financial Times reported Huawei's strong performance in 2002 and expected growth in 2003. "Much of Huawei's growth has been fuelled by its home market where a nation of 1.3bn people is quickly taking to mobile telephony and the Internet, while fixed-line phone access is being extended in rural areas."(Nuttall, October 21, 2003)

Many multinationals are operating in the Chinese market, including Nortel Networks, Ericsson, Motorola, Alcatel, Siemens and Lucent Technologies. Some of them entered China much earlier than Marconi. The market is already well established. Firms are competing in this industry by and large in the level playing field. They usually win contracts through a bidding process. It is understood whether to win bids or not can depend on a couple of critical factors, such as functions, price and quality of the products, and the services provided. At the same time, there can still be somewhat interference from the government, particularly for state-controlled companies (Director, personal communication, November 6, 2003). The Financial Times made comments: "regulatory transparency remains lacking in China's telecoms markets, while the government's controlling stakes in all the operators make for a tangled web of bureaucratic and commercial interests." (Dickie, January 19, 2004)

Telecommunications companies may be strong in certain products: particular types of equipment or technology. As for Marconi, its SDH technology has a very good reputation in the marketplace. Shanghai Marconi mainly supplies SDH, Dense Wavelength Division Multiplexing (DWDM), Asynchronous Transfer Mode (ATM), and wireless products in China. Some companies may develop certain advantages in other aspects, such as reducing costs by manufacturing and sourcing locally. Shanghai Marconi has many areas similar to other MNEs, for instance, the way of operations and costs of products, but it has been lagging behind some companies in terms of localization. Some MNEs entered China earlier and made large amounts of investment. They have now manufacturing bases in the country, and thus can better

take advantage of low cost labour and local resources (Director, personal communication, November 6, 2003).

MNEs have in general mature products (well-developed), especially in the high end. They can provide equipment to a wider range in meeting customers' needs, either in terms of price or functionality. Chinese companies are behind in respect of products and technology, but not very far behind. The gap may be about one or two years. In recent years, domestic companies are becoming increasingly competitive and some like Huawei and ZTE began to extend their business to other parts of Asia, Europe and Africa. Huawei, as a leader, has established research institutes in Silicon Valley, Stockholm, Dallas, Moscow and Bangalore as well as in China (Nuttall, October 21, 2003). Moreover, competing in the home market, domestic companies can have some advantages that MNEs usually do not enjoy. They possess a large number of low cost employees and are able to operate at lower costs than foreign firms. In particular, they are developing products for their home market and, when developed, the matured products can often better suit the needs of domestic customers. These companies have great potential for expansion (Marketing manager, personal communication, November 6, 2003).

Marconi's Solution

Shanghai Marconi employs Marconi's technology and keeps abreast with the latest development of the industry. Marconi Corporation plc is a global communications and information technology company headquartered in London. Marconi has operations in many parts of the world, including the UK, Continental Europe, North America, Asia, and Australia. Its customers include are many of the world's leading data and telecommunications service providers, government agencies and the transportation industry (Marconi, Marconi Annual Report and Accounts 2002/3).

Marconi has hardware and software for building the superhighways that enable sound, video, computer data or other information traffic to travel rapidly. Within the public networks, Marconi is a major supplier of optical networking in the area of SDH technology. In private networks, the company offers a broad portfolio of solutions for Ethernet and ATM networks. The company has a leading position in SDH technology in the world. SDH technology allows operators to transport communications traffic

around their networks along optical fibres. In 2002 Marconi regained its number one market position in the European SDH market. According to *Marconi Annual Report and Accounts 2002/3*, its core business investment was orientated to key products areas, such as Optical Networks, Broadband Routing and Switching, and European Access Networks. Optical Networks (SDH technology) accounted for 40% of its core R&D investment in 2003. Its recent projects have focused, in particular, on the development of next-generation SDH, which is more effective for carrying the new and rapidly growing Internet and broadband data services. For Marconi, developing new products is critical for the company's prospects and, undoubtedly, for its survival.

The main products that Shanghai Marconi is supplying to the Chinese market include SDH, DWDM, ATM/IP, and wireless products. Shanghai Marconi focuses on designing and building world-class communications networks for customers, which have characteristics of high performance, flexibility, reliability and easy upgrading. It can meet customers' needs for any potential development. It also provides before-sales supports, which include solutions and installation advice, and after-sales technical supports, which include installation, operation, training, maintenance and emergent technical support. Shanghai Marconi has quality assurance systems. It possesses the ISO9002 certificate of the French BVQI and the testing certificate of the Communications Research Centre of the Ministry of Railway, making it a prominent company amongst domestic and multinational communications companies in China (Marketing manager, personal communication, November 6, 2003).

Management and Operation

Shanghai Marconi has a modern management approach. As stated by the company, "it has established itself as a customer-oriented organization and continues to hold the corporate motto of supplying customers with the best products and services. The corporate belief is embodied all through the process of production, quality control, sales and after-sale services."

The senior management consists of CEO (from Marconi) and EVP Director (from SRC). They are appointed by the Board. The most important issues of the company are decided by the Board, such as objectives, profits distribution, the charge of the services rendered between the parties. The Board Meeting is held once half a year.

Other important issues, if there is a disagreement between two directors, will be brought to the Board Meeting for solution. Under the senior management there are department managers. CEO is responsible for the overall business and various functional departments such as Services, Technical, HR, and Financial Departments. EVP Director is in charge of individual Business Divisions, which run specific projects for customers (Director, personal communication, November 6, 2003).

The operation is customer-orientated. The main activities include supply, sales, after-sales services, technical support, bidding, contracting and importing. These activities have been formalized in the setup of the joint venture and subsequent operation. Commercial Department is responsible for marketing and sales of products to customers. Technical Support introduces products to customers, including the details of technology, functions, and compatibility with other systems. Financial Department calculates costs and profits, determines bidding prices and discusses with Marconi in the UK about the procuring prices. Supply Department orders the products from Marconi in the UK. Business Divisions work on the contracted communication projects. The procedures are well defined, especially through job descriptions. As the joint venture operates between its customers in China and its parent company Marconi in the UK, the operation can be to some extent different from that of other telecommunications companies in China. The procedures are more complex when involving imports. The company rules cannot specify all the details of the operation. As employees have been working here for some years and are familiar with the process, they can execute those specific tasks well. Some software, such as ERP is used to support the operation. The company acknowledges a weakness in respect of applying a unified IT system to coordinate the operational activities, and this can result in the waste of human resources. Human resources are certainly much cheaper in China than in foreign countries, and thus the IT issue has not been given much attention. For high-tech companies in the western countries, equipment can be expensive, but people are even more expensive (Director, personal communication, November 6, 2003).

Marconi Corporation also has several other operations in China, including Marconi Communications in Beijing, Marconi in Chengdu, and Guilin Marconi Telecom. Each

site remains an independent business unit. There is no particular relationship between Shanghai Marconi and other Marconi companies in China (Marconi. China locations).

Management Issues – Partnership, Cultures, Communication and Language

Marconi Corporation plc has 51% of the equity ownership in Shanghai Marconi. The equity ownership was based on the capital investment made by each party. The Chinese party has provided buildings, offices and employees: the Marconi party has provided products – namely technology, management and training. For Shanghai Marconi, products, technology and management skills are very important resources (Director, personal communication, November 6, 2003).

The management of Shanghai Marconi is well aware that the company's success can depend on the cooperation between the two parties within the joint venture. The two parties need to work together and reach consensus when making important decisions collectively. Manager Qian made the following comments.

"There has been no case that one party makes a decision without consulting the other. Single-handed dominant approach is not good for either party. For multinationals to understand the local regulations and culture is very important. The present situation is different from the early 1990s when the market was not that open. At that time, customers needed products and often chased after companies (MNEs) for the products. But now the market is highly competitive, and the customers have a great number of choices to make. In such a context, the partnership plays an important role for MNEs to understand the local conditions. The joint venture is sandwiched between the local market and the parent company, MNE, and operates in a difficult position and coordinates with the two. We need to satisfy the local customers and at the same time find a way that is acceptable to the headquarters of the company (MNE). The Chinese market has its uniqueness, and some customers have special requirements. The people working on the British side probably have never been to China, and they would not know the situation here. If we pass some customer requirements directly to the British side, they may think the demands are absurd. But in China their requirements can be normal, and if you do not offer the terms, other companies will do. As a joint venture, we must coordinate the operation between the local market and the parent company in the UK."

There are a lot of daily issues to be solved between the two parties in the joint venture. People are used to certain (Chinese personal and flexible) ways of dealing with issues in China, but foreigners (British side) stick to the rules and procedures, and are not that flexible. This can cause a difficulty in the operation between the two parties, and thus the joint venture need to absorb the two different cultures. The operational process is very important, such as procedures of ordering products, dispatching products, and solving arising problems, for instance, damage to the products, delays, defects of the products, and so on. The company must have a set of rules detailing how to deal with these issues in line with the parent company Marconi. Shanghai Marconi also promotes Marconi's organizational culture and emphasizes employees' training. Most employees have received higher education in the area of communication or IT, and some have received further training at Marconi in the UK (Director, personal communication, November 6, 2003).

Mr Qian also pointed out that Chinese employees are not used to raising issues to the management.

"Employees should raise issues actively; otherwise the management would not be able to know them. Those people in the operation should raise issues and give advice. Our employees' attitudes are responsive rather than proactive. If you tell them to do something, then they do it. The employees are not very used to raising issues when they arise. It often happens that when they develop into problems, those issues come to light. In the western culture, if you tell someone to do something, he may ask you if he could do it in another way. Employees should ask what it exactly means such as an instruction or order from the management, and how to carry it out. Sometimes also, one gives an instruction, and he may not know what he exactly wants. So people need to learn to understand each other and to communicate better."

Language can pose a serious difficulty in the communication within the company. The language problem can sometimes cause misunderstanding between the partners. Most Chinese employees can read English, but their ability to understand and speak English is rather limited. Especially, at a meeting, they may not be able to express their opinions clearly or make an argument. Chinese employees' lack of language ability may make them act passively or give no response rather than proactively be engaged

in the company's affairs. Language is especially an important issue in respect of product and technology. The product was developed in the UK, and all the technical materials, documents, and the like are in English. But in China, if a company wants someone who is both an expert in technical areas and proficient in English, this kind of people can be quite expensive and not every company can hire them. In addition, the communication with customers has to be in Chinese, as the customers all use Chinese internally and they have in general limited knowledge of English. They require documents, discussions, minutes, etc. in Chinese. Shanghai Marconi has thus a lot of work requiring translation. This in turn increases costs and reduces efficiency. Technical areas are also difficult for external translators (Director, personal communication, November 6, 2003).

Shanghai Location

Shanghai Marconi is located in Shanghai Pudong Waigaoqiao Free Trade Zone. This Free Trade Zone is one of China's biggest and earliest developed free trade zones. With the well-developed infrastructure and facilities, it has attracted a large amount of foreign investment and hosts many MNEs of various industries. Shanghai is positioned in the forefront of the economic development in China and often regarded as the powerhouse of China. The Shanghai region certainly has a lot more to offer for multinationals, like Marconi.

It is acknowledged that policies and regulations are generally better implemented in Shanghai than in other places in China. This may be one of the attractions to MNEs to choose Shanghai (Director, personal communication, November 6, 2003). Businesses located in the high-tech parks, industrial and free trade zones can enjoy different preferential treatment.

"But in Shanghai, there are problems with regulations as well," commented by a manager. "There seem to be too many regulations and they are often impractical. If companies strictly comply with them, some of the requirements can make their business incur very high costs, probably unbearable. In such a situation, companies usually try to find a way to bypass those regulations. I wonder if there was any communication between authorities and business communities when those regulations

were produced. For business, it's not just about procedures or methods, but we must consider costs."

Imports and exports may encounter some difficulties. Tariff is not a problem for Shanghai Marconi importing equipment, which is now implemented according to the WTO agreement.

The Shanghai area has quite a lot of talented people, with some coming from other places in China. Human resources, in particular, talented engineers, are very important for telecommunications companies. It is fairly easy for Shanghai Marconi to find wanted workforce. On the other hand, Shanghai has a large number of MNEs, and also many telecommunications firms. If the company is not well managed and the employees are dissatisfied, they may leave the company. It is more likely that people change jobs in Shanghai (Director, personal communication, November 6, 2003).

It is possible to reduce costs by taking advantage of the country conditions. Engineers are critical resources demanded by the company, which are available in Shanghai. In general, human resources are a large part of the production costs of telecommunications equipment. Components are available in China. The cost of engineering support is lower in China. Manufacturing certain types of equipment in China is certainly a means of reducing costs, but this really depends on the market size of the product. At present no market for a certain type of products is sufficiently big to justify the local production. Suppose the local production is served as a base for manufacturing and supplying equipment for other markets such as the UK, Europe or Asia. This will involve technology support for those markets as well, and requires the internationalization of local human resources, which concerns their English and ability to communicate with other countries and their technology capabilities. At present there are difficulties in this respect. The issue is not about the production of ordinary products such as household goods, but the production of sophisticated high-technology products. In addition, there are still administrative hurdles on the government side and, the degree of the country's internationalization is not high enough. This can impede the operations of the manufacturing base when the prompt cross-border movement is needed. For example, it may take a few days for someone to sort out procedures of going abroad. As for the company, they need to send

engineers abroad straight away if there is a problem (Director, personal communication, November 6, 2003).

Winning Customers and Using Leverage

The toughest thing is fierce competition in the Chinese marketplace. In North America, the market is mainly dominated by American companies such as Lucent Technologies, Nortel Networks, etc. In Europe, there are major European players. American companies may operate in Europe, but only in very limited areas. In China, all the major MNEs in the world, no matter where they are from, are competing in this market, plus Chinese domestic companies. For example, in 2001 Shanghai Marconi competed in a fierce bid with several strong rivals such as Lucent, Huawei and Alcatel, to win a multi-million dollars contract from CRC (Marconi, Shanghai Marconi DWDM Contract Win from China Railway Communication). In addition, Chinese customers are more sensitive to prices, and thus domestic companies usually have advantage. Marconi's products are manufactured in the UK, and the costs are high. There are also other costs associated with the coordination and providing technical support between Marconi in the UK and Shanghai Marconi. The possibility of making profits is lower than in other markets (Director, personal communication, November 6, 2003).

According to Mr Qian, Shanghai Marconi's performance was not very promising in recent times when the market turned tough, but the company has won quite a number of significant projects in China over the past several years. The company was awarded a few times the performance enterprise by the Waigaoqiao Free Trade Zone Administration for achieving high revenues. Facing the intense competition from other companies, it has leveraged its various strengths to secure successful biddings and profits. There are many stories about its winning customers.

In 1999, Shanghai Marconi designed the network combination for the first-phase project of SDH key network of Guangdong Electricity Power. The distinctive feature of this project is that it covers a large scope, divided into the East Network and the West Network, and including many sub-bureaus. Consequently, the project demands very high compatibility and adaptability of the equipment. After several rounds of selection processes, Shanghai Marconi won the bid thanks to its excellent network

combination and highly functional equipment. One of the managers of Guangdong Electricity Power System explained, "the reason why we choose Marconi's transport, access and network management equipment is that it splendidly satisfies our requests for equipment overall functionality, future expanding ability and customer service."

Shanghai Marconi provided the SDH transmission plan, equipment and service for the GSM Expanding Project of Dalian Unicom. In accordance with Dalian Unicom's demand of a large amount of business and economic and convenient upgrading, Shanghai Marconi made full use of the flexibility of the SDH products and designed a network combined by ADM, TM and REGEM equipment. The powerful SMA-1x was used. This equipment can configure optical cards and branch road cards with different types of slots according to the network topologic structure, thus it is very convenient and safe to upgrade in the future. The equipment has a powerful cross-connection ability. Shanghai Marconi takes advantage of the equipment to design a flexible, economical and highly efficient network. Mr. Burton, CEO of Shanghai Marconi said, "we are glad that our customers have great confidence in our products. With the development of optical communication technology, I believe we will continuously provide our customers, with state-of-art equipment and solutions that are not only reliable, but future proof."

ZDNet China reported (January 10, 2002) Shanghai Marconi won the contract from the South Power of the communications network for the project of power transmission from the West to the East of China. Facing the intense competition from other domestic and multinational companies, Shanghai Marconi's won the bid with its high quality products and extensive experience in the communications networks of power projects.

Shanghai Marconi can introduce newly developed products into China. However, providing too many kinds of products could consume a lot of resources, for it is possible that one type of products may only be manufactured once or twice. The starting costs are usually high, and the company need to train people and asks for support from experts from abroad (Marconi's Headquarters). When the market expands, then the company can make profits (Manager, Shanghai Marconi).

Communications equipment is standardized. Every year (Chinese) government produces budgets and planning for the industry, concerning the capacity of the networks development, types of technology to be used, etc. During the bidding of a project, telecommunications companies provide their products to meet the clients' needs. Of a particular type of technology, companies may have a few different types of products. They can have different functions, and be of different generations and in different prices. So taking into account these factors, companies make their bidding of the project. Providing the best or expensive products does not suggest winning the contract. The products provided should suit the customer's needs as the very expensive products with a large capacity may not be necessary for the customer in many cases. The customer may have no plan for the future development to use up that capacity. So it is important to take into account various factors when entering a bidding.

In the initial bidding of a project, Shanghai Marconi may not be able to make any profits. After the successful bidding and having established the relationships with the customers, the company can often have advantages in price in the future projects with the existing customers, and will be able to make profits. The customers also need use the software of the same supplier. It is important for Shanghai Marconi to enter the customers' networks. Once those companies have used Marconi's equipment to build their communications infrastructure, become familiar with its products and technology, and have trained people to use the equipment, they are supposed to purchase new equipment from Marconi if they expand their capacity or upgrade their system in the future. Adding different types of equipment (switching to different suppliers) to the existing networks will inevitably increase costs, such as training people, and will also increase difficulties and complexities of the management and the operations of the system. Although communications equipment has industrial standards, using different types of equipment in the same system can result in certain functions or features not working (or not working properly) due to the requirement of compatibility. Each type of the equipment has its own characteristics and strengths. Customers take into account these factors when making purchasing decisions (Director, personal communication, November 6, 2003).

Chapter 11

GSK Pharmaceuticals Chongqing

Background

In the 1980s, Glaxo held a talk with a pharmaceutical company in Shanghai to set up a joint venture. Glaxo planned to produce aerosol products for respiratory illness. The two companies did not reach an agreement. When Glaxo was expanding its business in the southwest of China, it spotted an opportunity of setting up business in Chongqing. Chongqing was one of the industrial bases in China, and had established chemical, pharmaceutical and many other industries. There were pharmaceutical joint ventures in other parts of China, but not yet in the southwest. The Chongqing Pharmaceutical Bureau was interested in the idea of joint venture and proposed Southwest Pharmaceutical Co. Ltd. as the Chinese party. In the 1980s aerosol products (powder-based) were new in China as a very advanced form of medicines. As the medicine can be administered directly into the respiratory system, aerosol products are efficacious and have minimum side effects. In this background, the idea of setting up a joint venture in Chongqing won the support from Chongqing Government and the State Drug Administration in Beijing (Manager, GSK Chongqing, personal communication, November 12, 2003).

The Chinese party and Glaxo made an investment of US$10 million in equal equity. The Chinese party consisted of Southwest Pharmaceuticals, No. 3 Chongqing Pharmaceuticals, and CPC (a state owned pharmaceutical trading corporation based in Beijing under the State Food and Drug Administration). As the pharmaceutical companies did not export, they had no foreign currency. The local government and the Beijing pharmaceutical authority helped provide foreign currency through the Bank of China. With the support of the local government, all the procedures and paper work were completed within a month. Chongqing Glaxo Pharmaceuticals Ltd. was established as a joint venture in 1988 (Manager, personal communication, November 12, 2003).

GSK Pharmaceuticals (Chongqing)

The joint venture has experienced two times the worldwide merger of the British parent company. One time was the merger between Glaxo and Wellcome in 1995, and

the other time was the merger between Glaxo Wellcome and SmithKline Beecham in 2000. In 2001 the joint venture was renamed GSK Pharmaceuticals (Chongqing) Ltd (GSK). The equity ownership of the joint venture was restructured. GSK, Southwest Pharmaceuticals and No. 3 Chongqing Pharmaceuticals have respectively 88%, 8% and 4% of equity (Manager, personal communication, November 12, 2003).

GSK Chongqing was granted both the Chinese and international GMP certificates. The company makes five main aerosol products including Ventolin, Becotide and Beconase specialized for asthma, bronchitis, and rhinitis (GSK). The plant covers 87,000 square metres, with 26,000 square metres in use. It has about 75 employees in total. The joint venture has advanced production facilities and the technology used is ahead of that of domestic manufacturers. It can produce products most effective in treatment (Manager, personal communication, November 12, 2003).

GSK China

GSK Chongqing is one of the GSK manufacturing sites in China under GSK China Investment Co. Ltd, a holding company based in Beijing. GSK China Investment was established in early 2001 when Glaxo Wellcome and SmithKline Beecham merged, and became one of the largest multinational pharmaceutical companies in China. The company was originally established in 1998 as SmithKline Beecham China Investment Co. Ltd (GSK).

GSK Group has seven business units in China. It has also established offices in 32 cities (including Hong Kong) across the country. The other business units, apart from GSK China Investment and GSK Chongqing, include Tianjin SmithKline & French Laboratories Ltd. (JV), GSK Tianjin Co. Ltd. (JV), GSK Pharmaceuticals Suzhou Ltd. (WFOE), GSK Biologicals Shanghai Ltd. (JV) and Guangzhou Xin Yuan Beverages Co. Ltd. (JV). These business units have clear divisions of business. Each manufacturing site is designed only for its particular production purposes. Prescription Medicines and Vaccines are headquartered in Shanghai; OTC Medicines are headquartered in Tianjin; sterile products and coating tablets are based in Suzhou; Consumer Healthcare is headquartered in Hong Kong (GSK).

From Loss Making to Profits

Since the operation in 1991, GSK Chongqing had suffered a loss till 1997. From 1997, its performance has gradually been improved. In recent years, the company can make profits of RMB 10 – 13 million per year, plus the tax contribution of RBM 6 – 9 million. The loss making in the early period was mainly due to the large amount of investment and the difficulties that the management experienced in adapting to the China market. The improvement of the performance has taken place in recent years, especially since 2001, when Glaxo Wellcome and SmithKline Beecham merged. The merging activity had implications for GSK Chongqing as the company began to shift the focus on the market. Since then, GSK Chongqing has greatly strengthened the marketing and sales. The management has also been localized with Chinese managers taking office. In 2003 its total revenues were estimated about RMB 100 million achieving 10% of growth (Manager, personal communication, November 12, 2003).

GSK China Investment is in charge of the operations of the GSK invested businesses and the sales in China. The Prescription Medicines Headquarters in Shanghai are responsible for the sales and distribution of medicines. GSK China Investment promotes GSK products on the China market targeting hospitals and clinics. The majority of GSK products sold in China are imported from other GSK manufacturing sites in the UK, Australia or in other countries. The products manufactured in China account for approximately one third of the total sales. The sales are carried out through distributors across the country, for example, through Chongqing Pharmaceuticals Ltd., Beijing Pharmaceuticals Ltd., and other regional companies. Those distributors are normally state owned trading companies and have very close relationships with hospitals and clinics (Manager, personal communication, November 12, 2003).

As the sales were poor, the Board of Directors decided that GSK Chongqing could set up a sales unit to sell its products in addition to Prescription Medicines in Shanghai. Sometimes GSK Chongqing can sell its products easily to distributors as they are taken by distributors together with other highly demanded GSK medicines, such as antibiotics and imported medicines in different therapeutic areas (Manager, personal communication, November 12, 2003).

Management Transformation

Management Models

The management had been changed several times in the past. Before 2001 executives and some senior managers were foreign expatriates. Most of them were British. Some of them were dubbed number one for sales in Europe, or had an impressive sales record in America. After they took office in the company, they all failed to reverse the poor sales. When the Chinese partner advised them to do something different, they were not interested or even not considering the advice. They regarded the Chinese approach as a sign of poor competence. The poor sales were attributed to the factor that the Chinese were too poor to afford those good medicines. The present Chinese managers believe that too many people can afford those medicines, and their prices are actually quite low on the market. The problem lies in the distribution system and the wrong approach to the market. Mr Tang, a senior Chinese manager made the following comment:

Before 2001 the management approach was a typical British model. The management style was very rigorous. It was very much rules and procedures based. Employees' behaviour was clearly defined. Their approach is excellent in respect of management and operation. Our company could achieve efficiency and reduce costs. We should accept their strong points. But there was a serious weakness. The management had difficulties in adapting to the market conditions in China, and they overlooked the market. For example, our company did not understand the pricing of medicines. As for Johnson & Johnson, they had seen through those things long time ago. Until 2001 the prices of our medicines had been only a few yuan above the prices set in 1991. What the company considered was the manufacturing costs and expected profits. It did not know the market and the distribution. Those companies had almost nothing to earn for distributing our products, not to mention their interested parties – distributors under them and hospitals. Other distributors need to make some profits as well. It's an open secret in China: hospitals and doctors also have a share (Manager, personal communication, November 12, 2003).

A sales manager of the company was once talking to a trading company. "Your company's medicines are definitely effective," said the manager of the trading

company. "But the points you offered are too few. With so few points, other companies have no incentives to distribute your products. They can't be sold."

GSK was not well-known among the general public in China. The new managing director (since 2001) once went to a restaurant in the neighbourhood. During the meal he asked the people working in the restaurant about GSK, and they had no idea of what GSK was. GSK did not advertise its products to the public. It could have done so during the early period of its operation, for there had been no regulations about advertising medical products in China. Although GSK has a good reputation among doctors and medical professionals in China, its OTC products in pharmacies are largely dependent on the general public (Sales manager, GSK Chongqing, November 12, 2003).

Mr Tang also pointed out:

"They must have a good understanding of the local conditions. Each country or market has its own characteristics. Understanding them is a must, and that's why some foreigners (foreign businessmen) are so successful. But for most foreigners, I think, their understanding of the local market is still not deep enough. A sales champion in America, taking the same approach, wants to be a sales champion in China. He can't."

"As a foreign manager, you can learn about the local market. You must let your subordinates be dare to advise you. If you don't listen to others and insist your own way all the time, at the end of the day, your business will fail. If no performance, the Board will replace you (with another executive). That's why the executives (in our case) were changed so often, like two years or less, in the past." (Manager, personal communication, November 12, 2003)

After the merger between Glaxo Wellcome and SmithKline Beecham, GSK has a stronger recognition of the market. SmithKline Beecham is based in America and has different management values. Their values were thus brought into the company, which emphasized the market and performance. Watching the market conditions became an important issue. Operating in China was to make profits, and incurring a

loss was not to be accepted. CEO is assessed based on the company's performance. The previous approach emphasized on the internal operations and efficiency. Operating in China with a loss was considered strategic. So everyone got his full salary or wage. As the best executives had been put in China, loss making seemed to be excusable owning to poor consumers. With the new management approach, a series of changes were also introduced into the operation in respects of production planning, materials procurement, localization, and the like. Quality control and technology remained the same, which are essential to pharmaceutical companies (Manager, personal communication, November 12, 2003).

Management Localization

At present GSK Chongqing is managed by the entire Chinese management team. Each year GSK sends a few times their senior officials from the UK to the joint venture to review the operation and exchange views with Chinese executives and managers. Through this procedure, GSK can supervise and monitor the joint venture and know how GSK policies have been implemented in different areas such as production, finance, quality assurance, EHS (environment, health and safety), and so on. The management of GSK Chongqing is thus localized, but under the supervision of GSK. The managing director directly communicates with GSK officials. The communication between the workforce and Chinese managers are much easier without any language or cultural barriers. Decision-making often becomes quicker and easier among the management. In particular, the issues related to local authorities and government can be dealt with efficiently as the Chinese managers have a good knowledge of them. But in terms of the management values and approach, Chinese managers believe that there still exist some differences between the Chinese managers and GSK British managers. Training and workshops can be a useful way to narrow their differences in this respect. The localization of the management can give the joint venture a lot of advantages, and after all the company is operating in China (Manager, personal communication, November 12, 2003).

Operation System

The materials used for medicines and other related devices for aerosols are specialized and imported from the UK. As the import takes about three months, they must be ordered well in advance. GSK has the Global Manufacture & Supply (GMS) network

managing manufacturing processes for production of active compounds at primary manufacturing sites. The active compounds are then supplied to the secondary pharmaceutical sites. GMS operations are structured into Supply Chains and Regions across the world, and can coordinate the supply of materials for GSK manufacturing units worldwide. GSK Chongqing can use GMS China to coordinate the supply of materials from abroad. For GSK Chongqing, the supply chain activities run smoothly in general and can meet the production needs (Production manager, GSK Chongqing, personal communication, November 13, 2003).

The production process consists of mixing materials, canning, storing and packaging. In addition, the activities of procurement, warehousing, and quality control support the production. The production process is simple, but it relies on the advanced technology, machinery, and automatic systems. Mixing materials is to prepare the medicine. Canning then takes place to make aerosols. The products are stored for 28 days to achieve the even distribution of powder medicines. Final process is packaging the aerosols. Quality control and testing is conducted in the whole production process to ensure the products to meet requirements. In the whole process, workers and production managers strictly follow the procedures laid out for the operation, for example, stamping the production and expiration dates on the products requires three persons' checking to prevent errors and checking every hour to prevent the machine making faults. There are also tracking systems in place for materials and products in the operation (Production manager, personal communication, November 13, 2003).

Both materials and their transport are expensive, and thus materials are the major cost drivers in the production. Other costs are mainly associated with machinery, the plant facilities, the central air-conditioning system, and labour. Packaging cartons and printing are contracted to domestic firms. As the overall industry standards are enhanced in China, MNEs and their invested companies can outsource more to domestic suppliers. The technology requirements for the production of powered aerosol are high, and domestic manufacturers cannot meet them at present. Similar products made by domestic manufacturers would be less effective for treatment than those of GSK Pharmaceuticals Chongqing (Production manager, personal communication, November 13, 2003).

New products introduced by GSK into the production need pass the trial process in China. First, a small number of aerosols are produced, and then they are tested in clinical trials. After the trial approval the production begins. The company has a laboratory, which possesses a certificate for conducting clinical trials and testing. Among the employees there are a number of professionals including some graduates from universities specialized in medicines and medicine testing (Production manager, personal communication, November 13, 2003).

Uneasy Partnership

When the joint venture was set up, the British partner and the Chinese partners had a common goal aiming to sell 5 million units annually three years after the operation. However, since the production in 1991, the joint venture had been losing money every year till 1997. The Chinese party had little confidence in the joint venture, and felt extremely difficult to persuade the British party to make changes of the management. In addition, the British party had a further project in mind for the joint venture. As a result, the Chinese partners thought the only choice for them was to withdraw their equity (CPC completely withdrew). It had been a hard time for the Chinese partners when they saw the joint venture lose money and withdrew their equity, and the British party took control (a majority of the ownership). When Glaxo and Wellcome merged in 1994, the British party added another US$5 million into the joint venture. These events resulted in a new ownership structure with the Chinese partners holding 12% equity. The Chinese party was actually playing the second fiddle in running the company. Therefore, the joint venture was very much run like an independent company or a subsidiary of GSK. Since 2001 there have been changes of the management team. GSK began to use Chinese directors and managers. Today a complete Chinese management team is running the company for GSK (Manager, personal communication, November 12, 2003).

After the joint venture was set up, Glaxo (later GlaxoWellcome) filled the managing director and some other management positions with British managers. The British management could not adapt to the market conditions in China. For the managing director, totally a foreigner, it was too difficult for him to understand the China market and how the distribution of pharmaceutical products was actually done. The problem was exacerbated by communication difficulties. The Chinese in senior

positions knew little English, and the British managers could hardly understand Chinese. The channel to communicate was rather limited, often dependent upon the secretary to translate. In contrast, Johnson & Johnson have used Taiwanese and Singaporean managers to run their operations in China. The Taiwanese and Singaporean are in a very good position to know the China market. They have no difficulties in language and culture (Manager, personal communication, November 12, 2003).

The British management also had an assertive style. When the Chinese managers expressed their opinions at meetings, the British executives ignored their opinions and insisted on their own approach. Possibly due to a lack of experience of working with foreign companies, the Chinese managers were not able to guide the British party to deal with the problems of the market and distribution. Within that partnership, the Chinese party felt very hard to be involved in running the company, and thus let the British party be in charge of the company. The joint venture was virtually run as a British company. The sales were handled by Glaxo's (or GlaxoWellcome's) Prescription Medicines Headquarters in Hong Kong (moved to Shanghai in 1997). They sold the products to Chinese trading companies (distributors). In that system the sales never picked up, and the company had incurred loss every year till 1997. There is a hypothetical understanding of the situation. Had the sales been managed by the parent company of the Chinese partner (for instance, by Southwest Pharmaceuticals), the performance could have been far better (Manager, personal communication, November 12, 2003).

Building Strong Workforce

The majority of employees working in the company have an intermediate level of education. They carry out production activities and operate machines. Only a few employees have a higher level of qualifications and are able to conduct research. The company can find the wanted people from the local area of Chongqing. Employees receive different forms of training at the company. One is in-house training related to specific jobs. For example, a newly employed engineer who may need to learn or familiarize himself about the production process and facilities in the plant. A medical professional need to learn about details of the aerosol production such as production process and technology. Another form of training is provided by GSK. GSK can send

experts to the company to give training or organize workshops for employees. GSK organizes management and scientific seminars for managers and technical people each year in one of its manufacturing sites in China. Managers and technicians from different plants attend those seminars and can update their knowledge and skills. Moreover, GSK Chongqing encourages its employees for self-development and also provides fees for training relevant to the job. For instance, some employees who were college graduates have now gained a Master's degree (Secretary, GSK Chongqing, personal communication, November 12, 2003).

GSK promotes its values amongst the workforces to pursue excellence and innovation. After the merge of GlaxoWellcome and SmithKline Beecham, GSK has made efforts to integrate the two corporations in many respects. To build a unified organizational culture, GSK brought together a few hundred executives and senior managers from its business units worldwide to discuss the GSK values and cultures. The company has crystallized those values and spirits that are most representative for the corporation such as "pursue excellence" and "realize people's potential", and promotes them amongst the workforces across its business units worldwide. GSK detailed the contents of those values in a practical way by operationalizing them into actions and putting it "to do" and "not to do". Thus, the values are transformed into actions and fostered in every day working activities. Gradually, different practices of the two corporations have in this process been integrated into the GSK values and culture. The team working spirit is the essence of its culture and continuously strengthened in daily operations. Having inherited the corporate values of GSK, the joint venture has thus cultivated an organizational culture distinct from that of other companies in China (Secretary & Manager, personal communication, November 12, 2003).

Promises and Challenges

The Pharmaceutical Industry in China

The pharmaceutical industry in China has experienced the rapid development and high growth in recent years. From 1978 to 2000, the annual growth rate of the industry was about 16%, making it one of the fastest growing industries of the national economy. It was reported by China Daily:

> China is the seventh-largest pharmaceutical market in the world, generating US$6.8 billion from drugs in 2002. It is estimated the Chinese medical market will be worth US$14 billion by 2006 and US$24 billion by 2010.This would make China the fifth-largest medical market in the world at that time.
>
> (Qin, 2004. June 19, China Daily)

Accompanying the rapid development of the industry, Chinese government has promulgated some new regulations for the pharmaceutical industry and its reform. *The Drug Administration Law* and *The Regulations for the Implementation of the Drug Administration Law* are the most important documents. The general trend is that the industry is gradually converging with the international standards and practices.

At present there are more than 4,000 pharmaceutical companies in China. There were about 6,000 companies, but some of them may have been shut down or restructured to comply with the GMP. It was reported by China's official media:

As a measure to ensure medicine safety, the SFDA regulated compulsively that all drug enterprises and workshops would have to pass the GMP authentication.

By the end of this April, more than 3,000 authentication certificates had been granted to 2,721 out of 5,082 drug manufacturers with the rest demanded to pass the GMP authentication before July 1 or to be closed. (Xinhua, 2004, May 24)

Important players in the industry include some large domestic state owned enterprises and foreign invested enterprises. About 60-70% of pharmaceutical companies are state owned enterprises. Private enterprises may only account for 10-20% of the total number. About 1,800 are joint ventures among pharmaceutical companies. MNEs probably own a few hundred companies in China. Although the number is relatively small, they have large production capacities as well as sales volumes on the market. MNEs have thus a big impact on the industry. Their products can account for about 35% of the total sales on the China market. The products of state owned enterprises account for about 60%. The rest about 10% of the sales belongs to private enterprises (Manager, personal communication, November 12, 2003).

Competition is very intense in the industry. This is mainly due to the facts that same types of drugs may be manufactured by different companies, many domestic manufacturers mainly make generic products, and there are also counterfeit products on the market. Counterfeit products can appear frequently on the market and pose a threat to pharmaceutical companies in general (Manager, personal communication, November 12, 2003).

Many MNEs have achieved good financial performance in spite of a large number of manufacturers in China. According to some forecasts, the sales of MNEs can reach 60% in about 5 years. Many MNEs introduce their new products to the China market in parallel with their introduction in other markets. MNEs have advantage over domestic companies in respect of innovations and products. Domestic companies usually have advantage in prices (Manager, personal communication, November 12, 2003).

Competition

GSK Chongqing faces competition mainly from three companies in China. One is Xinyi in Shanghai, which produces the same type of aerosols. Xinyi's sales are close to those of GSK Chongqing. Its products are cheaper, pricing about more than half of GSK Chongqing's. Another competitor is AstraZeneca in Wuxi. Its aerosols are also for respiratory illness but the prime ingredients (compounds) of its products are different from those of GSK's. The third one is Jiai in Beijing, which was set up by some former British GSK experts with the Chinese Academy of Science. Jiai's products are similar to GSK's, but its sales are much smaller on the market. Jiai may also have the similar problems of sales and distribution. It has made some improvements to the aerosol device so that the products are easier to use for patients. The aerosol of GSK Chongqing requires the patient to synchronize his actions when using the aerosol in order to get the medicine into the respiratory system. Patients normally need some training given by doctors. Overall, GSK Chongqing's production and sales are larger than those three companies (Manager, personal communication, November 12, 2003).

There have not been found any illegal counterfeits on the market of GSK Chongqing's aerosol products. The aerosol production requires technology and facilities, and is

difficult for illegal manufacturers to produce (Manager, personal communication, November 12, 2003).

Potential Improvements

The joint venture has potential for the improvement of its operation. The production capacity was designed for 6 million units per year. At present, only about 40% of the capacity is used. If the sales are increased from the present level, the more capacity can be utilized and the unit cost of the product can be reduced. All the facilities have to be in operation in the production process regardless the number of products produced. It is also possible that the material costs can be reduced. Some parts used in aerosols are specialized and manufactured by GSK plants in the UK. There is a possibility that their prices could be reduced if more units were ordered. The prime materials are very expensive, and their production and technology are controlled by a GSK manufacturer. With the introduction of new ingredients (innovations) in the products, their purchase could possibly be negotiated with the supplier.

At present all the imports from the UK are transported by sea and the supply cycle takes about three months (previously by air). All the planning and orders must be made well in advance to guarantee the supply. Domestic manufacturers are improving their standards in China. As the overall standards of industries are further improved, some parts can be supplied by domestic manufacturers. The localization of the production provides another possibility of reducing the costs. If the costs are reduced, then the saved costs could be used to provide incentives for distributors to sell the products and improve the performance (Manager, personal communication, November 12, 2003).

At the same time, the company has a good working relationship with government authorities. There is room for increasing prices of the products. The products are unique and effective in treatment, and the costs are high. The pricing can directly affect the sales and distribution of the products (Manager, personal communication, November 12, 2003). According to the Law and Regulations for pharmaceutical products in China, the state exercises a system under which the price is fixed or guided by government or regulated by the market. The regulations indicate that the

pricing department can fix and adjust the price in accordance with the principle set out in the Law.

Moreover, the sales and distribution of the products are still managed by GSK China Investment. Establishing an effective sales and distribution system is understood the most important area for GSK Chongqing to improve its operation. The present system does not appear to have made a significant improvement of the performance in line with the shift of the management approach (Manager, personal communication. November 12, 2003).

Chapter 12
YARACO

Introduction

The Yangtze River Acetyls Co. Ltd. (YARACO) is a joint venture established by BP Amoco, Sichuan Vinylon Works (SVW) of China Petroleum and Chemical Corporation (SINOPEC), and Construction and Investment Company of Chongqing (Municipality) (CICC). It is BP's first chemical venture in China and one of the largest foreign investments in inland China. The joint venture was established in 1995 and the production began in 1998. It produces and markets acetic acid and derivatives of acetic acid – acetate esters. The company employs BP's technology of the methanol carbonylation process. It has over 200 employees, and located in a factory town of Chuanwei, next to SVW's large complex (BP, Manufacturing Site: Chongqing, 2001; Office leader, YARACO, personal communication, November 19, 2003).

BP has the majority ownership, with 51% of the equity in the joint venture. SVW and CICC have respectively 44% and 5% of the equity ownership. The joint venture was developed in three phrases. The investment for the first phase construction was RMB 2.1 billion, and the construction actually utilized RMB 1.8 billion. The saved funds plus profits made after the operation were used for the second phase construction for acetate production. The third phase project is about RMB1 billion, and it will increase the company's annul production of acetic acid from the current level of 150,000 tons to 350,000 tons. The company could be the largest producer of acetic acid in China when the construction is finished in 2005 (YARACO. Yangtze River Acetyls Co. Ltd. 2002; Office leader, personal communication, November 19, 2003).

BP's Operations in China

BP has been operating in China since the early 1970s. Its operations are spread across BP's four main business streams: refining and marketing (downstream), exploration and production (upstream), chemicals and gas, and power & renewables (BP, China). BP has expanded its business in China considerably from oil and gas exploration since the late 1970s and the 1980s. At present its business in China covers oil and gas production, supply of aviation fuel, imports and marketing of liquefied petroleum gas

(LPG) and liquefied natural gas (LNG), fuel retailing, solar power installations, and chemicals production (BP, China).

BP's major upstream activities in China include Yacheng – 13 gas fields and Liu Hua Oil field in the South China Sea. BP China Gas & Power won in 2001 a bid to have become the 30% foreign participant in China's first LNG terminal and trunk line project in Guangdong Province. BP has made a large-scale investment in chemicals and retail fuels with its Chinese partners. In November 2001, it established a 900,000 tonnes per year ethylene cracker joint venture with Sinopec and Shanghai Petrochemical Company Ltd. It built a world scale PTA plant in 2003 in Zhuhai. Apart from YARACO, BP set up another acetic acid joint venture in Nanjing in 2005. It also formed a retail fuel joint venture with PetroChina in 2001 to build 500 service stations in Guangdong. It is the only foreign company participating in China's aviation fuels business, with a 35% equity holding in the Cheng Yuan joint venture at Shenzhen Airport and a 24% equity holding in the Blue Sky joint venture which supplies fuels to 16 airports in South China (BP, China; BP, China (Hong Kong & Taiwan), 2006).

Through joint ventures and direct hire, BP employs over 3000 staff in China. About 97% of them are locals. The BP people work in many parts of the country, including Beijing, Shanghai, Guangzhou, Zhuhai, Chongqing, Shenzhen and Fuzhou. In addition to its main partners, China's three major oil companies – CNOOC, Sinopec and PetroChina – BP has formed partnerships with a range of other industry players at the local level. In parallel to its business development activities, it also works in partnership with government organizations and universities (BP, China; BP, China (Hong Kong & Taiwan), 2006).

Acetyls

BP's acetyls business is built on its leading edge process technology. The products include the naturally occurring carboxylic acid series - acetic, formic and propionic acids – and the derivatives of acetic acid such as vinyl acetate, acetic anhydride and ethyl acetate. Acetyls products are largely used as chemical intermediates in the production of derivative products and everyday consumer goods (BP, Business Units – Acetyls, 2001).

Acetic acid is one of the world's most important chemicals and is a key raw material for the production of vinyl acetate, acetic anhydride and the acetate esters solvent range. It is used in a variety of products from textiles to pharmaceuticals. The important acetate esters include ethyl acetate and butyl acetate. They are oxygenated solvents, which find use in a wide variety of applications, such as pharmaceuticals, printing inks, coatings, adhesives, and cosmetics (BP, Business Unit – Acetyls, 2001; BP, What We Make – Acetic Acid, 2001).

YARACO has an annual production capacity of 150,000 tons of acetic acid at present. This level of production is based on the design capacity of the factory. According to the maximum sustainable daily rate (MSDR) research and testing, the production can reach 170,000 tons of acetic acid. The third phase expansion will increase the production capacity to 350,000 tons of acetic acid per year with the new technology (Cativa) and upgrading of the production facilities. The production uses methanol carbonylation process based on natural gas and methanol, different from most production processes in China. YARACO is the largest producer of acetic acid using natural gas in China (Office leader, YARACO, personal communication, November 19, 2003). With the expanded facilities, YARACO can produce 80,000 tons of ethyl and butyl acetate per year (BP, Acetyls, 2005).

As for acetic acid there is no product differentiation. If the quality is ensured, there is no difference in acetic acid. Some products produced by SVW have different types. They are made in different production processes, and have different usages (Office leader, YARACO, personal communication, November 19, 2003).

The market of acetic acid in China is estimated growing between 10% and 15% per year. For YARACO, the company is to produce the maximum amount of acetic acid at its permitted capacity. The company can sell on the market all the product that it can produce. The acetate market is in a different situation. YARACO's production of acetate is determined by the demand on the market. The market is small and customers are sparsely spread across the country. The price of acetate has been low, but the market begins to grow largely due to new government regulations (GM assistant, personal communication, November 19, 2003).

Management and Partnership

The company has a General Manager (GM) and a Deputy General Manager under the Board of Directors. The General Manager is presided by the Chinese party, and the Deputy General Manager is presided by BP. The two General Managers have joint powers over the financial controller under them. They have equal power and are responsible for different areas of the management of the company. The General Manager is in charge of production, including Production Department, HR Department, Financial Department, and Purchasing and Materials Management Team. The Deputy General Manager is in charge of marketing, including Marketing Department, Distribution Team and Sales Team. The approval of financial decisions is by the Board of Director. Procurement is under the General Manager, but the expenses exceeding RMB 5 million need the approval by the Deputy General Manager as well. Important issues are discussed between the two General Managers and bear both signatures. In addition, there is General Office under General Managers in charge of IT team, Administration Teams and Development Team (GM assistant, personal communication, November 19, 2003; YARACO, Yangtze River Acetyls Co., Ltd.).

There is no control or interference of the joint venture by either SVW or BP. The appointment of General Manager and Deputy General Manager, and other key expatriates is determined by the Board. The Board consists of the three investors of the joint venture. The management and operation of YARACO are completely independent (GM assistant, personal communication, November 19, 2003).

When the joint venture was set up, BP mainly contributed technology over which it has the patent. BP has reached an agreement with Lurgi, a German company that YARACO would use Lurgi's technology for CO production including the reformer (world-class technology). Lurgi is a leading technology company for process engineering and plant contracting, and has proprietary technologies in the areas of gas-to-petrochemical products. The acetic acid production facilities were based on BP's technology. The Chinese party, SVW contributed land and workforce. The workforce includes engineers and workers. They have extensive experience and been well trained by SVW in engineering and chemicals manufacturing. During the testing

stage of the facilities BP sent some experts to monitor the testing and production process (GM assistant, personal assistant, November 19, 2003).

The partners have developed cooperative and constructive relationship. Every year there are three or four Board meetings. The Board meetings are mainly to discuss and solve some significant issues and give advice and guidelines. Most management and operational issues are discussed and settled between the General Manager and Deputy General Manager. The cooperation between the partners has been central for the success of the joint venture. For example, if the price of a material is very high at moment on the market, the General Manager may consult the Deputy General Manager when making purchasing decisions. If the company can meet the demand of customers, they may consider temporary suspension of the production. The General Manager can then delay the procurement. The two General Managers have a meeting almost every week to discuss the important issues (GM assistant, personal communication, November 19, 2003).

The original objective of BP was to learn about the Chinese market and the investment environment rather than aiming at a financial success. BP wanted to know the potential of the future investment in China, and used the joint venture as a window of opportunity to enter China. BP was mainly testing the market. The Chinese partner, SVW was interested in advanced technology and wanted to borrow some western management experience to lead SVW's development. As YARACO became so successful beyond BP's original expectation, BP now wants to expand its operations and make it even more successful (GM assistant, personal communication, November 19, 2003). According to Mr Jin, GM assistant, at the Board meeting at the end of the first year' operation (in 1999), BP made this comment. "We didn't really anticipate YARACO making profits. Our objective was to test the Chinese market and use the joint venture as a window through which BP can learn about the investment environment and enter China." At that time the operation had just begun after the initial testing at the end of 1998. The production capacity was still unstable and the system needed adjustments. Making profits under that condition was really an excitement for BP. It was considered as a miracle. Now the production has been very stable and the profits grow year by year. BP has awarded YARACO for its achievements. YARACO was also granted by banks in China and the local

government some awards, such as AAA and taxation contribution (GM assistant, personal communication, November 19, 2003; YARACO, Yangtze River Acetyls Co., Ltd.).

BP has now started the third phase project with YARACO (BP, Yangtze River Acetyls Co., Ltd., 2002). SVW has actually learned and borrowed BP's management approach and practices through the joint venture. SVW has made some structural changes to itself and adopted some new management practices, for instance, in the area of marketing and sales (GM assistant, personal communication, November 19, 2003).

A manager of production made the following comment. "We have an effective management system. The two parties have good cooperation, and the management can take swift decisions. We are able to respond to any changes on the market quickly and effectively. With advanced technology, we can achieve efficiency and low cost of production. We have about 200 employees and the labour costs are low". "If workforces are diligent and accountable for their work, this can help avoid some problems from arising and suspension of the operation. At present, we produce nearly 600 tons of acetic acid per day. If we have a problem and stop the production for one day, we will lose over RMB2 million. That loss is very big. An excellent working team is very important." (Personal communication, November 19, 2003)

At the initial stage of the partnership, there were more likely disputes or conflicts in some issues, possibly due to the differences in culture and the management approach. The expatriates of each party also represent or defend its parent company's interests to some extent. Only when the partners understand each other, can they have good cooperation. Through the years the partnership has become mature and been developed to the current height. It is cooperative, constructive and dynamic. The British party has learned about the Chinese party and deepened their understanding of running business in China (GM assistant, personal communication, November 19, 2003).

The ultimate objectives of the two parties are the same: success of the joint venture. Each party has its own approach, which can be deep-rooted in its working practices

and culture. This may lead to some differences in opinions and decision-makings. Each party may not want to compromise, as he believes that things should be done in this way. When differences occur, managers first try to solve the problem at the lower level. If no agreement can be reached even between the two General Managers, then the issues will be brought to the Board meeting for solution (GM assistant, personal communication, November 19, 2003).

Chongqing is an inland region. Comparing with Shanghai, people in Chongqing are less open to new things and their way of thinking was rather reserved. At the early stage of the partnership, many new things brought about by the British company were difficult for the Chinese management and employees to accept. For example, the British management had strict requirements for HSE (or EHS). They required all workers wear helmets and glasses when clearing the land for the construction. The Chinese managers did not take those issues serious, but accepted the British party's requirements. For workers, wearing helmets was OK, but not glasses. The weather was very hot in Chongqing and the workers felt inconvenient wearing glasses. The British managers inspected the site and asked the workers to put on glasses whenever seeing them not. After some time, the Chinese workers got used to this practice and accepted it willingly. Chinese managers' approach to safety was often different. They acknowledged and stressed that safety must be given priority. But in practice, safety can often be compromised due to other things. For instance, if the implementation for safety costs too much money, or everyone else does in the same way, then the Chinese managers may relax the standards for safety (GM assistant, personal communication, November 19, 2003).

Through the partnership, the two parties have learned to understand each other and to compromise or find a practical solution to disputes. As a result of working together, the Chinese party and workers became more accustomed to the British management approach. In the meantime, the British party became more aware of the practicality of some issues when implementing them in China, and may lower the standards to a certain extent so that the policy can be implemented rather than just paper work. One example was the purchase of lorries. The British party had certain requirements for the lorries. As one of the requirements was difficult to be met by the manufacturer, the

British party decided to give up that requirement (GM assistant, personal communication, November 19, 2003).

Workforce

The workforce comes from SVW. Those managers and engineers who were initially involved in the project of YARACO were transferred from SVW to YARACO. They have knowledge of YARACO. Some experienced workers in SVW were also transferred to YARACO. In addition, YARACO employed some young graduates from technical colleges. Though they lack experience, they are young, energetic, and learning very fast under the experienced workers and engineers. Some people in key positions were sent to BP's plant in the UK to receive further training, which lasted about one or two months (Production manager, personal communication, November 19, 2003). Those engineers who have received training at BP's factories can provide in-house training to others at post in the joint venture. In addition, YARACO also organizes two other types of training. One type is to send someone in a particular post to take a course in order to obtain a certificate, for government requires certain postholders must hold the required qualifications. The other is planned training organized by the production management for employees. Management also receive training, and senior levels are often trained abroad targeting particular management areas (Production manager, personal communication, November 19, 2003).

Technology and Production

YARACO employs BP's technology of the methanol carbonylation process. Acetic acid (CH_3COOH) is produced under the influence of a catalyst through the synthesis of methanol (CH_3OH) and carbon monoxide (CO). CO is produced through a reforming process from natural gas. YARACO uses Lurgi's technology for the CO production. The present technology for acetic acid production has over 10 years' history. As many domestic manufacturers already use the same technology, YARACO seeks to employ more advanced technology, Cativa, to increase the production scale and lower the costs (GM assistant, personal communication, November 19, 2003; YARACO, Yangtze River Acetyls Co., Ltd, 2002; BP, Technology – Acetyls, 2001).

> Cativa, an iridium-based catalyst, is the most significant breakthrough in acetic acid technology for over 25 years. Developed in-house for the BP acetic acid carbonylation process, Cativa offers high selectivity, high reaction rates and reduced by-products. It is capable of retrofitting to existing plants and also offers significant advantages for new builds.
>
> (BP, Technology – Acetyls, 2001)

The first phase project was constructing the facilities for acetic acid production. CO and CH_3OH make acetic acid through the synthesis reaction. The second phase project was constructing the facilities for the derivative acetate production using acetic acid. The plant layout includes two major parts of the production facilities for CO production and acetic acid production and one part for the acetate production. Using Cativa technology, YARACO can double the present acetic acid output without making significant changes to the existing plant facilities of acetic acid production (GM assistant, personal communication, November 19, 2003; YARACO, Yangtze River Acetyls Co., Ltd., 2002; YARACO, Yangtze River Acetyls Co., Ltd.: Employee Training Materials).

To increase the acetic acid production requires an extra supply of CO. Thus, the third phase project is now under way to construct a new CO production unit. CO is produced in the reforming process using natural gas and water. The CO unit is expected to be completed in 2005. By design the company will have the production capacity of 350,000 tons of acetic acid. With some improvements of the systems, the production capacity may even exceed 350,000 tons (GM assistant, personal communication, November 19, 2003; YARACO, Yangtze River Acetyls Co., Ltd.)

The inputs into the production mainly include natural gas, water and methanol. These inputs are supplied by SVW. SVW itself uses natural gas in its production, which is supplied by a company in the local region (gas field). The pipeline of natural gas was extended from SVW to the YARACO plant. Methanol is a product of SVW. The supply of both natural gas and methanol from the Chinese partner is thus guaranteed and they are of low costs. The present catalyst is provided by BP. YARACO can also procure it on the market. However, the new technology Cativa is owned by BP, and Cativa catalyst can thus only be supplied by BP. The catalyst is the core of the acetic

acid technology (GM assistant, personal communication, November 19, 2003; YARACO, Yangtze River Acetyls Co., Ltd.).

Acetates are more expensive and often used, for instance, for expensive paints and coatings production. Many small customers do not use them. New regulations issued by the government limit the use of other substitute chemicals which can cause pollution to the environment and damage to people's health. When the new regulations are implemented, the market situation of acetates will likely be improved (GM assistant, personal communication, November 19, 2003).

Since 2002 after some chemicals accidents, the government has promulgated some new regulations regarding the production, sales, storage, and transport of chemicals. The new regulations set out strict requirements for dealing with each category of chemicals. Acetic acid belongs to the second-class risk of chemicals. As YARACO has adopted BP's management and standards, it can meet the requirements of the regulations and the standards can be even higher (GM assistant, personal communication, November 19, 2003).

Sales and Marketing Strategy

The sales are carried out through two channels. One channel is direct market sales; the other is through distributors in the country. Representatives of the Sales Department are responsible for the direct market sales. The direct market sales normally target big and medium sized customers and can help reduce costs. For example, a PTA firm (BP's joint venture in Zhuai) consumes a large amount of acetic acid, over 1000 tons a month. Those big companies normally use a few suppliers rather than rely on a single one. YARACO's sales representatives then reached an agreement with the PTA firm. The company purchases, for instance, 500 tons a month from YARACO. YARACO has no particular relations with other BP's invested units in China (GM assistant, personal communication, November 19, 2003).

The sales through distributors are often to overcome difficulties of sales and marketing when facing restrictions in some regions, or they are carried out in regions where the customers are small or geographically dispersed. The distributors' selling

prices are in line with the BP's pricing policy and they can earn commission fees for the sales.

Moreover, BP has a global perspective. BP has production sites in other countries in Asia, such as Singapore, South Korea and Malaysia. BP can balance the production and supply of acetic acid in different markets in Asia. To guarantee the supply to the customers in China, any shortfall will be met by the imports from BP's other manufacturers in Asia. YARACO carries out maintenance work once a year, which takes from 20 days to a month. During this period, the shortfall will be covered by imports. Through this sales model, YARACO and BP can together maintain the sales and market share in China. YARACO had 30% of the market share in China before the second phrase project, the largest among the manufacturers. After the production of acetates, its market share in acetic acid has slightly decreased to 27%.

If there is a production problem or a shortage of the product in other Asian markets, YARACO can export its product there. As its product is all sold out in China, YARACO does not export its product in practice. With the global approach, BP and YARACO can ensure that YARACO can hold the largest, most important and long-term customers at all times. The Deputy Managing Director of YARACO is also in charge of the Asia Pacific market. He can coordinate and balance the supply across the Asian markets to ensure BP's interest in Asia (GM assistant, personal communication, November 19, 2003).

Moreover, the sales through distributors and direct market sales are divided by geographical areas, and thus direct market sales would not be carried out in the regions where YARACO uses distributors. There is thus no conflict of interest between the two channels of sales (GM assistant, personal communication, November 19, 2003).

Although some other manufacturers have the same or similar production capacity, YARACO has a great advantage over them in that it has the stable production and good safety. It can maintain the high capacity of production. With the same or similar production facilities, YARACO can normally produce slightly more than other

manufacturers. For example, with the same facilities they produce 150,000 tons, while YARACO may produce 180,000 tons.

BP has very distinctive strategy to the market. The Deputy Managing Director (BP's side) is responsible for the marketing and sales. Before YARACO began the operation, BP had started importing acetic acid from its other manufacturers to the Chinese market. Buying the product, for instance, from South Korea and then reselling it in China would result in a loss for the company. The prices were even lower than other manufacturers'. The more was sold, the more loss would incur. The Chinese partners could not understand BP's approach, and was very dissatisfied with the loss, which amounted to a few million RBM to RBM 10 million in budgeting. But through this strategy, YARACO had taken customers and the market even before its production, and established relationships with the customers. After the production, it sold its products instantly to the customers. The Chinese partners then learned this successful "takeover" approach of the market. The parent company SVW now applies the same strategy for its new production (GM assistant, personal communication, November 19, 2003).

YARACO has established very good reputation and trust among its customers and suppliers. The company guarantees the supply of the product. YARACO makes a commitment – if you rely on our supply and distribution, we guarantee your product 100%. Generally, chemical manufacturers do not rely on one supplier or distributor to avoid the risk of supply shortage or cut. Through the long-term supply relationship, YARACO has built its reputation and trust among the customers. There has never been any shortage of the supply and the product has high quality. Now many chemical manufacturers use YARACO as the single supplier (GM assistant, personal communication, November 19, 2003).

Trust has been built with the customers through the long-term business relationships. YARACO has maintained the stable supply of the product throughout even though there were changes on the market. YARACO keeps its commitment to the agreement at all times, and thus customers have no worry about the supply relationship. Some customers even become the distributors for YARACO, for example, an acetic acid producer in Yunnan Province in south China. That company's product is not very

competitive on the market in terms of price. YARACO could not enter the market in Yunnan Province. YARACO visited that company a few times to negotiate a deal. After a few months, YARACO and that company reached an agreement. The company ceased its production and began to distribute YARACO's product earning commission fees. YARACO guarantees the supply of the product. In China, regional protectionism exists in many places as provinces and cities often try to protect the interest of their own enterprises and limit the entry by "foreign firms". Without the deal, YARACO could not have entered the market in Yunnan. That company was pleased with the agreement; YARACO acquired all its existing customers. "BP has really good strategy towards the market," the GM assistant commented.

There are many domestic manufacturers of acetic acid in China. The market demand of acetic acid grows rapidly. BP is conducting a feasibility study for setting up another acetyls factory with a capacity of 600,000 tons. At present China import 200,000 to 300,000 tons of acetic acid every year. According to BP's research and the market analysis, the gap between the demand and supply of acetic acid will further increase in China in the next five years taking account of the increase of the production by manufacturers. When the Cativa technology is employed, the company can also increase the production of acetates. As the production of acetates consumes acetic acid, producing more acetate will reduce acetic acid available for the market (GM assistant, personal communication, November 19, 2003).

YARACO sets the high standard of work in transport and storage of the product. Especially, the British partner is very strict with the rules. For example, if some customers' storages do not meet the standard, YARACO can stop supplying the product. YARACO gives them advice and even sends experts to help change or improve their storage facilities. At the beginning some customers did not really understand what YARACO was doing. Some Chinese staff working in YARACO were also asking, "why do we bother to do this, costing our labour and money? After the product is dispatched, our job is finished. Anything after that has nothing to do with us." When these customers realized that YARACO was sincerely helping them to raise the standards rather than looking for excuses to stop the supply, they were very grateful to the company. YARACO has continued its practices of strict rules of transport and storage of the product, and extended help to its customers free of charge.

These customers and YARACO have developed very strong long-term relationships and trust. In the meantime, this practice also helps the company avoid any likely accidents throughout the business operations (Production manager, personal communication, November 19, 2003).

Local Business Environment and Government Support

When the joint venture was built, the local conditions were worse than at present, in particular, the roads. At that time, the travel between Chongqing and Chuanwei took over one day, going around mountains and hills. There were serious traffic jams and travellers often had to stay overnight on the way. In recent years, transport has been greatly improved. After the highway was built, the travel between Chuanwei and Chongqing is about two and half hours. Anyone from the company can make a day return for business. BP had inspected many other places for the joint venture, but finally decided to set up the plant in Chuanwei considering overall factors (GM assistant, personal communication, November 19, 2003).

SVW has very good supporting facilities, for example, it has its own power station and thus can guarantee electricity. SVW can also supply water. The advantages offered by SVW could save a large amount of investment to build these facilities. In addition, Chuanwei is very close to the natural gas field (PetroChina), and thus natural gas can be supplied at low cost. Only an extension of the pipeline from SVW was needed to obtain natural gas. Power, water and natural gas supplies are the critical inputs into the production. Furthermore, SVW itself produces methanol. For a chemical plant, it is critical to have the guarantee of electricity. Power cut could result in serious situations. If the whole production is stopped, all the materials in the production process can become wastes. Various measures may have to be taken to prevent accidents, like fire or explosions. Power cut would be extremely costly. Finally, Chuanwei is close to Yangtze River, and shipping from here is very convenient (GM assistant, personal communication, November 19, 2003).

There are some disadvantages locating in the Chongqing region. The market is concentrated in the east and south of China. The product is transported via shipping, railroads, and motorways. Shipping is the cheapest method but restricted to those customers who are next or close to Yangtze River and a port. Transport could be

expensive. Many customers are far away in the east and south, depending on railroads and motorways (GM assistant, personal communication, November 19, 2003).

Human resources are easy to acquire, mainly from SVW. This is an advantage of locating in Chuanwei and partnering with SVW. SVW is a big state owned enterprise. Previously it had over 10,000 employees; at present it has about 6000. If YARACO expands its production, it can recruit people from SVW via advertisement. Workers and engineers of SVW are well-trained and experienced in the chemical industry. Although many high calibre people may be recruited by YARACO, it does not seem to be a problem for SVW as it is a much bigger company and has a large number of well-trained and experienced people (GM assistant, personal communication, November 19, 2003; YARACO, Yangtze River Acetyls Co., Ltd., 2002; YARACO, Yangtze River Acetyls Co., Ltd.: Employee Training Materials).

The joint venture has received a lot of support from the Chongqing Government and Changshou County where Chuanwei is located. Support included favoured taxation and administrative support. If the joint venture encounters some problems, it can ask for help from both local governments. When setting up the joint venture, the partner CSCC worked as a bridge to help BP develop a good working relationship with the Chongqing government. At the higher level of exchange, BP's people could see the mayor of Chongqing, and ask government authorities to coordinate with other parties and solve important issues. The Changshou Government pays attention to enterprises, like YARACO, and provides support to them. It has set up a help line exclusively for foreign invested enterprises. The companies, like YARACO, are a big tax contributor to the local government, and the local government listens to these enterprises. In comparing with some eastern regions in China, for example, Shanghai, people here in Chongqing are still less open in general. Administrative efficiency here may be lower (GM assistant, personal communication, November 19, 2003).

PART 4

Case Analysis

Part 4 presents the analyses of the 5 Sino-British joint ventures. This part will first analyse each individual case and then make comparisons between them. Both within-case and multiple case analyses are conducted based on the case descriptions and guided by the conceptual framework. The conceptual framework and analytical techniques were explained in the methodology part.

Chapter 13 will examine the 5 individual cases of the Sino-British joint venture. The analysis of each case includes examinations from the positioning perspective, the resource-based view, and a synthesized approach. From the positioning perspective, a position is meaningful only when it is matched by the best set of activities that the firm performs. The activities and positioning are explained with the activity system of each joint venture and the causal links between the positioning and various factors underlying the activity system. Joint venture partnerships and locational conditions are incorporated in the analysis. From the RBV, those resources which are difficult to acquire in the market are more likely to be sources of sustainable competitive advantage. Broadly speaking, intangible assets and capabilities are more difficult to imitate and substitute, and therefore they can provide a meaningful basis for competitive advantage. The analysis is thus concentrated on those intangible resources and capabilities of the joint venture. In the joint venture, resources are better understood with reference to the partnership; locational factors are examined in the analysis where they are significant for the resource acquisition and use. The synthesized analysis seeks to illustrate how critical resources and capabilities are deployed to support activities and the position of the joint venture in the marketplace. Sustainable competitive advantage may depend on both resource attributes and the configuration of activities.

Chapter 14 will then present the cross-case analysis. The comparisons will be explained with two tables, respectively from the positioning perspective and the RBV. From the positioning perspective, the five cases will be compared in respects of their

positions, configuration of activities, partnerships including with parent firms, and significant locational factors. From the RBV, the five cases will be compared in respects of their distinctive, valuable and critical resources in relation to competitive advantage of each joint venture. The cross-case analysis searches for common factors underlying the competitive success and/or failure of those joint ventures. The last section of the chapter will compare across the cases the relationship between activities and resources for sustainable competitive advantage based on the synthesized analyses.

Chapter 15 will draw theoretical implications of the case studies. It will discuss some theoretical issues arising from the case studies for the joint venture and competitive advantage. The chapter will first examine those issues from the positioning perspective and then from the RBV. They may be distinctive to an individual case or common among a few cases. Joint venture partnerships and locational factors are included where relevant in the discussion. Finally, the chapter will explore the integration of strategic positioning and the RBV for competitive strategy, and highlight the potential areas for theoretical extension.

Chapter 13
Five Distinctive Cases

AstraZeneca China Manufacturing

Analysis from the Positioning Perspective

Industry Conditions

The pharmaceutical industry in China is developing rapidly in recent years. It is forecasted, according to AstraZeneca China and *China Daily* (Qin, 2004, June 19), that China will become the fifth largest market for pharmaceutical products in the world in 2010. Competition in the industry is intense. AstraZeneca faces strong competition in some therapeutic areas but often limited to a few drugs. Competitors include some large domestic companies and a number of MNEs. Generic drugs are cheap, and illegal counterfeit products can often appear on the market. It is estimated that up to 30% of drugs in Southeast Asia and China may be counterfeit (*AstraZeneca CR Summary Report 2005*). They could pose a threat to pharmaceutical companies as substitute products. Distribution channels of pharmaceutical products are fragmented and complex, and can represent the biggest challenge for companies. Distributors often wield considerable bargaining power. Developing effective networks with wholesalers and distributors can be critical to pharmaceutical companies. The distribution practices are idiosyncratic to China. The pharmaceutical industry is regulated by the government in respects of production, sales and distribution, advertising, and pricing of drugs.

Positioning and Operational Activities

AstraZeneca China Manufacturing plant has achieved good performance since it started the operation in China. The company has a variety-based position, which relies on its strong product portfolio in six therapeutic areas. OTC products are not significant in its product portfolio. Its medicines are patented. The company continues to fill its product pipeline through AstraZeneca's worldwide R&D. Some of its medicines have a leading position in the world. As the company stated, AstraZeneca China has the greatest strength in products. Its potential customers – hospitals, clinics, and pharmacies – are not segmented and its products are sold to wholesalers across

the country. Through 15 branch offices across the country, AstraZeneca China tries to reach as many customers as possible to increase the sales and market shares in China. Its strategy lies in the way that the focused product range, in which it has the greatest advantage, meets the needs of a broad group of customers. Other pharmaceutical companies are not so superior in general as AstraZeneca China in those six therapeutic areas. They could have strengths in other therapeutic areas. The direct competition from other companies is usually limited only to a few specific medicines.

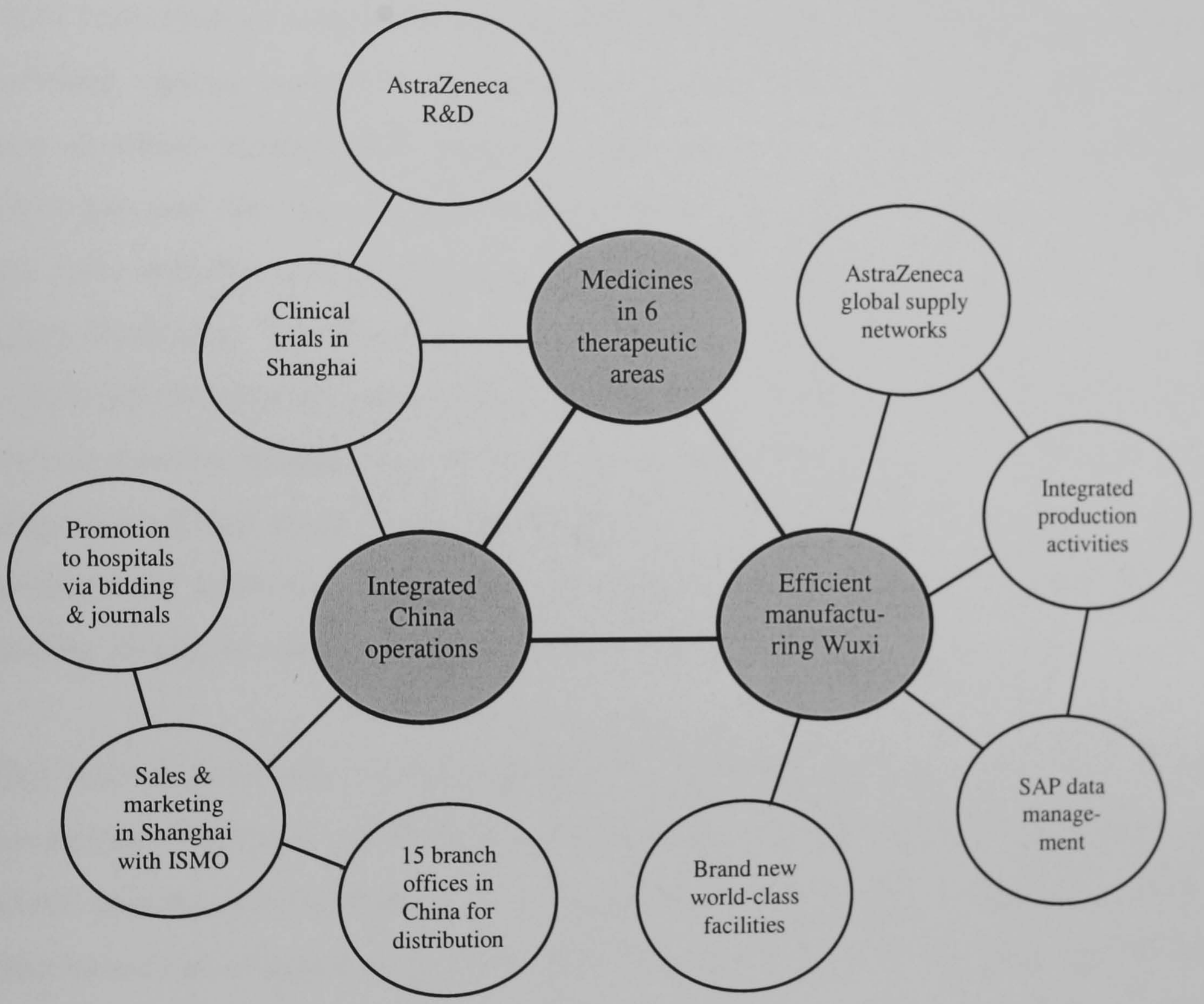

Figure 13.1 AstraZeneca China's Activity System

The company has two salient characteristics. One is the integrated operations in China, with Clinical Trial Centre in Shanghai, Manufacturing Plant in Wuxi, and sales and marketing managed by AstraZeneca China's Headquarters in Shanghai. Figure 13.1 shows the company's activity system. The Clinical Trial Centre was the first one ever set up by MNEs in China. It is linked with AstraZeneca China's operations and

can support the company's product portfolio. New drugs developed by AstraZeneca are to be tested at this centre before their production in the Wuxi plant. The manufacturing process is organized through 8 departments in the Wuxi plant. The sales and marketing is managed by the office in Shanghai and carried out in 15 branch offices across China. The products are sold to wholesalers and distributors. These three sets of activities can support each other.

The second characteristic is its unique joint venture structure. AstraZeneca formed the joint venture with the Hi-Tech Industrial Development Administrative Commission of Wuxi New District and the local Pharmaceutical Bureau. The Chinese partners have provided various support to the company, such as in setting up the joint venture, administrative matters, and solving difficulties when dealing with government authorities and the like. The case reveals that the Chinese parties are not engaged in any form with the management and operation of the joint venture, and they have no equity ownership. The aim of the Chinese partners is to attract foreign investment and to develop the local economy. Within this unique structure of the company, the joint venture actually operates as a wholly foreign owned enterprise. The "joint venture" is simply an official name, but it has benefited AstraZeneca China as well as the local development authority. Figure 13.2 illustrates this special partnership and location specific factors in relation to the activities of the joint venture.

This kind of *quasi*-joint venture structure is not an exceptional case in China. There can be other different hybrid forms of joint ventures in the country. The author came across another quasi-Sino-British joint venture during the data collection. It was a pharmaceutical company based in Chengdu, in inland China. This "joint venture" was set up by a Chinese state owned company, but it actually has no foreign partner. The "foreign partner" could be just a name used for making the joint venture entity. It is unknown whether such a hybrid form is more common in the pharmaceutical industry or just a coincidence. Some studies of FDI in China can confirm the existence of such joint venture practices on a larger scale. It was reported as round trip investment (The World Bank, *Transition – The Newsletter About Reforming Economies*, August 1999; Asian Development Bank, *Asian Development Outlook 2003*). According to the reports, some firms in China deposited a substantial amount of profits in accounts in

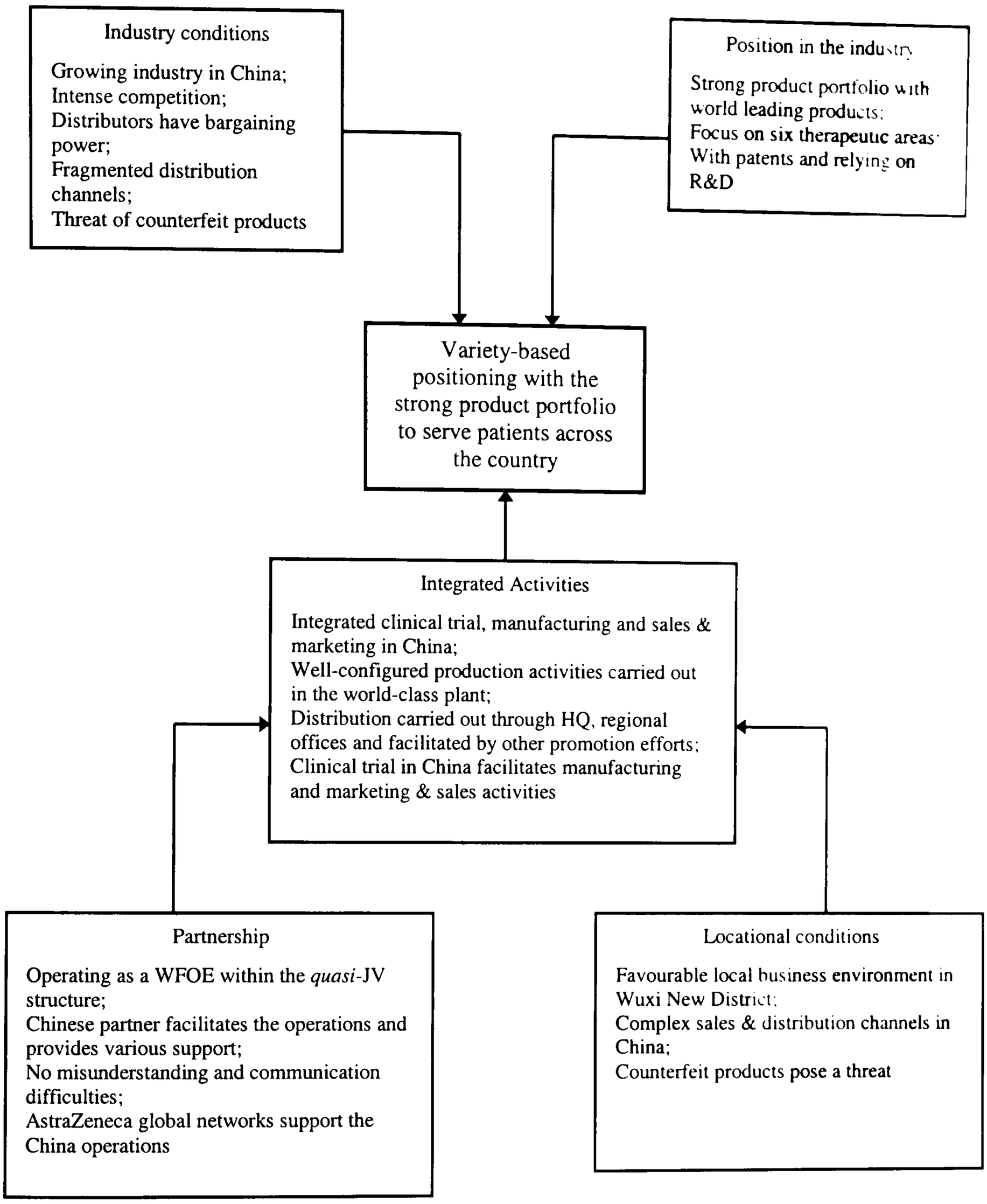

Figure 13.2 AstraZeneca China's Positioning and Activities

Hong Kong, and then reinvested in China as foreign investment for tax purpose or regulations that favour FDI.

There are differences between these two types of *quasi*-joint ventures, but they both can have implications for competitive advantage. In the case of the first type, the partnership has no effect on the positioning and configuration of activities of the

company. Any valuable or substantial amounts of support by the Chinese partner can be better regarded as locational factors rather than joint venture partnerships. The joint venture is by nature a wholly foreign owned enterprise.

The most significant locational factor may be the distribution practices in China. The pharmaceutical market is subject to government regulations. Pharmaceutical companies are required to sell their products to wholesalers and distributors, who then distribute them to final customers. In practice, whether the products can be sold or not may very much depend on the distributors who virtually act as final customers. The pharmaceutical market in China is characterized by a large number of distributors across the country. The distribution system appears to be fragmented, and can be subject to some regional barriers between cities and provinces. AstraZeneca uses the first-tier and second-tier distributors. In particular, its 15 branch offices across the country facilitate the sales and distribution at the regional level. Some large distributors can dominate the distribution channels in certain parts of the country. Competition amongst pharmaceutical companies is likely to be built up in the distribution channels. Distributors, as intermediaries, could function as a barrier between pharmaceutical companies and final customers.

Advertising pharmaceutical products in China is regulated by government as in many other countries. AstraZeneca China strictly complies with the regulations. It advertises its products (prescription drugs) in medical journals as stipulated by the law. Through medical journals, AstraZeneca China can directly communicate with doctors and medical professionals, and inform them of its products and innovations. In addition, there is a bidding practice in hospitals in China. As hospitals have a list of prescription drugs, the entry of a particular medicine into this list means that the hospitals can procure the medicine. As a result, the company can increase its sales by selling to more hospitals. The bidding is usually carried out at regional levels. To break into another city or province is often difficult as there is widespread regional protectionism. AstraZeneca China has put considerable efforts into the bidding, and charged a department with the bidding task. In summary, medical journals and the bidding practice are two key channels, through which AstraZeneca China can communicate with healthcare providers and inform them of its products. From the positioning perspective, these marketing and sales activities are aligned with the

company's variety-based position and strategy. In other words, the configuration of the activities is specific to the strategy and local market conditions.

The counterfeit practice has been a problem in China (a problem in some other countries as well). There could be counterfeits for a wide range of products, from music CDs to clothes, from medicines to car parts, especially for those branded names. Both well-known domestic companies and foreign companies can fall into victims. Although there have been some attempts to crack down this illegal practice, the problem still remains. The counterfeit practice can pose a significant threat to pharmaceutical companies and results in a loss of profits.

The locational factors also include the investment environment of Wuxi New District. With its advantageous location, well-developed infrastructure and useful business services, the New District becomes a favourable place for investment and hosts hundreds of companies, including many well-known MNEs. The local government continues to improve the business environment in various aspects and to provide valuable support for the businesses. Ironically, AstraZeneca's *quasi*-joint venture may have embodied to a great extent such initiatives and support from authorities of Wuxi New District.

Analysis from the Resource-Based View

There are many kinds of resources and capabilities idiosyncratic to AstraZeneca's operations in China, such as its world-class manufacturing facilities, AstraZeneca's supply chain in Sweden, its strong product portfolio, Clinical Research Centre in Shanghai, the partnership structure and organizational resources. This part of the analysis will concentrate on those resources and capabilities that are likely to be potential sources of competitive advantage.

Product Portfolio and R&D

One salient characteristic of AstraZeneca China is its product portfolio. The prescription drugs in 6 therapeutic areas – cancer, cardiovascular, gastrointestinal, infection, neuroscience and respiratory – form the core of its product portfolio. Some products have a leading position in the world. Its strong position of the products rests

on the R&D efforts of AstraZeneca Group. AstraZeneca's investment in R&D ranks number two amongst pharmaceutical companies in the world. The company has over 11,000 people worldwide involved in the drug development. Its R&D activities are closely linked with local markets and customers' changing needs. Some R&D projects are also undertaken in collaboration with research institutes and academic institutions in several countries.

From the resource-based theories, intangible resources and capabilities can be potentially sources of sustained competitive advantage. The issue of R&D can be explained by asset stock theory (Dierickx & Cool, 1989). The imitability of an asset stock is related to the characteristics of the process by which it may be accumulated. Assuming the R&D capabilities were developed over time (time compression diseconomies) and cultivated within the organization, it would be very difficult for any other companies to imitate or acquire such a valuable asset. The development of these capabilities may rely on many other tangible and intangible resources (interrelatedness of asset stock), such as scientists, the management of the R&D, clinical research centres, collaboration with other institutions, and continuous investment (to prevent asset erosion) in lab facilities, research centres, human resources, and so on. Other large pharmaceutical MNEs can possess their own unique R&D capabilities, possibly in different therapeutic areas. It is acknowledged that only a very small number of research projects could actually be turned into a success out of many heavily invested projects in the industry. This phenomenon is sometimes described as "jackpot model" (Dierickx & Cool, 1989). The pharmaceutical industry reflects high risks and uncertainty. The R&D capabilities are the most important asset of the company, and they may determine the company's long-term success in the industry as a source of sustainable competitive advantage.

Intellectual Property Rights

Protection of intellectual property rights is critical to ensuring an effective return on investment. Patents and trademarks are two important means of protection for pharmaceutical companies. They can be a source of competitive advantage. Patents are protected by law, and are thus regarded as a valuable intangible asset. It is one of the isolating mechanisms of the RBV, which also include, *inter alia*, specialized assets, team-embodied skills, and switching and searching costs. Patents can make

competitive positions of the firm stable and defensible (Rumelt, 1984). However, patents can expire in a particular country. The sustainability of such competitive advantage may be very much dependent on the R&D capabilities to fill the product development pipeline. "Our success is based on a commitment to discovery", stated AstraZeneca. Moreover, trademarks can be a source of competitive advantage as well. They are especially useful after the patent expires and a generic version of the drug becomes available in the market.

However, protection of intellectual property rights is generally weak in China. The production of many generic drugs may not be properly controlled. For instance, when AstraZeneca registered a product, it was surprised that the generic version was already produced by a domestic company. There are counterfeit medicines in China. These locational threats can have a negative impact on patents and trademarks as a source of competitive advantage. Therefore, to understand such isolating mechanisms in practice may entail appreciation of the locational factors.

Organizational Resources

AstraZeneca China may have many other valuable resources, such as efficient production system, special partnership with the local development authority, and talented people. Perhaps, the most valuable resources which are difficult to imitate are its socially complex organizational architecture. The company operates as a wholly foreign owned enterprise, but at the same time enjoys a special relationship with the joint venture partners; it operates as a foreign company, but possesses a pool of talented local employees who understand the culture and the market. In addition, its China operations are integrated and are also coordinated with AstraZeneca's global networks in the areas of product portfolio, research and trial data, supply chain, and imports to supplement its manufactured products in Wuxi. These organizational resources were developed historically, are embedded within the broad structure of AstraZeneca Group, and reside in the local context of China. They are imperfectly imitable. When these resources are combined with other physical resources, such as world-class manufacturing plant, clinical trial centre, 15 branch offices in China, and SAP system, AstraZeneca China can exploit these physical resources in a way idiosyncratic to its organizational resources. Other competing firms may try to match those physical resources, for example, Pfizer was planning to set up a clinical trial

centre in Shanghai (Yan, 2003, November 6). Nevertheless, it would be unlikely for other competing firms to exploit those physical resources in the same way and to implement the same strategy, for exploiting those physical resources would involve the complex organizational resources.

Synthesized Analysis

Activities and Resources/Capabilities

The position of AstraZeneca China relies on its strong product portfolio and regional sales and marketing networks across the country. The Wuxi manufacturing plant carries out manufacturing related activities by 8 departments as described in the case data. Figure 13.3 illustrates some key activities and the position of the company. Planning is made on the basis of sales forecasting, and then purchasing materials takes place. The next stage is warehousing of the purchased materials, and the same department also carries out the distribution of products (for both purchased materials and products are stored in the same automatic warehouse). Liquid production and dry production make different types of solution, aerosols, tablets and capsules. QA/QC ensures that the products meet the standards. Other supporting activities include general administration, human resource management, process development, and engineering. The manufacturing activities are integrated with sales and marketing activities (by Shanghai Head Office) and clinical trials (by Clinical Research Centre in Shanghai).

Performing each of these activities will require particular resources or capabilities, or the combination of both. Those resources and capabilities listed in the figure are identified as critical to the performance of the activities, amongst other resources and capabilities. Planning and purchasing input materials requires the sales forecast provided by Shanghai Head Office and the supply chain of AstraZeneca in Sweden for prime materials (chemical compounds). Supplementary materials can be procured on the domestic market. At the same time, the company recently installed the SAP system to integrate data management across different departments, and thus the individual activities from supply to production will benefit from the system. In addition, warehousing input materials and distributing products rely on the automatic warehouse facilities of the plant. The manufacturing activities consist of liquid production, dry production and QA/AC. To perform these activities requires input

materials, hygienic production areas, advanced equipment and laboratories as well as skilled human resources. Successful sales and marketing activities rely on the product portfolio in the 6 therapeutic areas, Shanghai Head Office, regional branch offices, and management expertise and sales forces with market knowledge.

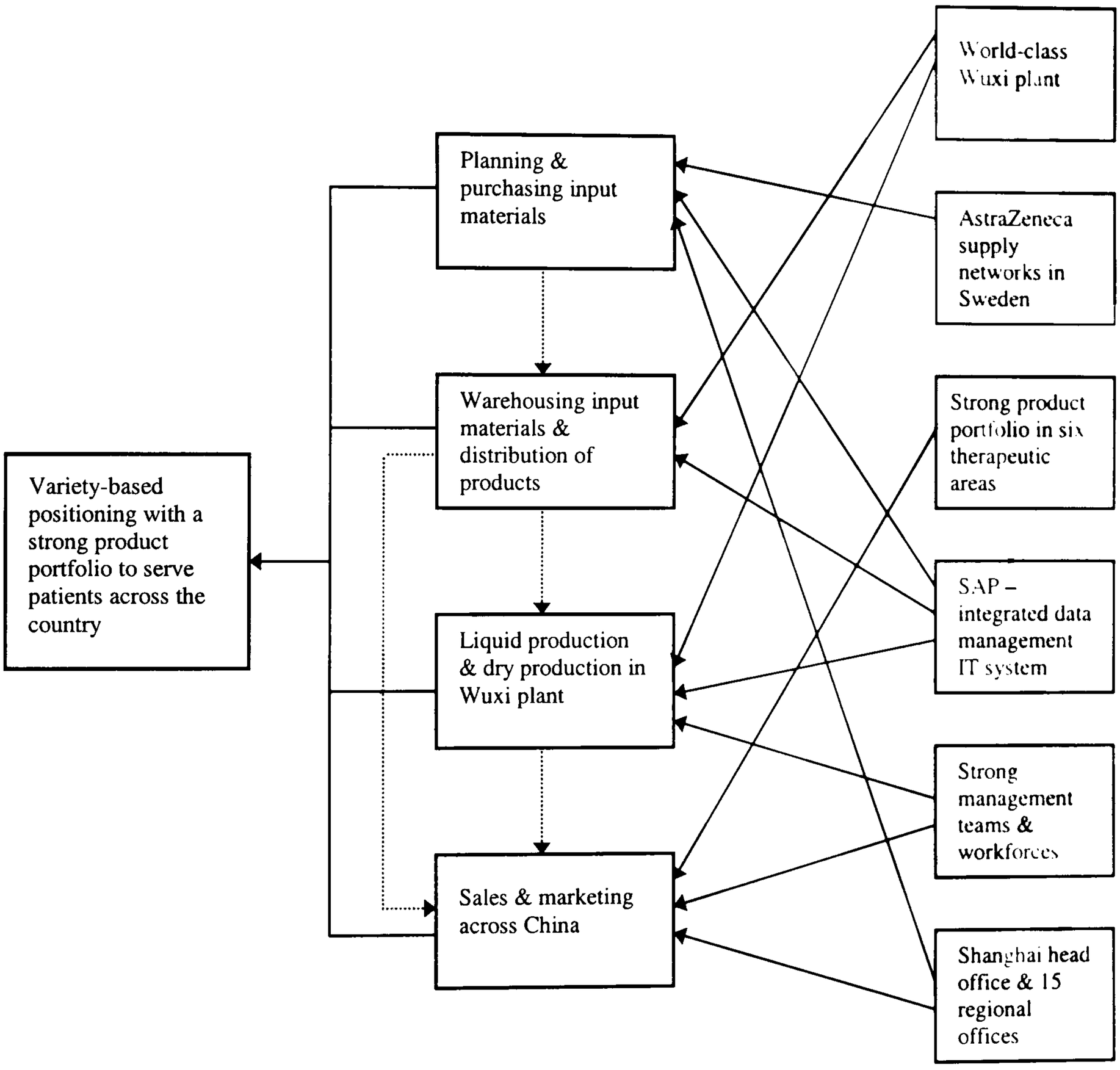

Figure 13.3 AstraZeneca China's Alignment of Resources/Capabilities with the Positioning

Sustainable Competitive Advantage

From strategic positioning, sustainable competitive advantage of the company depends on how various manufacturing activities and sales and marketing activities

are configured and if they have achieved fit amongst them. The manufacturing activities are well configured across the 8 departments to achieve efficient production and high quality of the products. This is one of what the company has claimed as its strengths: product portfolio, process and people. As explained in the early analysis of the positioning, sales and marketing activities are configured to meet the location specific conditions, such as fragmented distribution channels and barriers between different cities or regions. In addition, the company enjoys an advantage of conducting clinical trials, especially for introducing drugs to the Chinese market. The trial is integrated with the product portfolio and the production. For competitors, it may not be difficult for them to perform some discrete activities in the same way, for instance, in manufacturing or sales, but it is unlikely that they can copy the combined activities as a whole system. Moreover, these activities performed are in line with the position of the company in the marketplace, and if not for that particular position, some of these activities may not be so relevant and valuable for competitors to copy. Conversely, if they cannot perform the same activities, it is unlikely that they can take hold of the same position in the marketplace.

The incorporation of resources and capabilities into the activity analysis can indicate that the activities relying on a number of resources and capabilities may be more difficult for competitors to copy because the chance of obtaining all the necessary resources and capabilities may be small. See Figure 13.3. Planning and purchasing input materials can be difficult for competitors to copy as it relies on a number of key resources: AstraZeneca supply networks in Sweden, SAP data management and Shanghai Head Office. If competitors have no access to its supply networks or the equivalent for them, they may not be able to acquire those prime chemical compounds for the production. The SAP system can be installed in their company if they make investment. However, competitors also need to simultaneously possess reliable information about the sales and the market, possibly supported by a similar Shanghai Office. As the activity rests on a number of resources and/or capabilities, it could be more difficult for competitors to copy it than other activities resting on a single resource or capability.

If we incorporate the analysis of resource attributes, we may gain some further insights into sustainable competitive advantage. Assuming the resources of physical

nature can be matched by competitors, we now focus on the product portfolio and R&D capabilities. The product portfolio and R&D capabilities are difficult to be substituted and imitated (except in case patents may be purchased) as illustrated in the early analysis. This can make it difficult for competitors to successfully copy the sales and marketing practices of AstraZenca China, even if they can imitate some discrete marketing and sales activities by, for instance, setting up many branch offices, taking part in medicine biddings, entering different distribution channels, and the like. The reason is that they would not have the same advantage in the product portfolio, especially not supported or backed by the R&D capabilities behind in the long run. Suppose a competitor practices sales or marketing exactly in the same way as AstraZeneca China to promote its medicines in the gastrointestinal area or anaesthesia products. AstraZeneca has a leading position in these areas in the world, and the competitor's medicines may not match (substitute) those of AstraZeneca's in terms of applications and efficacy. As long as there is a good flow of information, the competitor will unlikely be able to succeed in copying the sales and marketing practices of AstraZeneca China. It may have to modify its sales and marketing practices to suit its inferior or cheaper products or target different market segments. In this context, the resource attributes of the product portfolio and the R&D capabilities may function like a barrier to competitors' copying marketing and sales activities.

Moreover, some resources and capabilities, notably, AstraZeneca China's strong product portfolio in the six therapeutic areas and organization of sales and marketing, are playing an important role in the company's establishing its position in the industry. The values of these resources and capabilities are thus manifested in the variety-based positioning in the marketplace.

ERM China

The ERM China has a distinctive way of operating its consulting services in the Chinese market. A number of important elements appear to underlie ERM China's characteristics described in the case. They can be identified, among other things, as the market that the company has targeted, its provisions of consulting services, the way of organizing activities, its resources and capabilities, the partnership, and its global perspective and localization.

Analysis from the Positioning Perspective

Industry Conditions

The environmental industry has been rapidly growing in China in recent years, particularly in those more developed regions in the east and the south. The annual growth rate is about 15% reported by the "Tenth Five-Year Plan" (The State Economic and Trade Commission, PRC, 2001). Despite the rapid development, the competitive market has not yet been established for the industry and unfair competition and local protectionism are widespread. According to the Tenth Five-Year Plan, the government has set out guidelines to encourage the development of science and technology in the industry and to strengthen the management of social issues. Environmental services account for less than 10% of the total output within the sector, but have been developing rapidly expanding from technologies and consultancies into the areas of project contracting, management services for specialized equipment, fund raising, and financial risk assessment.

In the area of the consultancy services provided by ERM for MNEs, there can be two tendencies in the industry. One is the potential threat associated with the localization of MNEs. As they are more inclined to the local standards, ERM could lose some customers. The other tendency is that some Chinese firms have increasingly the need for adopting international standards and practices, and they could be potential clients for ERM.

Positioning and Operational Activities

ERM China has a distinctive position in the industry. Its positioning can be explained as needs-based. It is similar to traditional thinking about targeting a segment of customers. It arises when there are groups of customers with differing needs, and when a tailored set of activities can serve those needs best.

The environmental protection industry in China can involve both the public sector and the private sector, including government organizations, institutions, domestic firms and foreign firms. ERM China provides consulting services only to MNEs in China. It forgoes all the potential businesses which can come from other segments of the market. According to the case description, three factors may explain its targeting MNEs. The first one is the approach taken by Chinese domestic firms (and

institutions) in general to EHS issues. They largely do not take the issues serious. Secondly, ERM China does not want to alter its global practices and industry standards to adapt to the local market. Thirdly, the fees it charges may not be acceptable to most of domestic firms. For these reasons, it has targeted MNEs in China abandoning other market segments. From the positioning perspective, serving domestic firms at the same time would require a different activity system. The more orientated to domestic clients the activities configured, the less they would be able to satisfy MNEs.

ERM China provides environmental consulting services in a different way from of other providers in general. It is highly specialized in consulting services and able to satisfy different needs of clients of various industries with its technical expertise. This is in contrast with other environmental consulting services providers in China. About 80% of these services providers operate in engineering, construction or equipment areas, and provide related consulting services. ERM China delivers only advice and solutions to EHS issues, and there is no engineering, construction work, or equipment involved. The services are customized to individual companies and projects. The company is able to design projects, and especially not only to solve EHS issues, but also in some cases to improve the overall management system of the client.

ERM China's activities are illustrated in Figure 13.4. Its mobile and flexible workforce can deliver tailored consulting services to the clients. Owing to its global resources, local knowledge and access to Class "A" EIA certificates, the company can meet both the corporate and local needs of MNEs in China. Its diverse technical expertise makes it possible to operate for MNEs in different industries. The company can organize activities in different ways through teamwork. The team can be configured with suitable people from different offices and a right mix of technical expertise and professional knowledge to meet project requirements. Moreover, the flexibility of the organization enables a team to be organized in the shortest time to take up a project. ERM China's ability to meet differences in needs is thus embedded in its idiosyncratic organization of related activities.

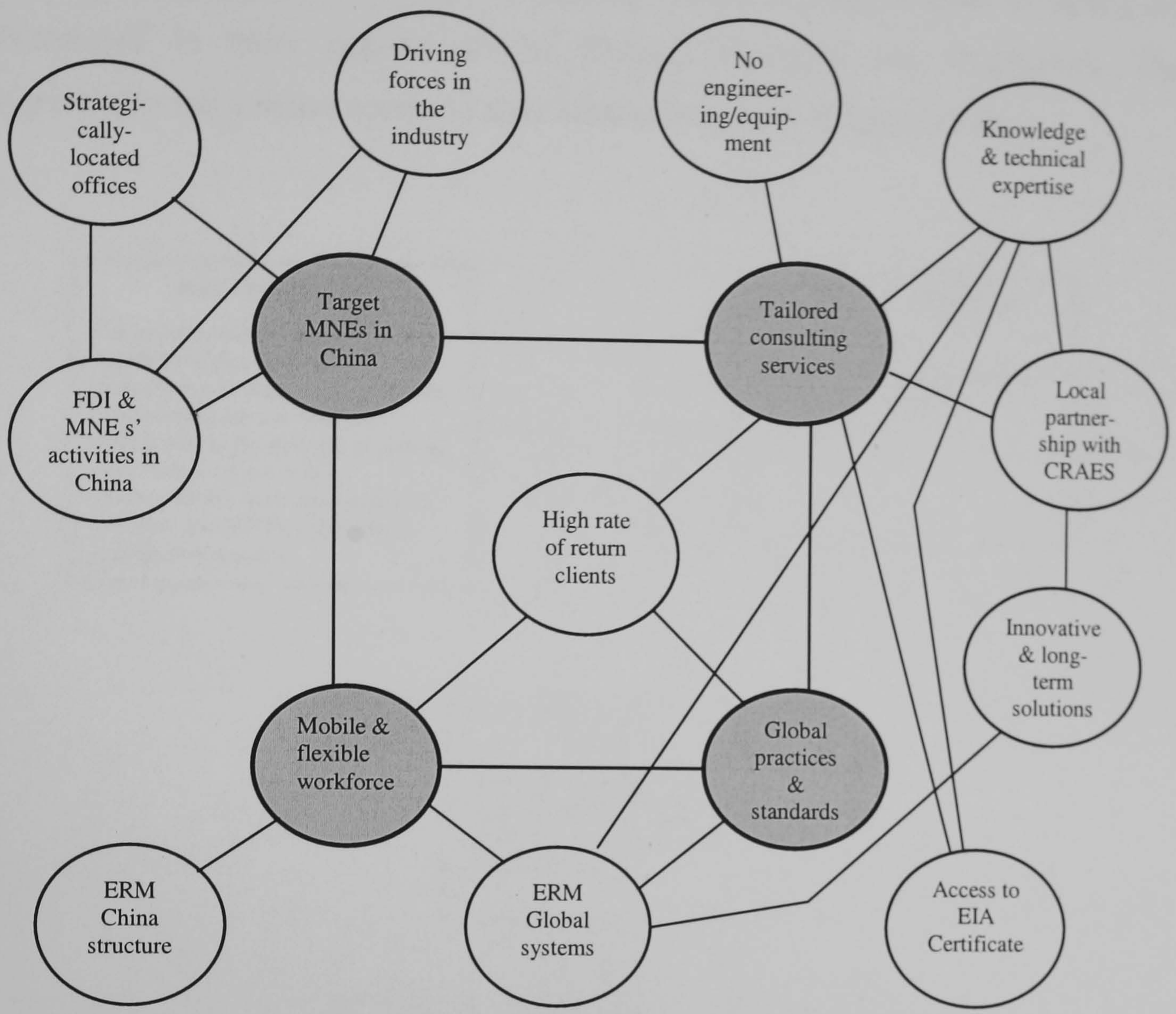

Figure 13.4 ERM China's Activity System

For its clients, ERM China delivers a unique mix of value. It includes high quality, international practices and standards, and meeting MNEs' both corporate needs and local needs. The company can also provide services for turnkey projects. Services are tailor made for individual clients and projects. Solutions in some areas are not only to solve EHS issues but also to enhance the overall management system. Figure 13.5 shows the linkage between ERM China's positioning and configuration of activities. ERM China's activities are aligned with its overall strategy in targeting MNEs in China through tailored services. The company has been operating with its own global practices and standards on the platform provided by the joint venture partnership. Its global networks enable it to meet MNEs' corporate needs. The partnership with CRAES may have been critical to its gaining the host country knowledge and expertise to satisfy MNEs' local needs. Moreover, its strategically located offices in

China are in line with its strategy of targeting MNEs. A large number of MNEs are concentrated in those regions around Beijing, Shanghai and Guangzhou. The company also has a better access to right human resources in these regions.

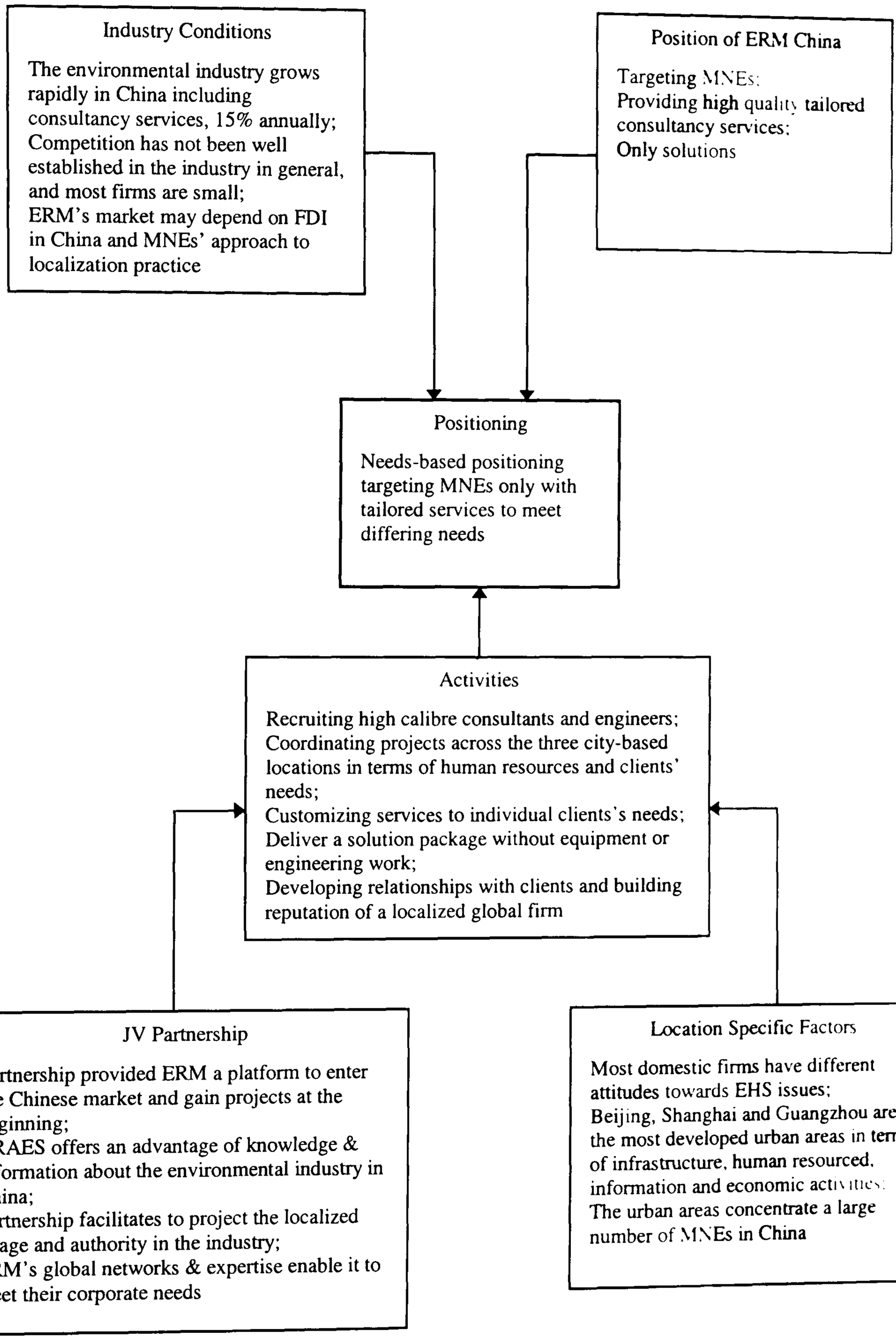

Figure 13.5 ERM China's Positioning and Activities

Analysis from the Resource-Based View

ERM China has achieved good performance over the past decade. It possesses various valuable and unique resources which can give the company competitive edge in China. For example, ERM China's teamwork, knowledge and skills, experience, and dedicated workforce all could be sources of competitive advantage.

Teamwork

ERM China provides customized consulting services to MNEs in China. With its experience in different industries, ERM China can design and deliver the whole project with teamwork. A team is organized to design the project from strategic studies and due diligence to monitoring its operations, and maybe to restart another cycle when the project is to be decommissioned. The services are usually tailor cut to suit needs of individual clients by offering the best possible solutions. The team combines knowledge and expertise in various fields, such as environmental science, industries, business management, and engineering. Such customized services are highly valued by MNEs and generate good financial returns for ERM China. The ability to deliver customized services is ERM China's most valuable and unique resources. Such resources are idiosyncratic to the company's organizational structure and its global perspective, and not shared by other environmental consulting firms. The organizational structure gives the company flexibility in organizing teamwork, with experts being drawn from different operational units. In particular, the company is able to respond to needs of individual projects promptly. ERM China's distinctive resources are not likely to be acquired by other firms as they are an integration of knowledge, experience, international standards and practices and organizational structure.

Managing Globalization and Localization

Another interesting characteristic of ERM China is its unique management approach to its China operation. ERM positions itself as a global firm rather than based in a particular country. At the same time ERM China has been localized and adapted to China's business environment. Its teams working in China are able to draw upon the company's global and regional resources whenever needed. ERM China's previous joint venture partnership with CRAES also played a critical role in providing the

company a platform to conduct consulting services in China but in ERM's methodology. ERM's restructuring in 2001 was to create a unified global entity able to meet the environmental, social and risk management needs locally and globally. Managing the paradox of being global and local is a valuable resource regarded by many MNEs. It also gives the company the potential for innovation in China. Some advanced or new technology available in the developed countries can be applied creatively to the Chinese market and adapted to the local needs to help improve the standards. Such management approach can be a unique source of sustained competitive advantage, in particular in conjunction with knowledge, expertise, teamwork and organizational structure.

Synthesized Analysis

Positioning and Resources/Capabilities

As a consultancy service company, ERM China has different building blocks of value chain activities from manufacturing companies. The activity categories can include human resource management, finance, organizing projects and delivering consultancy services, marketing activities, and technology development. Figure 13.6 shows the main activities. Amongst them, delivering high quality customized consultancy services is vital to the company's competitive advantage. The distinctive features of this operation are that service provisions are conducted by project based in one of the Offices and a particular project may be organized through coordination of various divisions, such as Finance, ESIR, CAS and ESIA with an appropriate Office. This enables a quick response to clients' needs and a mix of different expertises required for the project. ERM China is also building a good reputation among MNEs and often enjoys a high rate of return clients due to its long-term relationship with clients and quality services provided. In addition, ERM China continues to enhance its services through forecasting possible changes of environmental policies in China and seeking innovative solutions.

Some critical resources have been identified, which enable the company to perform those major activities. The keys to providing high quality consultancy services are high calibre human resources and knowledge and expertise that the company possesses. ERM China's human resources include consultants and specialists in various industries and services, illustrated in the case data (ERM China's Workforce).

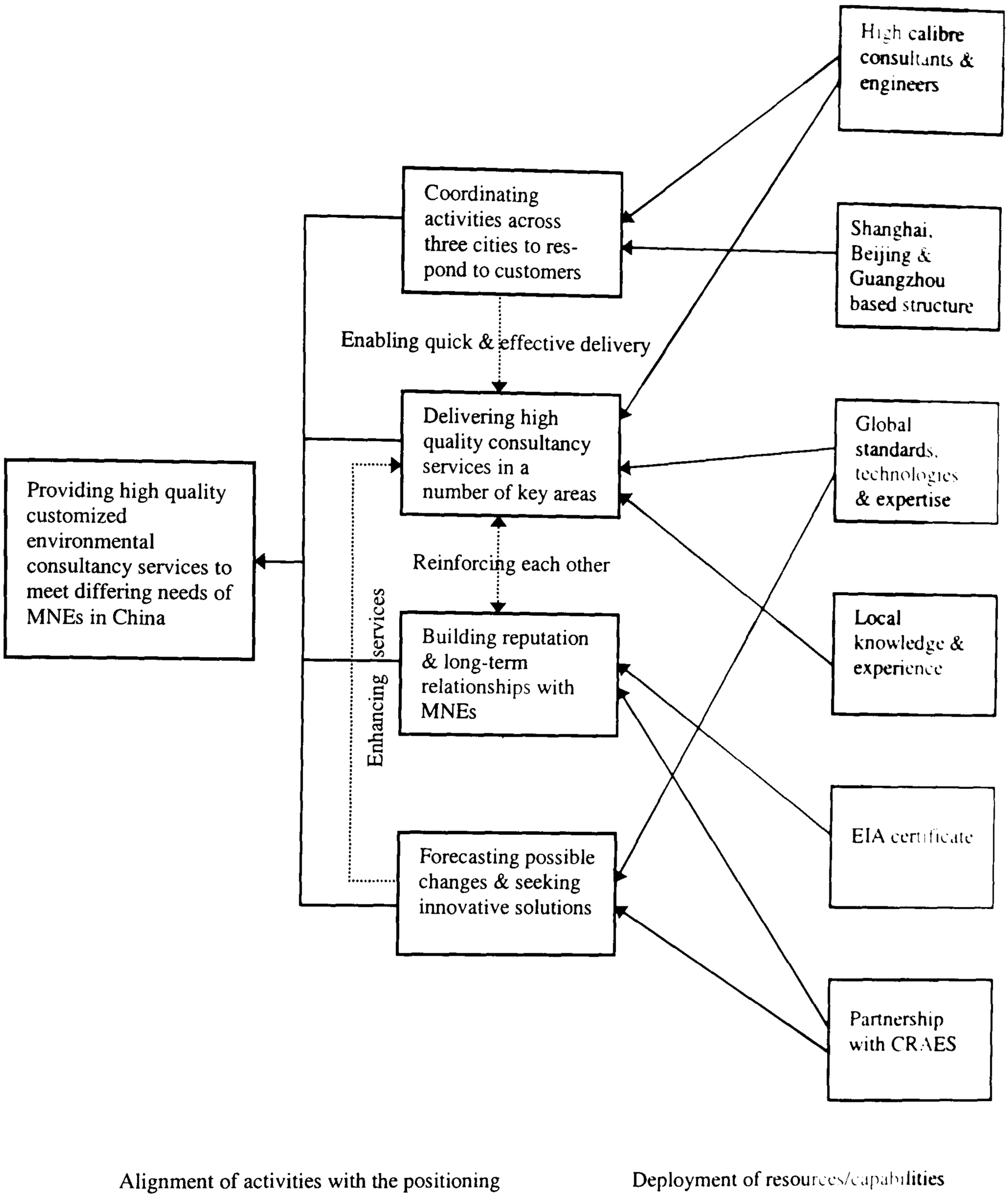

Figure 13.6 ERM China's Alignment of Resources/Capabilities with the Positioning

They are of very high calibre, and possess excellent knowledge and extensive experience in their fields. Their makeup includes experienced professionals and young people in technology and science, and often includes foreign experts working in China. Technical know-how and expertise in environmental sciences are essential to its service operations. The company has integrated more than 30 disciplines, including engineering, physical science, social science, environmental health, risk, economics, planning and management. To provide services often demand knowledge and expertise drawing from both ERM's global networks and local professionals. For

example, its social strategies and wastewater treatment combine international experience with the local knowledge and capabilities, as described in the data (A Pool of Knowledge and Expertise). In addition, ERM China's Class "A" EIA Certificate demonstrates its capability to provide turnkey services for the preparation and approval of Chinese EIAs.

Moreover, good coordination across three city-based locations will enable a quick response to clients' needs and a right mix of professionals and specialists required for a particular project. Thus, its locational structure can also facilitate the service provisions.

ERM China presents it as a localized global firm, which may demonstrate its capabilities of providing services for MNEs in China. The Class "A" EIA certificate can confirm its local knowledge and authority. Its past partnership with CRAES may also support its efforts of building such a reputation.

ERM China continues to search for better solutions to the EHS issues. One way is to forecast possible changes of the polices concerning the environmental protection and to incorporate them into the consultancy services. Through the partnership with CRAES, ERM China was able to gain some insights into the policy orientation of Chinese government in the environmental protection industry. The other way is to look for innovative solutions. There may be possibilities of applying new technologies developed in other countries, which may or may not be applied yet in the industry, to solving environmental issues in China.

Sustainable Competitive Advantage

From the positioning perspective, ERM China's sustainable competitive advantage may come from the trade-off position in the marketplace and configuration of activities. As ERM China offers consultancy services only to MNEs, it foregoes potential business of domestic firms in China. In addition, in comparison with many other firms in the environmental protection industry, ERM China offers only solutions to EHS issues without any equipment and engineering work involved. In line with the position, its activities are configured to deliver the best values to MNEs which cannot be matched by other firms in the industry. As discussed early about its positioning, its

activities are carried out consistently with the position and support the position. Its activities are aligned to achieve a fit among them, for example. the activities of managing projects from office-based location, delivering consultancy services, projecting its image among MNEs, and efforts to enhance its services are consistent with each other. Specifically, the deployment of workforces is well aligned with the recruitment of human resources, and is further supported by its organizational structure which allows flexibilities. Managing the partnership to support its localization is consistent with its global approach to EHS issues. The alignment of its activities into a coherent system makes it extremely difficult for any competitor to copy its activity system.

ERM China's activities cannot be disconnected with its distinctive resources and capabilities, illustrated in Figure 13.6. Coordinating activities for a given project depends on its project based organizational structure and three offices. It often requires a particular mix of professionals and expertises in the relevant areas drawn from different offices. Delivering high quality services requires mostly high calibre professionals and specialists as well as technology, knowledge and expertise either globally based or locally based. Building the reputation and long-term relationship with MNEs may benefit from its partnership with CRAES as well as from EIA certificate to project an image of a local expert. Moreover, ERM China can also benefit from its partnership for gaining insights into policy orientations in the environmental protection industry. Its global knowledge and technology advantage may become the valuable resources when it seeks innovative solutions to local EHS issues.

The ultimate aim of various activities is to deliver high quality services customized to MNEs' needs in China. To deliver such services requires a bundle of resources and capabilities, notably, human resources and various types of knowledge and expertise. It may also depend on other activities which support the delivery of consultancy services. The combination of both global and local knowledge and expertise can be the biggest barrier to competitors' imitating efforts. Also, various types of knowledge and consultancy experience were accumulated over a long period of time and come from multiple sources. As for competitors, if they cannot acquire these critical resources, it will be unlikely that they can copy the activities to deliver same or

similar services. In addition, as ERM China has created trade-offs in providing services, its resources and capabilities are more likely developed and nurtured over time within the organization gearing up to its trade-off position in the marketplace. Clearly, its knowledge and capabilities of delivering services are orientated to MNEs only, and not to domestic firms. The company has also developed strengths particularly in searching for solutions but not in engineering work. Thus, there is a tendency that its resources and capabilities are developed highly focused and specialized.

As indicated in Figure 13.6, EIA certificate and partnership can be conducive to its building reputation among MNEs, but these two assets alone are apparently not sufficient. This is because building reputation depends on its delivering quality services. Therefore, without consistency between activities, seeking a few (critical) resources may not be effective in this context, especially in the long run. In comparison, forecasting possible changes of policies may be relatively easy to copy as this is largely dependent on the access to information. Any competitors, if they can forge a similar partnership or via other means of gaining inside knowledge or insights, they are also likely to forecast the policy orientation. To search for innovative solutions in the same EHS areas will be more difficult for other firms in the industry.

On the whole, various resources and capabilities of ERM China can be valuable for its competitive positioning. Among them, human resources, knowledge and expertise, and its organizational structure which is project based and allows flexibilities, can be most important resources to support its distinctive position in the industry. At the same time, its unique positioning may have led to the development of some idiosyncratic resources or capabilities, such as specialized knowledge, expertise and capabilities.

Shanghai Marconi

Shanghai Marconi provides communication solutions for customers in China. It employs Marconi Corporation's technology and is particularly strong in SDH products. The customers are varied and mainly include railways, power industry,

telecommunications carriers and metro networks. Shanghai Marconi has encountered great difficulties in the marketplace due to the downturn of the telecommunications industry and fierce competition on the market. The company also faces other challenges, such as communication difficulties and language barriers, pressure of prices, and problems with coordinating activities with the parent firm in the UK. The following is the analysis of the company's competitive situation in China.

Analysis from the Positioning Perspective

Industry Conditions

The downturn of the telecommunications industry, intensifying competition and strong bargaining power of customers have made the industry less profitable. The telecommunications infrastructure has been largely built in China, especially in urban areas, and the growth for communications equipment is limited in general. The recent growth of broadband and mobile phone services has led to some improvements of the industry. The market is highly competitive in China with leading MNEs, such as Nortel, Lucent, Alcatel, Ericsson and Siemens, and some Chinese companies such as Huawei and ZTE.

Positioning and Operational Activities

Shanghai Marconi has expensive products (high costs in manufacturing in the UK). It cannot pursue a low cost strategy. Its position is based on a set of high quality and expensive products to serve a wide range of customers. Given the industry conditions in China, the likelihood of achieving good profitability is low. Figure 13.7 shows four major elements of its operation and outlines various relationships related to the operation. Shanghai Marconi provides customized services for customers. Each project is carried out by a business division. The company may have leverage for future business due to the compatibility of equipment.

Shanghai Marconi can be considered on the whole as having a variety-based positioning because its position is based on the offer of limited telecommunications equipment and technology. The company's positioning and activities are illustrated in Figure 13.8. At the same time, Shanghai Marconi's products and relevant services are customized to meet individual customers' requirements in different industries. Its telecommunications solution includes advice, equipment, installation, services, and

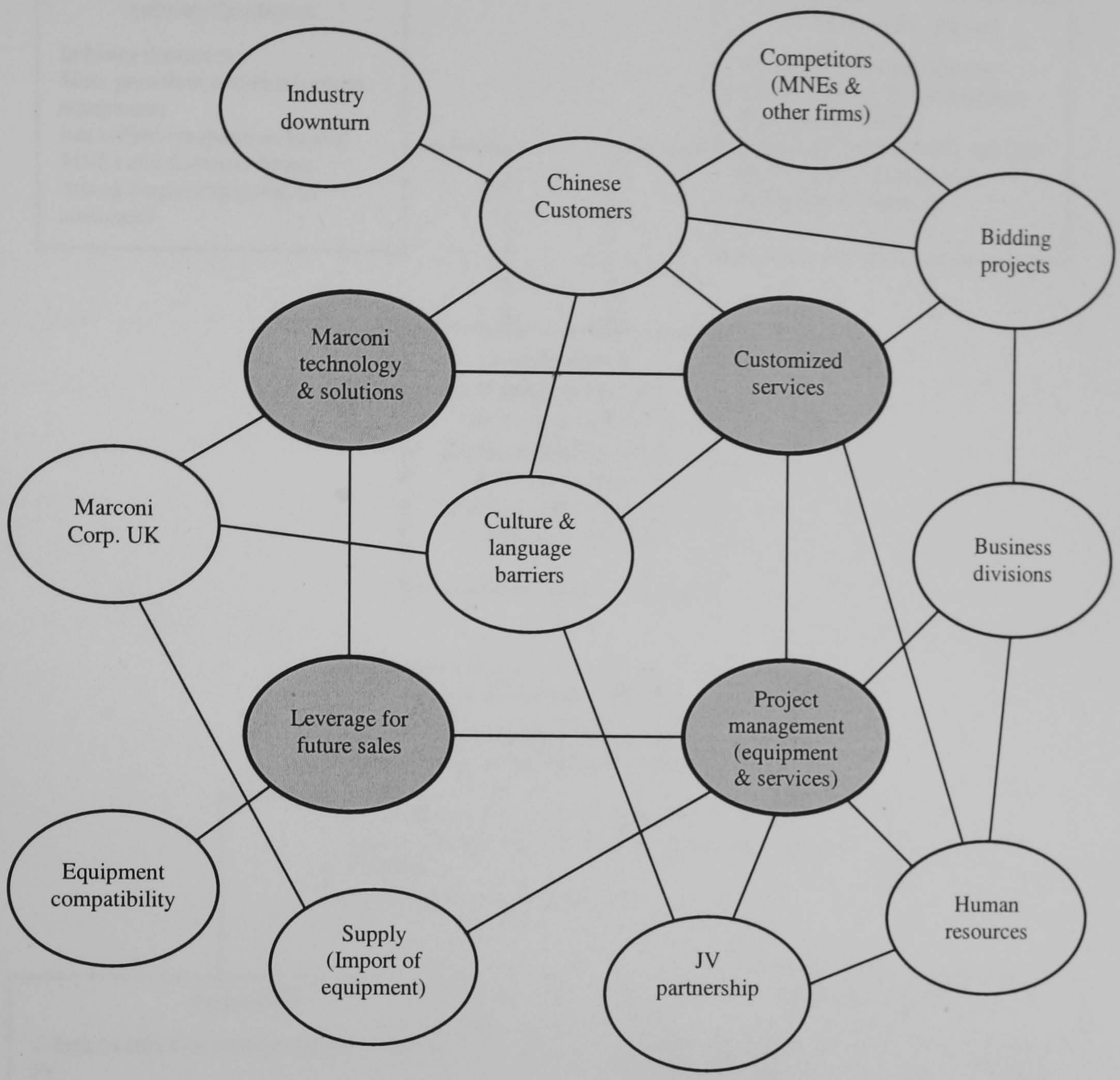

Figure 13.7 Shanghai Marconi's Activity System

technical support. Its customized services suggest needs-based positioning. One of its main problems could be the difficulty in carrying out operational activities between the company and its parent firm Marconi Corporation in the UK. Its main activities, which involve bidding, ordering, importing, sales and marketing, and manufacturing, can be best organized between Shanghai and the UK base to provide variety-based products based on technology. However, providing customer orientated services in China requires designs for specific customers, meeting different requirements, delivering services by teamwork and flexibilities. Needs-based services could thus complicate the operations and cause inconsistencies among the business and engineering activities in China and the manufacturing in the UK.

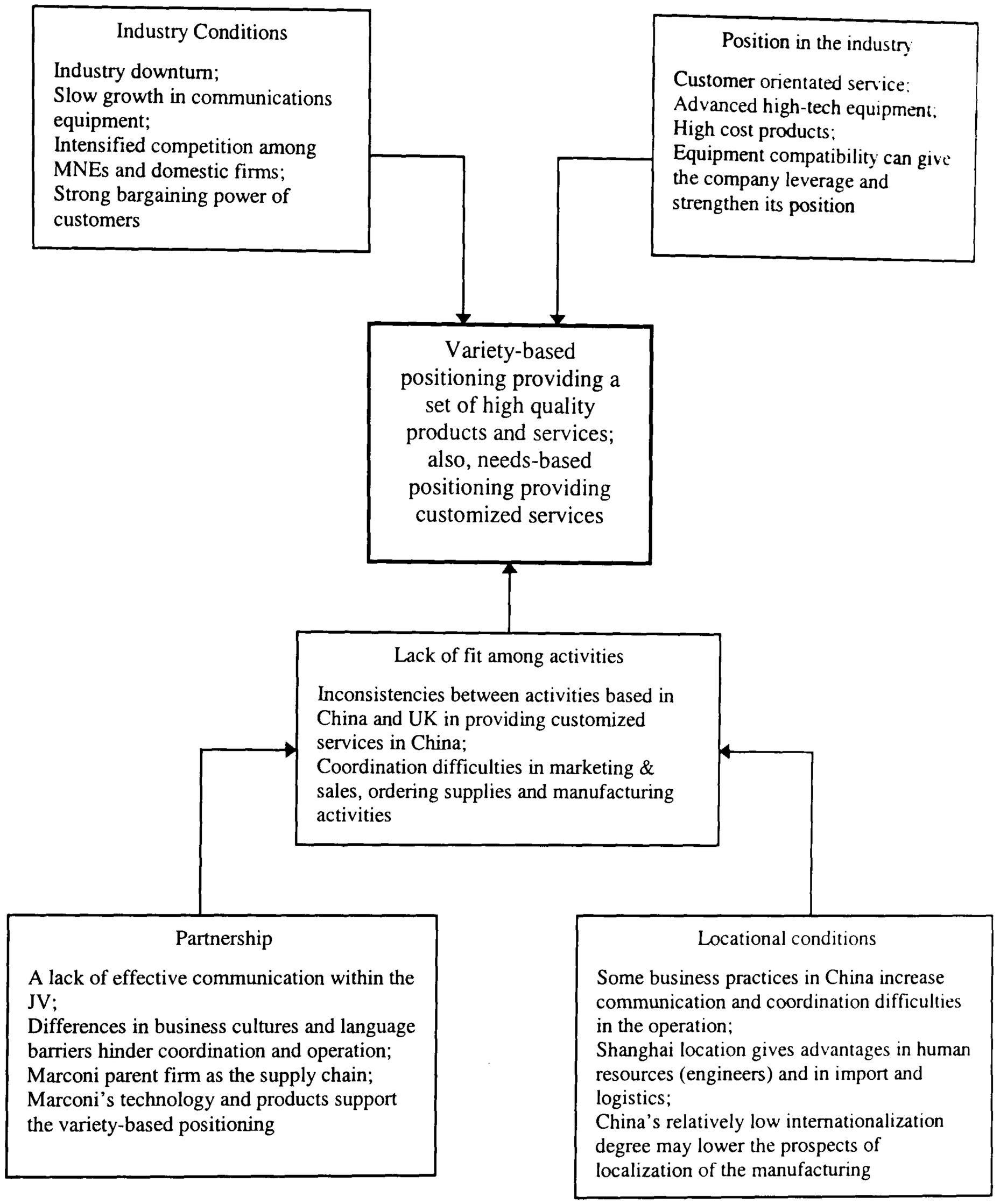

Figure 13.8 Shanghai Marconi's Positioning and Activities

From the partnership perspective, Shanghai Marconi, as a joint venture, lacks an effective internal communication between employees and management, in particular, between Chinese employees and British managers, for instance, carrying out instructions and expressing opinions at a meeting. Moreover, the language barrier in translating technical documents between English and Chinese, can further amplify the difficulties of the coordination between Shanghai Marconi and its parent firm in the UK. The translation requires both technical knowledge and a good command of

English and Chinese. It can increase costs and slowdown the operation. The lack of effective communication within the joint venture and the language barrier could weaken the vertical linkages between activities and hinder the operation.

Differences in business practices between Chinese firms (customers) and British firms may also to some extent complicate the communication and coordination between Shanghai Marconi and Marconi Corporation. As suggested in the case, some Chinese customers may have special requirements that would not be considered as standard business practices in the UK. Shanghai Marconi must coordinate between its local market activities and the manufacturing in the parent firm.

In summary, the industry conditions, its positioning in the industry, difficulties in the operational activities and weaknesses in the partnership can be the key factors in explaining Shanghai Marconi's difficult situation in China. Its high manufacturing costs make it difficult to win biddings from Chinese customers who are price sensitive and have relatively strong bargaining power. It is possible to solve some difficulties, for example, using advanced IT software (ERP or SAP) to improve supply chains and integrate data management in the operation between Shanghai and the UK base. Promoting organizational culture, improving communication within the joint venture, and organizing language-training programmes can be helpful to some extent for improving the operation and coordination. Nevertheless, the central issue may be to resolve inconsistencies between the activities and positioning. In spite of the needs-based position in the industry, reducing costs in coordinating activities and delivering related services and engineering supports may help improve the company's competitive position in the marketplace. In the long run, it may be desirable for the company to have a manufacturing base in China if the conditions are right.

Analysis from the Resource-Based View

Shanghai Marconi's telecommunications technology may be significant among its various resources. Its main products include SDH, DWDM, ATM/IP, and wireless products. They encompass the areas of transmission, access, switching and networks. Its technology comes from its parent firm. Marconi's SDH technology has a leading position in the world. Its SDH products have been deployed throughout Europe, Asia

Pacific, and Central and Latin America. According to *Marconi Annual Report and Accounts 2002/03*, the company continues to invest in SDH, and focuses, in particular, on the development of the next generation SDH. The next generation SDH range is more effective for carrying the new and rapidly growing Internet and broadband data services.

In the Chinese market, Shanghai Marconi's majority business operations are based on SDH products. The SDH technology has generated a large part of its revenues. Do other firms possess this technology? Some firms have their transmission technologies, but not in the same position as Marconi. In respect of rareness of the resource, the SDH leading products and the next generation can possibly be considered rare. When its advanced technology is developed and patented, it will be a source of competitive advantage. It can be difficult for other firms to match or surpass Marconi in such technology, on which Marconi has the greatest technological strength and continuously makes investment. In particular, when the R&D capabilities are embedded within the organization where Marconi cultivates learning, innovation and teamwork spirits among employees, it can be much harder for other companies to imitate the technology or surpass Marconi. Possessing such leading technology may help explain Shanghai Marconi's survival as well as some significant business contracts, given the fierce competition amongst MNEs and some domestic firms in China, and also given Shanghai Marconi's weaknesses in internal communication, difficulties in coordinating activities between Shanghai and its UK base, language barrier, and high manufacturing costs.

On the other hand, on many occasions Marconi's leadership in technology has not been fully appreciated. Many customers value more the price, the compatibility with their existing systems, future upgrade choice, engineering support or any other needs. The leading technology does not necessarily guarantee the successful bidding. *The Financial Times* has reported that Marconi lost BT's landmark contracts on a new network to its competitors, such as Ericsson, Siemens, Huawei and Alcatel. "Though the company's technology is considered leading edge, Marconi is not able to sell it at a low enough price in what has become a fiercely competitive market for telecoms equipment." (Pesola, Tucker & Odell, 2005, April 28). From the resource point of view, other firms' similar resources can substitute Marconi's valuable and imperfectly

imitable resource. Those alternative resources (different technologies) are owned by a number of telecommunications firms. Therefore, from the RBV perspective, Marconi's leading technology will not translate into sustained competitive advantage.

Synthesized Analysis

Activities and Resources/Capabilities

The positioning of Shanghai Marconi relies on its various value chain activities. The important activities are shown in Figure 13.9. Technical support mainly includes introduction of technology, equipment, functions, compatibility, training, maintenance, and emergency technical support. Commercial Department is responsible for marketing and sales and bidding projects. Financial Department calculates costs and profits and determines bidding prices and discusses with Marconi in the UK about procuring prices. Supply Department orders equipment from Marconi in the UK. Business Divisions carry out contracted projects for customers, including installation of equipment, operation and related services. To perform each of these activities will require particular resources and capabilities, which are also illustrated in the figure. Technical support needs qualified engineers and good communication skills dealing with customers. Marketing and sales may depend on technology leadership of the company, products and services to be offered, communication skills negotiating with customers. Accounting also provides necessary support for marketing and sales. Once taking on the project, ordering equipment needs communication skills and detailing the order with the parent firm in the UK. Carrying out projects largely depend on engineers and support from other activities (departments). Accounting may rely on the IT system, communication with the parent firm and accountants. Among these resources and capabilities, communication skills are needed in many activities, especially when dealing with Chinese customers and the parent firm in the UK where bilingual competency can be critical in the communication. Translation of technical documents and relevant materials such as discussions and minutes can be a demanding task requiring both technical knowledge and a good language command. IT system can support different departments carrying out various activities.

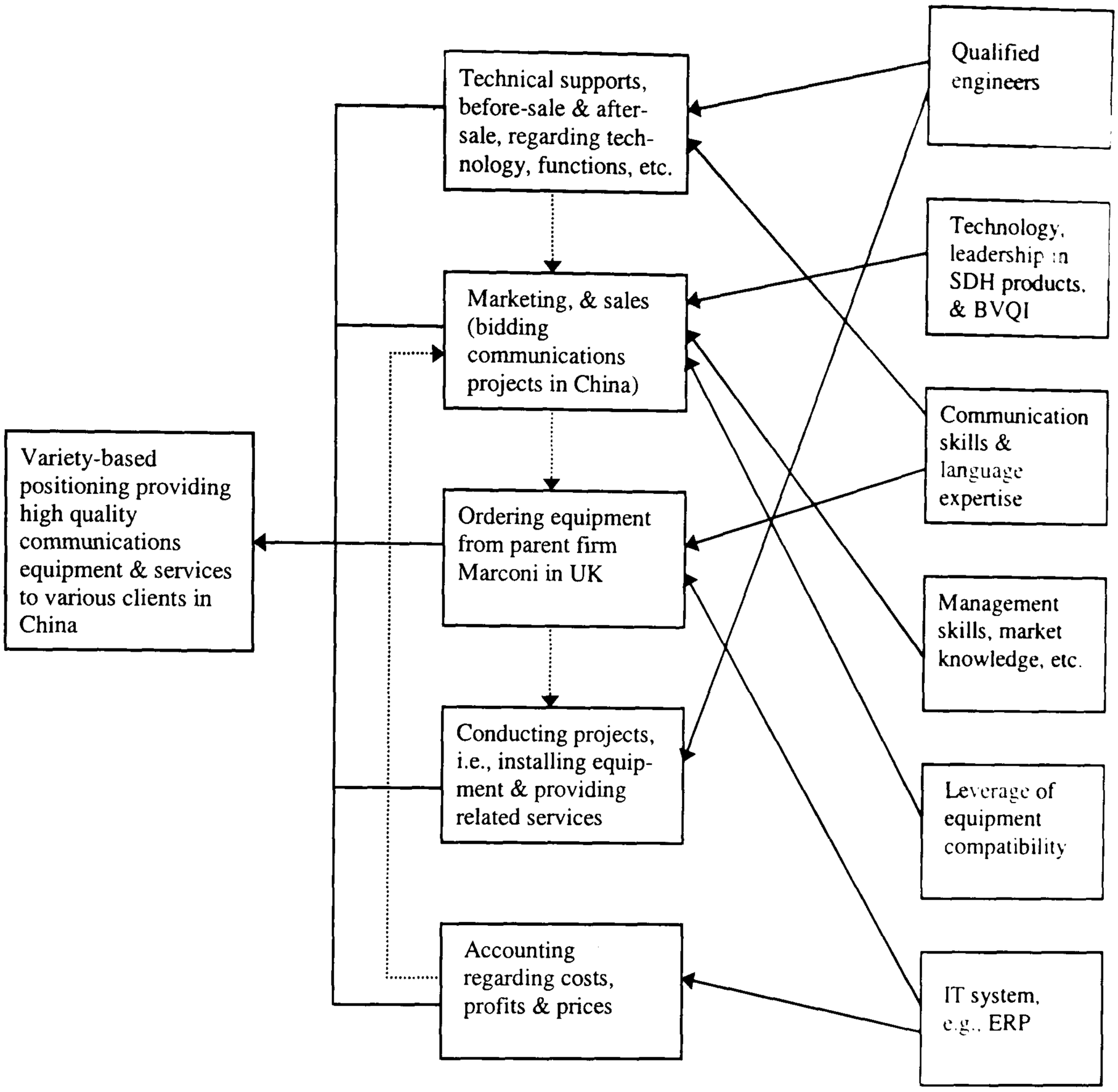

Figure 13.9 Shanghai Marconi's Alignment of Resources and Capabilities with the Positioning

Sustainable Competitive Advantage

From the positioning perspective, the company must achieve fit among various activities apart from a trade-off position. For Shanghai Marconi, there lacks a consistency among some activities as discussed earlier in the section of the positioning and activities. The inconsistency is likely to occur among the activities performed to deliver customized services and the activities related to the procurement of equipment. The company needs to manage the differences in business practices between China and the UK. High cost manufacturing and customized services are hard to reconcile with the demand from some price sensitive customers who have

strong bargaining power on the highly competitive market. The case shows that many contracted projects were often to meet the demand of functionality, future expanding ability and customer services. Shanghai Marconi's overall activities are better aligned for delivering high quality products and customized services for customers who are not quite price sensitive.

As we discussed earlier about resources and capabilities of Shanghai Marconi, its technology and products can be substituted and do not constitute a source of sustainable competitive advantage. However, the company has leverage over the existing customers whose communications system Shanghai Marconi has entered into. As the major telecommunications companies have their own products and technology, the leverage of equipment compatibility is likely to remain between the companies. As a valuable resource, its value is unlikely eroded. The combination of technology and equipment compatibility can make the marketing and sales activity very distinctive for the existing customers, and thus competitors are in a disadvantaged position to lure those customers. However, for any new customers, the company does not enjoy the leverage of compatibility, and whether the marketing and sales activity can be carried out successfully may depend very much on technology and to some extent management and marketing skills. The examination of other related activities shown in Figure 13.9, such as technical support and setting the prices and contract terms, may shed more light on the marketing and sales activities.

Ordering equipment from Marconi parent firm is conducted after marketing and sales is successful, and can rely on communication and language skills and the IT system. The Shanghai Marconi case illustrates the importance of communication skills and language expertise as one of the critical resources of the company. Lack of effective communication may affect introducing technology and products to Chinese customers, slow down other activities, and even result in errors. In particular, translation of technical materials is essential for providing services to customers and coordination with the parent firm. Translation of a large volume of documents can be costly and time consuming, and thus the possession of language expertise is imperative.

The analysis of the activities and resources suggests that Shanghai Marconi has not created much sustainable competitive advantage except with existing customers. The difficulties in coordinating activities in line with its position and insufficient critical resources may be largely the causes of the problem. The analysis also helps identify the needed resources, for instance human resources possessing both technical and bilingual expertise and an effective IT system integrating various activities. When there is a better fit among the activities, marketing and sales might be conducted more effectively, especially with new customers. What has not been addressed here is the industry. The low growth, fierce competition and great pressure on prices present a difficult situation.

GSK Chongqing

Analysis from the Positioning Perspective

GSK Chongqing is a joint venture specialized in manufacturing aerosols for respiratory illnesses. Since the operation in 1991 the company had suffered a loss every year till 1997. Since then it has improved performance. GSK Chongqing has a distinctive position in the industry, but it has a serious problem with the sales and distribution of the products in China. The management of the company is well aware of this.

Industry Conditions

The pharmaceutical industry has been growing rapidly in China. Some forecasts suggest that the China market will become the fifth largest in the world by 2010. As for aerosol products for respiratory illnesses, the competition is moderate. Distributors have great bargaining power as they sell products to hospitals and pharmacies and have a very close relationship with them. At present there is no indication of any direct substitute products for the aerosols. Though counterfeit products can be common in China, the technology and facilities required for the production may have prevented illegal manufacturing of the counterfeit aerosols.

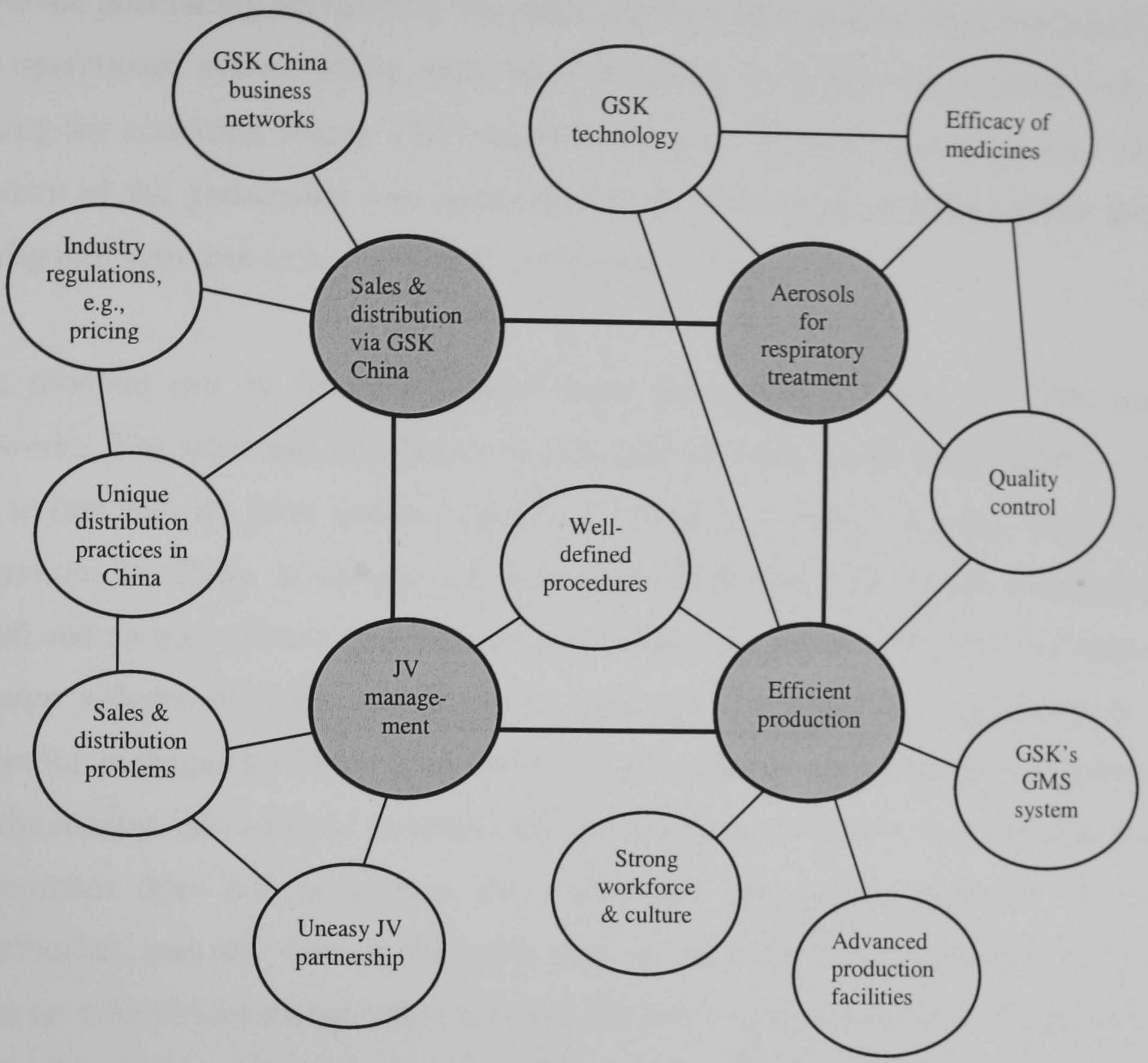

Figure 13.10 GSK Chongqing's Activity System

Positioning and Operational Activities

GSK Chongqing has a distinctive position in the industry. Figure 13.10 shows its activity system. The product has a distinctive form of dosage, and its production relies on GSK's technology and supply of the primary ingredients and aerosol parts. The aerosol products are efficacious in treating a number of respiratory illnesses. GSK Chongqing's positioning also shows a trade-off, specializing in a narrowly defined range of aerosol products. The management, particularly the British partner, had emphasized efficiency. The production activities, from the supply of prime materials to packaging, from quality control to limited local sourcing, have been well configured to achieve efficiency and are aligned with the positioning in the marketplace. GSK's Global Manufacture and Supply (GMS) system is also employed to enhance the supply chain operation with the parent networks.

From the positioning perspective, the sales and distribution is not well configured into the operational system along with other activities. In other words, there lacks fit among the activities. Figure 13.11 explains the joint venture's positioning by taking account of the partnership and locational factors. The diagram distinguishes the ill-configured activities from those well-configured activities.

The problem can be firstly explained from the partnership and the GSK parent networks. The sales and distribution is managed by GSK China Investment, but it is not in line with the joint venture's position. China Investment manages many GSK's operations in China. In comparison with other GSK businesses, GSK Chongqing is small and an insignificant part. Medicines produced by other GSK units in China and a large volume of medicines imported from the UK form the main part of the operation managed by China Investment. Those medicines are often highly demanded on the market, and medical professionals are well aware of them. In particular, China Investment does not understand the market for the aerosol products and their distribution, and sell them in the same way as other products. Moreover, there had been no effective communication between the joint venture and China Investment. A lack of understanding between the partners within the joint venture, including the British partner's assertive management style, the Chinese partner's inability to guide them, and the language and cultural barriers, became an obstacle to the reconfiguration of the activities.

From the locational perspective, the distribution problem reflects one aspect of the country conditions. The relationships between pharmaceuticals companies, distributors, and hospitals and pharmacies are highly complex. The distribution system is very fragmented, and there are also regional barriers. Given the ineffective partnership within the joint venture to recognize and deal with the distribution problem, the activities of the sales and distribution have not been configured into the joint venture's system. The management before 2001 failed to appreciate the locational conditions and to untangle the complex web of relationships in the distribution system in China. As a result, the sales and distribution activities were not configured in the light of the market conditions in the country. Moreover, government regulations in pricing control might also pose a constraint to the joint venture in managing commercial relationships with distributors.

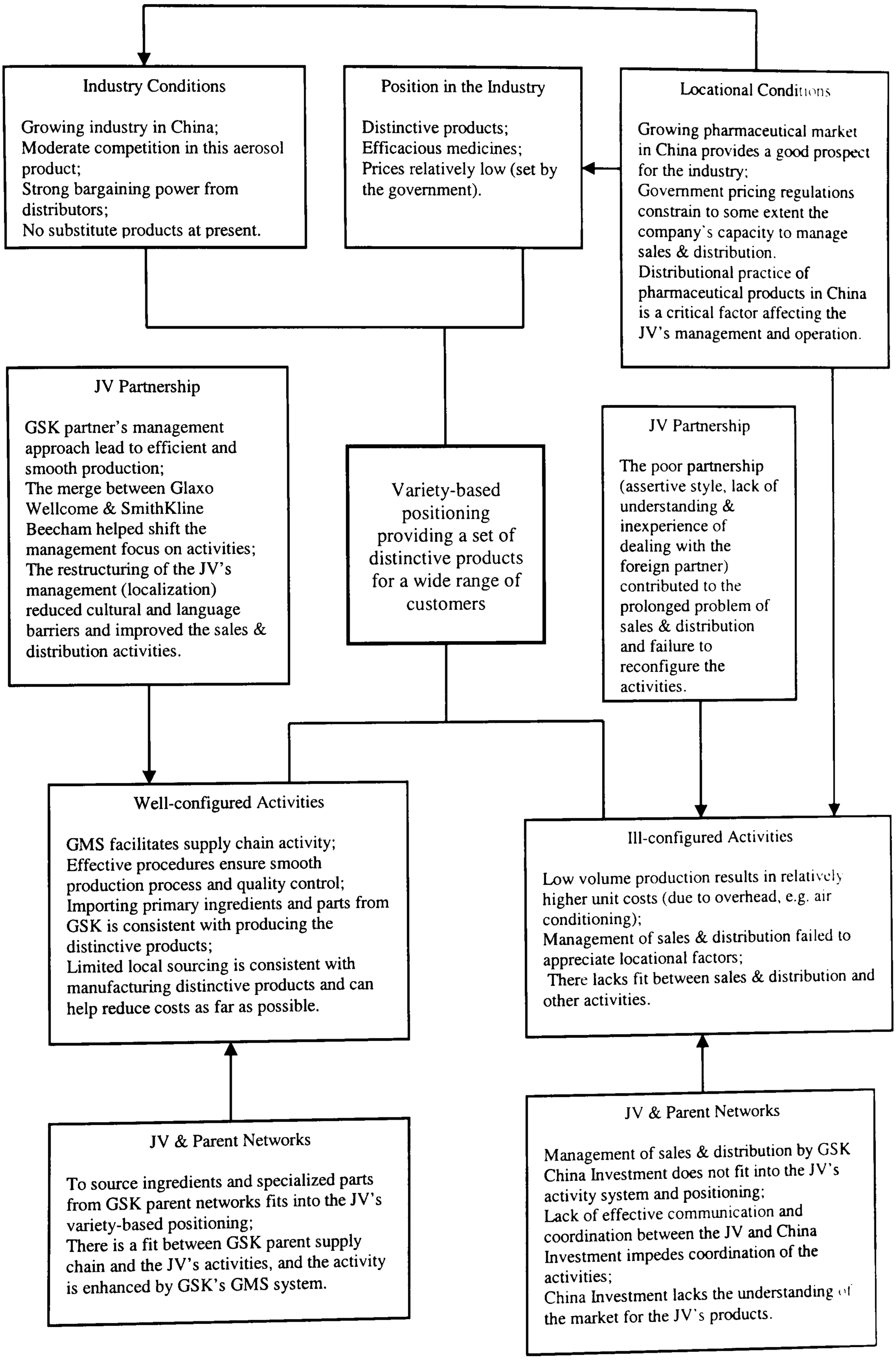

Figure 13.11 GSK Chongqing's Positioning and Activities

All in all, GSK Chongqing has a variety-based position with the manufacturing activities well configured. Apart from the above problems, its production has been smooth and efficient in line with the position. The partnership and GSK parent networks have played an important role in achieving the distinctive position and operational effectiveness as well as in ineffective management of sales and distribution.

Analysis from the Resource-Based View

The production of aerosol products relies on GSK's technology, supply of compounds and aerosol parts, and specialized production facilities. Due to the efficacy of the product, the company's production capability is valuable. The products can potentially generate good financial value if the main problem of sales and distribution can be solved. Such valuable resource of the joint venture can also be considered rare as the supply of primary compounds depend on GSK's global supply networks and may not be easily available in China. There are some differences between GSK Chongqing's aerosol products and other manufacturers' such as AstraZeneca China, and Xinyi and Jiai. The imitability of such valuable and rare resource may depend on the ability to obtain technology and the supply of the main materials. It is not easy in practice for other firms to do so, or at least they have some disadvantages. The fact that no counterfeit products of GSK Chongqing's aerosols have appeared on the Chinese market may indicate the imperfect imitability of GSK Chongqing's production capability.

Moreover, whether the aerosol production capability can be a source of sustained competitive advantage can depend on its substitutability. Although other firms are unlikely to obtain exactly the same resource of GSK Chongqing, they may be able to substitute it with other similar resources and to implement the same strategy. AstraZeneca's aerosols use different compounds from GSK Chongqing's. The issue whether AstraZeneca could compete away GSK Chongqing's competitive advantage could depend on extent to which AstraZeneca's products differ from GSK Chongqing's in terms of medical applications and efficacy. Xinyi has till now different strategy – low cost position. Its products are priced half of those of GSK Chongqing. Jiai has the ability to produce similar products to GSK Chongqing's. It

also made some improvements of the aerosol device so that it is easier to use. Jiai's products could potentially substitute GSK Chongqing's. From the RBV perspective, GSK Chongqing has the valuable and distinctive resource, but may not be able to sustain its advantage in the long run.

Synthesized Analysis

Activities and Resources/Capabilities

Among many value chain activities of GSK Chongqing, a number of activities can be identified as characterizing the company's operation. Figure 13.12 shows its activities and resources and capabilities. The procurement of prime materials and aerosol parts is carried out with the GSK supply chain (GSM). Orders are placed well in advance to ensure the supply and transport from the UK. The procured materials are then stored in the warehouse. The production consists of four processes – mixing materials, canning, storing and packaging. Accompanying the production activities is quality control and testing. Sales and distribution is carried out by GSK China Investment through Prescription Medicines Headquarters in Shanghai. In recent years, the company set up a sales unit to supplement Prescription Medicines Headquarters.

To perform these activities requires various critical resources and capabilities as illustrated in the figure. Procurement and warehousing are relatively simple depending on limited resources. The production activities require multiple resources, including advanced plant facilities and automatic system, managerial competencies, technology, and dedicated workforce. For sales and distribution, the partners' managerial competencies may be crucial to the success. As the case shows, the assertive management style and lack of partners' cooperation have been one of the important factors contributing to the poor performance. The British management approach has enabled the company to achieve the efficient production, but not in the sales and distribution of the products. The poor partnership was also reflected by the communication and language barriers between the partners. In addition, sales and distribution may also depend on the product itself and its efficacy. Quality control and testing is part of the production process, and it may largely rely on the workforce and a dedicated working culture.

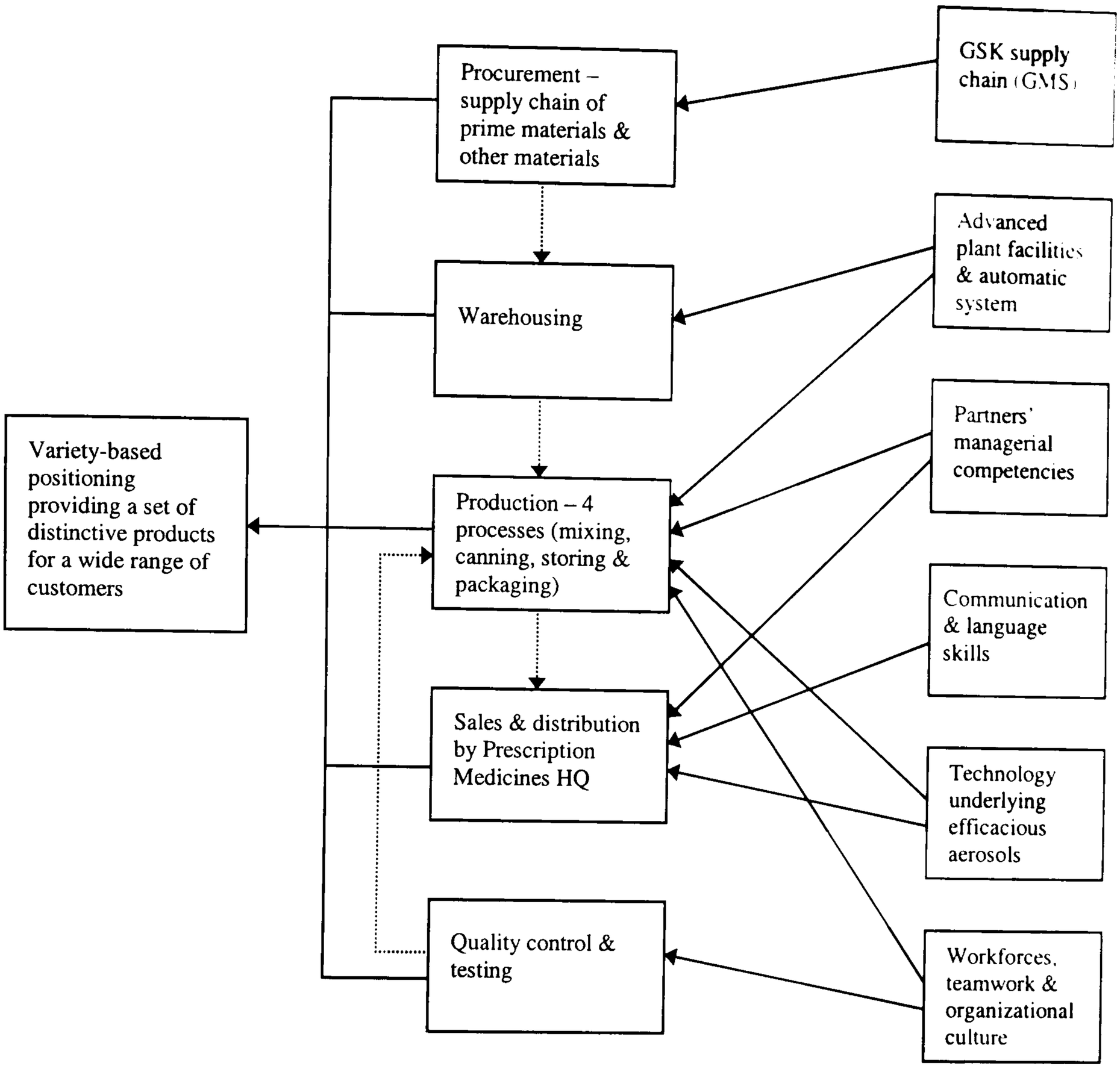

Figure 13.12 GSK Chongqing's Alignment of Resources/Capabilities with the Positioning

Sustainable Competitive Advantage

As we discussed earlier about the company's positioning, the sales and distribution activities are not well configured with other activities into a fit system. In other words, the company's variety based positioning is not supported and reflected in the entire activity system though the production activities are in general in line with the position. Moreover, the poor sales have led to more than half of the production capacity unused and higher unit costs. The higher costs allow the company little leeway to manoeuvre in the distribution channel in relation to distributors, and this could in turn have a negative effect on the sales. There might be a possibility of reducing procurement costs if ordering higher volumes. Therefore, due to the lack of

fit among activities, from the positioning perspective, the company can hardly create sustainable competitive advantage. The two sets of activities (production and sales and distribution) are not internally linked with each other to create a unity of the system. Any of those 3 major competitors, for example, Jiai may be likely to performance the same or similar activities allowing it to implement the same strategy.

The examination of resources and capabilities of GSK Chongqing may throw some more lights on the above points. Of those activities, the production may be relatively difficult for the competitors to copy as it requires multiple resources and capabilities, in particular, technology among others. As for the sales and distribution, it is badly executed in relation to other activities, and thus there is not much value for copying it *per se*. On the resource side, the sales and distribution may not be well supported by appropriate resources and capabilities, such as partnership and communication skills. Its poor execution may reflect, on the other hand, the lack of such critical resources or capabilities in the joint venture, such as more constructive partnership, partners' ability to learn from each other, effective communication skills, and right human resources who can understand and adapt to the market conditions.

YARACO

YARACO produces and supplies acetic acid and acetates in China. The company has achieved superior performance. It has a distinctive position in the industry. Its operational activities are well configured in line with its overall strategy. It also possesses valuable and unique resources and capabilities. Its joint venture partnership has been one of the important elements contributing to its competitive success. Its achievement of superior performance can be explained as follows.

Analysis from the Positioning Perspective

Industry conditions

The industry condition is very favourable in general. The acetic acid market has been growing rapidly in China with the demand exceeding the supply. At present, China imports 200,000 to 300,000 tons of acetic acid every year, and the gap will remain in the next five years (case data). The bargaining power of customers is thus relatively weak compared with that in many other industries such as electronics, car, and

telecommunications. There is also a suggestion that the demand of acetates – the derivatives of acetic acid – could increase as the result of new government regulations. YARACO has one of the largest acetyls complexes in China and possesses 27% market share for acetic acid.

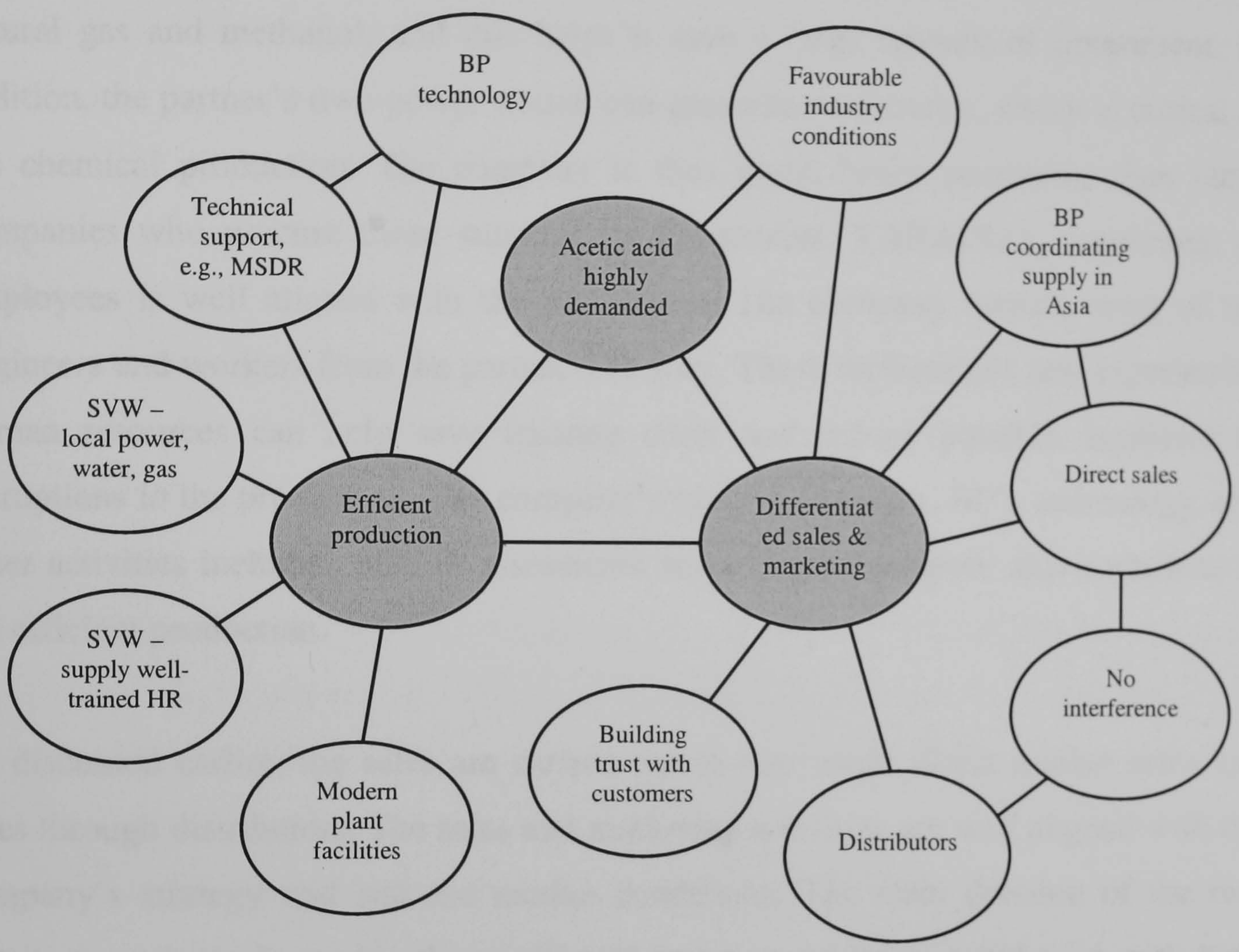

Figure 13.13 YARACO's Activity System

Positioning and Activities

YARACO has a distinctive position in the industry. It produces and supplies acetic acid and limited acetate products – ethyl acetate and butyl acetate. It serves many customers of varied size across the country. Overall, YARACO has the variety-based positioning. The company segments the market based on customers' scale and geographical location. Direct market sales help reduce costs and build loyalty with large customers. Sales through distributors are used to access fragmented markets and also help circumvent regional restrictions, which can be common in China. YARACO can be considered as having access-based positioning at a lower level.

YARACO's activities are well configured to meet the demand of the market, and there is a good fit among various activities, such as supply of inputs, recruitment, production, technical support, and sales and marketing. Figure 13.13 shows its activity system. The Chinese partner's supply of inputs is very cost effective and efficient for the production. YARACO plant is located very close to the partner's factory SVW. The company has thus the direct access to those critical inputs, including water, natural gas and methanol, and this helps it save a large amount of investment. In addition, the partner's own power station can guarantee electricity, which is critical to the chemical production. The company is thus much better positioned than other companies who procure those supplies on the market. YARACO's recruitment of employees is well aligned with the production. The company recruits most of the engineers and workers from the partner's factory. These well-trained and experienced human resources can help save training costs and reduce possible accidents or disruptions in the production. The company's modern facilities, BP's technology, and other activities including MSDR assessment and technical support, also contribute to the efficient production.

As discussed earlier, the sales are carried out in two ways: direct market sales and sales through distributors. The sales and marketing activities are well aligned with the company's strategy and suit the market conditions. The clear division of the two distribution channels avoids the conflict of interest and helps build trust with both direct customers and distributors. Moreover, BP's strategy of balancing the supply of acetyls to Asian markets can complement and strengthen YARACO's sales and distribution in the Chinese market. YARACO and BP can together seize the Chinese market through their coordination. In summary, the operational activities, from supply to production and from recruitment to sales and marketing, are well configured in the way that ensures cost effectiveness, smooth production, and long-term relationships with customers. The configuration of the operational activities is consistent with the company's variety-based and access-based positioning.

Figure 13.14 combines the joint venture partnership and location specific factors to illustrate YARACO's overall competitive strategy in the industry. Both partnership and location specific factors can influence the configuration of activities, and consequently competitive advantage.

As illustrated above in the activity system, the partnership gives the joint venture advantages in accessing critical materials, advanced technology, and valuable human resources. The partnership defining the key production inputs can suggest special supply conditions from the perspective of the industry structure. The close cooperation and coordination between the joint venture and the parent firms, SVW and BP, can make it easier to exploit the vertical linkages than independent firms in optimizing supply activities and reducing costs associated with the supply and inventory of the input materials, such as methanol and catalyst (water and natural gas are supplied through pipelines). In addition, the partnership has also been important in coordinating the sales and distribution of acetyls across China. This is clearly shown by the company's attempt to seize the market even before the production began and BP's coordination of supplies in Asian markets to ensure the company's reliable source of customers. The partnership has enabled the joint venture to enjoy some advantages that independent firms do not have: sharing the activities, combining business networks, and a close coordination of activities. On the whole, the constructive partnership has contributed to the cost effective and efficient production and the reliable supply of the products to customers, and ultimately strengthened the position of the company in the marketplace.

The location specific factors may be understood largely as the result of BP forming the partnership with SVW. The location in Chuanwei has a number of critical advantages in terms of the supply of inputs (natural gas, water, methanol), supporting facilities (power supply), and valuable human resources. Chuanwei is close to the natural gas field so natural gas can be supplied at low cost. To gain these advantages might be difficult in a different location in terms of access to and competitive pricing of these critical resources. A different location might offer other advantages, such as access to the market or better infrastructure, but it might forego these advantages deemed as critical to the acetyls production. The location specific advantages in Chuanwei have enabled the joint venture to acquire the production inputs at low cost.

However, the transport infrastructure around Chuanwei at the time when the joint venture was set up was in very poor conditions. An exception was the convenience for shipping offered by Yangtze River, but it was limited to some customers located close to the river and port facilities. Moreover, the markets of acetyls are concentrated in

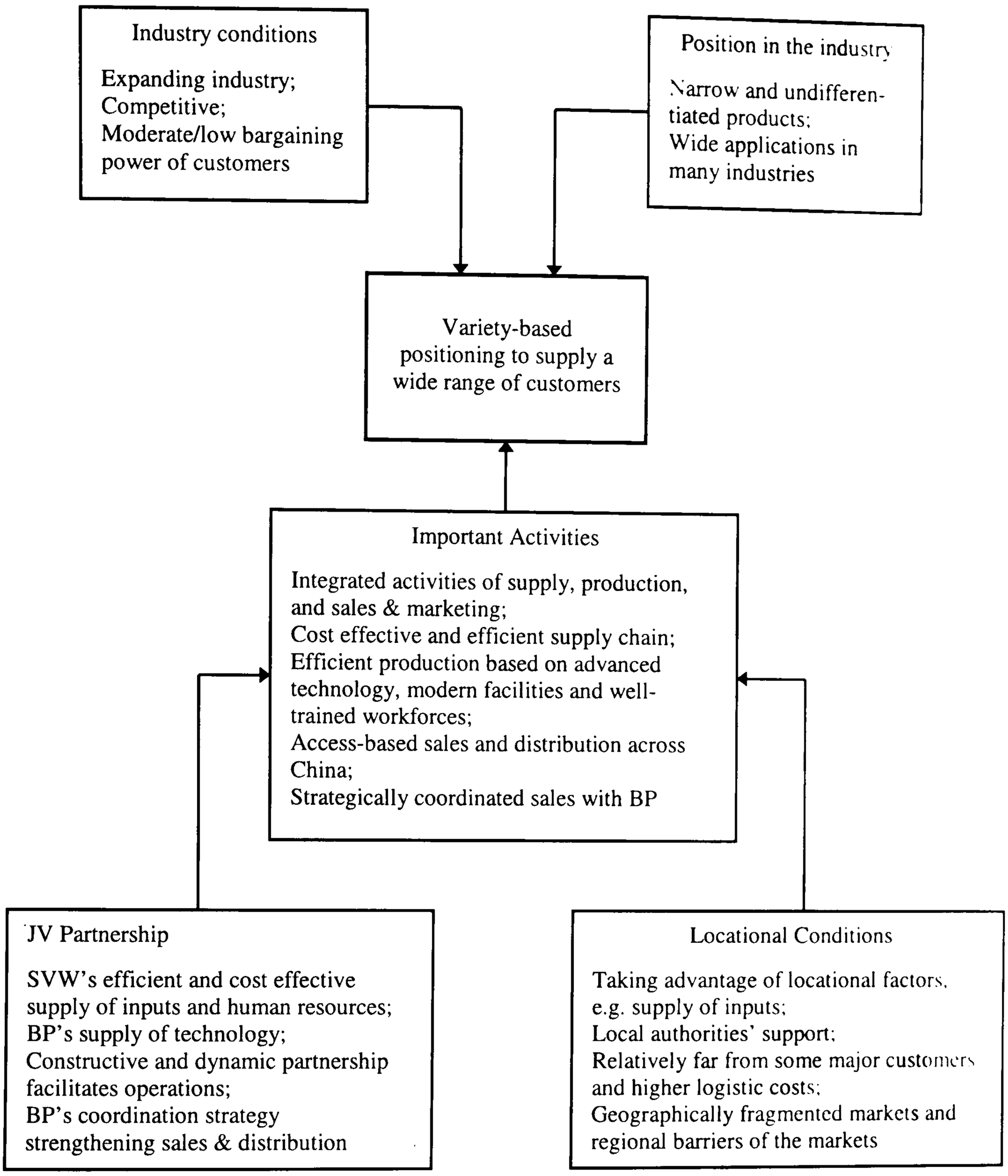

Figure 13.14 YARACO's Positioning and Activities

the east and south of China, and as a result, there can be logistic difficulties and transport costs could be high, in particular by lorries. Given these disadvantages, BP appeared to have given priorities to the access to inputs (or the partnership with SVW) rather than to the access to markets and local infrastructure. The locational choice may reflect BP's investment strategy of the YARACO case in the chemical industry, largely seeking resources and efficiency for the production. As for other locational factors, such as local government support and taxation policies, they did not appear to

be critical to the locational decision. Certainly, YARACO (or BP) values good working relationships with local governments as described in the case.

Analysis from the Resource-Based View

YARACO possesses many kinds of resources which may be critical to its superior performance, such as advanced technologies used in the production, cost effective supply of inputs, reputation being a reliable supplier among customers, well trained and experienced human resources, and joint venture partnership. Those resources that are difficult to acquire on the market can be potential sources of sustainable competitive advantage. Technology, partnership and its management of sales and distribution are, among other things, idiosyncratic to YARACO's operation.

The technology for acetic acid production is provided by BP. It is based on the carbonylation synthesis reaction. The core of the technology is the catalyst used in the synthesis process. The technology for CO production comes from a German firm. As a resource, technology is critical to the efficient and cost effective production, but it can become outdated. Some other factories in China use the same technology. However, the new technology Cativa is to be used in YARACO. It can almost double the production output and possibly reduce costs. BP has the patent of this technology. At present YARACO is quite competitive on the market in China. Any increased production and lower costs will probably make the company even more competitive and powerful, especially in the market where the demand of the product exceeds the supply. Given that it is not available to other companies unless licensed to them, the new technology can be a source of competitive advantage. As a proprietary asset, Cativa can be regarded as one of the isolating mechanisms from the RBV. As long as it is protected, it can be a source for competitive advantage. As technology is in a process of development and advances continuously, there is a possibility of an advent of another new technology and thus it may be substituted at some point in time. At the same time, YARACO may benefit employing Cativa from the first mover advantages, which can accrue to the firm with resource advantages (Barney, 1991). In comparison, other firms may lack such resource advantages that YARACO enjoys, namely, its partnership with BP and the result of BP's innovation.

Within the joint venture, the Chinese and British parties have been working together to achieve their objectives. The two parties had misunderstandings and difficulties, but they gained better understanding and appreciation of their differences as the partnership was evolving. Strategic management theory on alliances emphasizes the need for partners to achieve fit so that their alliance can make a positive contribution to the attainment of their objectives. The partnership of YARACO demonstrates that Chinese and British parties had awareness and flexibilities to be able to work together constructively and to develop mutual confidence. For example, the Chinese partner began to embrace the BP side's marketing strategy after they understood it. The BP side began to take account of practicalities for operations in China in the course of their partnership development. Both parties were learning from each other's cultural differences and working attitudes, so the partnership was becoming mature, constructive and dynamic. Such valuable attributes of the partnership were developed within this particular context of the joint venture, along with both the development of individual employees and management teams. The development of the partnership was a learning process at different levels. Such organizational capabilities would be difficult for outsiders to learn and replicate. Good coordination and performance of activities in joint ventures can to a great extent depend on how the partnership develops and is managed.

The distinctive approach to the sales and distribution can involve many aspects. A particular tactic or strategy is likely to be replicated. The Chinese partner has learned a sales tactic used by BP and applied it in their parent firm. It seems quite possible for other firms to learn the same tactic from the Chinese parent firm or from the joint venture, for this kind of skills or knowledge can be defined and specific. However, the overall management of the sales and distribution is more complex involving many elements, such as the way of dealing with distributors and direct customers, many "small decisions", for instance, helping a customer to improve their storage facilities and building trust, and BP's ability to manage its portfolio of the Asian sites as a whole at the corporate level to maximize their sales and competitiveness. Some skills may have a tacit dimension and be difficult for other parties to acquire directly, for instance, the way of negotiation or developing relationships with particular Chinese customers. The overall competencies of managing the sales and distribution will be difficult for other competitors to imitate or copy as they consist of many specific

skills, often tacit, managerial capabilities, and the broad structural relationships of the joint venture including the parent firms' networks.

Synthesized Analysis

Activities and Resources/Capabilities

Competitive advantage of YARACO may come from many sources. Broadly speaking, it may rest on its variety-based positioning in the marketplace, as explained in the early part of the analysis. The company has been performing many activities in line with its position to deliver the values to its customers – reliable supply of the products in competitive prices. Figure 13.15 explains the critical resources and capabilities and their alignment with the positioning. The main activities identified as having significant influences on the positioning and performance are shown in the figure. One set of activities performed are the cost effective and efficient supply of production inputs including natural gas, water, methanol, electricity and catalyst. The production activities involve the reforming process to produce carbon monoxide and the synthesis processes to produce acetic acid and its derivatives. To ensure the smooth production and safety, the company also carries out various technical activities, such as maintenance, constant evaluation of the system (MSDR testing), and so on. Sales and distribution is carried out based on the customer size and the geographical segmentation. In addition, there is coordination between the joint venture and its parent firm BP in importing acetic acid from other BP's sites in Asia to meet its shortfalls in China.

Performing each of these activities will require particular resources and capabilities to be deployed. For the supply of critical materials, YARACO has advantages in gaining access to them in the partner firms. The cost effective and efficient supply of natural gas, water, electricity, and so on depends on the partnership with the parent firm SVW. The carbonylation catalyst can be procured either on the market or from BP. However, the Cativa catalyst can only be procured from BP, for it is BP's proprietary technology. Other inputs can be procured on the market. Thus, the cost effective supply of input materials largely depends on the joint venture partnerships including the broad structure of the parent firms.

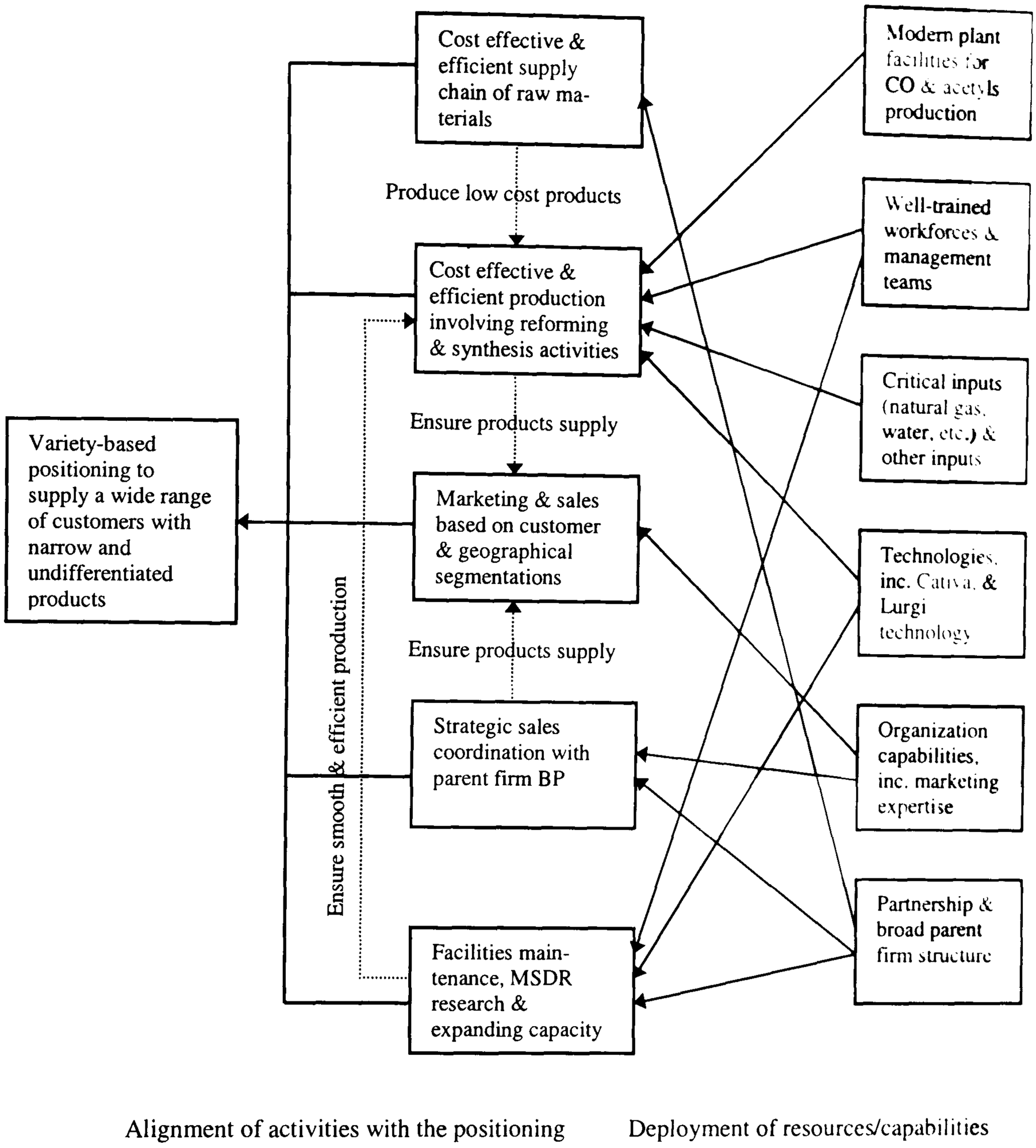

Figure 13.15 YARACO's Alignment of Resources/Capabilities with the Positioning

To carry out cost effective and efficient production activities requires a number of resources and capabilities. YARACO possesses newly built modern plant facilities. They include the facilities for CO production, acetic acid production, and acetate production. To expand the production, the company is building another set of CO production facilities. Human resources (well-qualified engineers, skilled workers and management teams) are certainly indispensable for the production activities. They can ensure smooth production and avoid disruptions or accidents. In addition, technology can play a critical role in the whole production processes. The carbonylation technology began to lose its edge as many domestic manufacturers already use it.

Cativa to be employed is regarded as revolutionary in the acetyls production and can increase productivity significantly. The CO production uses Lurgi's advanced technology. Technical capabilities, guaranteed power supply and other supports are also necessary for efficient production and avoidance of disruptions.

As indicated in Figure 13.15, organizational capabilities, such as experience and skills in negotiating contracts with customers, market knowledge, and marketing expertise and strategy, can play an important role in the sales and distribution of the products across China. The sales coordination between the joint venture and BP can rely on the broad structure of the partnership, including the parent firm, and organizational capabilities in managing sales and marketing. These resources and capabilities are critical organizational assets. Moreover, to carry out maintenance work, MSDR research and testing, and to apply new technologies in the plant will require well-trained workforce, technologies, and technical supports from the parent firms.

Sustainable Competitive Advantage

Whether YARACO has sustainable competitive advantage or not can be explained from the positioning perspective or the RBV. From the positioning, apart from trade-offs of activities in relation to the position in the industry, fit amongst activities is central, according to Porter (1996). For the YARACO case, the major activities are consistent with each other in general, and many activities are also tightly linked with one supporting another. The supply of inputs can support the production activities in producing low cost products. At the same time, both efficient production and strategic coordination with the parent firm can support the sales and distribution across China. Conducting quality maintenance work and technical evaluation can ensure the efficient production. Expanding the production (through Cativa) enables the company to achieve the scales of economy, which can in turn make the company more competitive. The company has been seeking the market share by building a reliable reputation and trust with customers through direct sales or distributors. Some sales and marketing practices can indicate this strategic intent. Ensuring the product supply is essential in this respect. On the whole, these activities are well aligned with its position in the marketplace. Competitive priced products, segmented sales and distributions, and reliable supply of products all can strengthen the variety-based positioning of the company.

From the positioning perspective, achieving such a good fit among these activities can make it difficult for competitors to imitate the activities. Discrete activities, such as some production or sales activities, are relatively easy to copy. However, when the various activities are combined as a whole and achieve a fit among them, the company will likely sustain its competitive advantage.

Figure 13.15 can indicate that the degree of difficulty in copying discrete activities can vary depending on the necessary resources deployed. If an activity chiefly relies on one single resource, it may be easier to be copied because there can be a good chance that competitors obtain that resource. In the YARACO case, the whole production activity is unlikely copied. This is because it requires the combination of various resources and capabilities, including plant facilities, human resources, input materials and technologies. The production of YARACO further involves the different processes, namely, two essential processes of CO production and acetic acid production. The possibility that competitors are able to acquire all these resources is very small unless they can find substitutes to many of them. Some resources themselves can be hard to acquire. In comparison, some sales and distribution practices are relatively easy for competitors to imitate if they have acquired the knowledge and expertise in the area. One sales tactic of seizing the market was later applied by the parent firm SVW (the tactic was also easier than the comprehensive sales and marketing strategy). Nevertheless, in the context of "fit" among activities (of the positioning perspective), if competitors lack the efficient production activities and strategic sales coordination or their equivalents, their mere imitation of sales and distribution practices will not be effective and cannot pose a credible threat to YARACO. This is because the sales and distribution activity is linked with and supported by other activities of the company (cost effective and efficient production and strategic coordination with the parent firm).

Moreover, the RBV's distinction of tradable and non-tradable assets suggests that non-tradable resources are more likely to be potential sources of competitive advantage. Some resources are difficult to acquire in the marketplace. The criteria of value, rarity, imperfectly-substitutability and non-imitability (Barney, 1991) suggest some useful attributes of resources for understanding sustainable competitive advantage. Although those critical inputs, e.g. natural gas, water and methanol can be

procured on the market, to obtain these inputs at competitive prices (like in YARACO) would possibly require a similar partnership or location. Regarding technology (discussed in the analysis of resources and capabilities), the carbonylation process is no longer of the leading edge. Cativa is a type of isolating mechanism as long as BP holds the proprietary right. Without being licensed, competitors cannot acquire it. The partnership and broad structure of the parent firm are also difficult for competitors to copy or substitute. In line with the above analysis of production relying on many resources, the attributes of these resources can at the same time imply significant barriers to copying the production activities by competitors. Resource attributes for sustainable competitive advantage are more relevant and meaningful when they are linked to activities of the firm.

Ultimately, resources should be linked to the product market where the value of resources is determined. Resources are most valuable for a particular position or a way of competing (Porter, 1998a & 1998b). Therefore, those resources which can contribute to the efficient production and low cost of products, for example, modern plant facilities, well-trained workforces, critical inputs, and technologies, can all be valuable for the joint venture to secure its competitive position in the marketplace. So are organizational capabilities and marketing expertise that can contribute to the sales and distribution.

Chapter 14
Multiple Case Analyses

The Positioning Perspective

Industry

Table 14.1 shows the comparison of 5 multiple case studies. The comparison is made along the different dimensions of the analysis. In respect of the industry in general, the chemical industry (acetyls production) has the most favourable conditions; the environmental consulting service industry and the pharmaceutical industry are also attractive and experience rapid growth; the telecommunications industry is highly competitive and the firms in this industry face greater difficulties than in other industries.

China's economic expansion is the main driving force of the growth of the chemical industry. As the products (acetic acid and acetates) are widely used in various industries, this chemical industry has very good prospects. The demand exceeds the supply at present. The competition is relatively less intense than in many other industries. The superior performance of YARACO can be partly attributed to the favourable industry conditions.

For the environmental consulting service industry, government regulations on the environmental protection assume an increasing role in China, and become a main driver of the industry growth. The EHS needs also come from businesses themselves. Especially, MNEs treat EHS issues seriously due to various concerns, such as reputation, operational effectiveness, corporate needs, and organizational culture. The good industry prospects may also contribute to ERM China's superior performance.

The pharmaceutical industry also experiences rapid growth in China, and firms operating in this industry can enjoy relatively favoured conditions. However, due to the distinctive conditions in distribution channels in China, pharmaceutical companies often encounter difficulties in sales and distribution of their products. The distribution system is fragmented, and there is also regional protectionism in general across the country. In addition, the industry is to a great extent subject to government

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Industry

Table 14.1 shows the comparison of 5 multiple case studies. The comparison is made along the different dimensions of the analysis. In respect of the industry in general, the chemical industry (acetyls production) has the most favourable conditions; the environmental consulting service industry and the pharmaceutical industry are also attractive and experience rapid growth; the telecommunications industry is highly competitive and the firms in this industry face greater difficulties than in other industries.

China's economic expansion is the main driving force of the growth of the chemical industry. As the products (acetic acid and acetates) are widely used in various industries, this chemical industry has very good prospects. The demand exceeds the supply at present. The competition is relatively less intense than in many other industries. The superior performance of YARACO can be partly attributed to the favourable industry conditions.

For the environmental consulting service industry, government regulations on the environmental protection assume an increasing role in China, and become a main driver of the industry growth. The EHS needs also come from businesses themselves. Especially, MNEs treat EHS issues seriously due to various concerns, such as reputation, operational effectiveness, corporate needs, and organizational culture. The good industry prospects may also contribute to ERM China's superior performance.

The pharmaceutical industry also experiences rapid growth in China, and firms operating in this industry can enjoy relatively favoured conditions. However, due to the distinctive conditions in distribution channels in China, pharmaceutical companies often encounter difficulties in sales and distribution of their products. The distribution system is fragmented, and there is also regional protectionism in general across the country. In addition, the industry is to a great extent subject to government

regulations. The government pricing control of certain pharmaceutical products may have significant effects on some pharmaceutical companies. In addition, the lack of effective protection of patents can pose a threat to companies and their performance. The industry has exhibited different effects on AstraZeneca China and GSK Chongqing as these two companies operate in different segments of the market.

The telecommunications industry has the least favourable conditions. The market is gradually getting mature, as a significant amount of infrastructure has already been built. The industry was also experiencing a downturn in China in the past few years as elsewhere in the world. Competition in this industry is intense among many leading MNEs and some domestic companies. The industry conditions may to a great extent cause Shanghai Marconi's difficult situation.

Positioning and Competitive Advantage

In respect of competitive strategy, YARACO has a unique position in the industry. It has both variety-based positioning and access-based positioning. Its strategy can be regarded very effective for the company's operation in China. AstraZeneca China and ERM China could be considered as having a strong position and being competitive. Both companies have a distinctive position in the industry. AstraZeneca China's position is defined on the relatively narrow products where it has the greatest strength, while ERM China targets MNEs with customized services. In particular, ERM China's trade-offs of the positioning can distinguish it from other firms in the industry. Both AstraZeneca China and ERM China have well configured their value chain activities in line with their positions in the industry.

GSK Chongqing has a clear and distinctive position in the pharmaceutical industry. Its weakness in strategy can be the lack of fit in the configuration of activities with its position. GSK Chongqing's sales and distribution, which is managed by the GSK partner firm in China, is not aligned with its production activities and strategy. Its production activities appear well configured. AstraZeneca China and GSK Chongqing have a similarity in that their sales and marketing activities are managed by their parent headquarters in Shanghai. This has not been a problem for AstraZeneca China, but for GSK Chongqing it has caused poor management of the sales and distribution and its misalignment with the positioning. AstraZeneca's regional headquarters in

Shanghai is responsible for the production and overall operations in China. The production and headquarters are integrated as the company has one manufacturing site. In the case of GSK Chongqing, GSK parent firm has seven business units in China with each of them specializing in certain areas. GSK Chongqing's aerosol products are not significant in the overall business. In addition, aerosol products have a different position in the marketplace from other broad categories of products managed by the headquarters. A lack of effective communication and coordination between GSK Chongqing and the headquarters may also have contributed to the poor configuration of GSK Chongqing's activities.

Partnership

Regarding partnerships, AstraZeneca China has a *quasi*-joint venture structure. The Chinese partners are local authorities. They provide support to the company, but they neither have equity ownership nor are involved with the management and operation. The partnership of ERM China was similar to AstraZeneca China's. Its partnership was dissolved at the end of the contract in 2002, and since then ERM China remains an independent firm. The previous cooperation between ERM and CRAES was largely in the area of environmental science and research rather than in business activities. The partnership had served as a platform for ERM to enter and operate in China.

GSK Chongqing and Shanghai Marconi both had difficulties in the communication and coordination of activities between the joint venture and the parent firm. In the case of GSK Chongqing, GSK partner had an assertive management style which may have largely contributed to the prolonged problem in the sales and distribution. As for Shanghai Marconi, there were difficulties in coordinating activities between the joint venture in China and Marconi parent in the UK. In contrast, YARACO's partnership has been constructive and dynamic so the difficulties of communication and coordination have in general been overcome. In addition, the coordination of sales by BP in Asian markets might be critical at some stage to YARACO's sales and expansion in the Chinese market. The partnership has been very effective for both parties to achieve their objectives, and played a critical role in the joint venture's achieving competitive advantage.

A common characteristic of the partnership in these cases is the significant role of parents firms in the joint venture. The joint venture's activities are configured within the broad structure of the partnership. The joint venture relies on the parent firms for various critical resources, such as technology, products, human resources, primary inputs, knowledge and skills, and its configuration of activities can go beyond the operating unit and often across national boundaries.

Locational Factors

The effect of locational conditions appears to vary with different industries and locations. However, government regulations do assume certain effects in industries and business operations. Regulations for the environmental protection have become a driving force of the industry growth. Pricing control of pharmaceutical products is practiced in many countries. In the case of GSK Chongqing, the relatively low price set by government did to some extent constrain the company' capacity to manoeuvre in the distribution channel. The regulatory framework is one of the factors affecting FDI, and has been greatly improved in China over the past two decades. Moreover, the government support may be conducive to joint ventures' operations. The local government had been instrumental in the establishment GSK Chongqing in 1988. AstraZeneca China's *quasi*-joint venture structure may reflect, to an extreme, such local initiatives and support for FDI and joint ventures.

Distribution difficulties are exhibited in both pharmaceutical companies. The market is fragmented across regions. AstraZeneca China has done far better in coping with this unique market condition. Especially, its local branch offices along with other promotion means may complement the sales and marketing management in Shanghai. The acetyls market in China is also fragmented. YARACO has a very effective approach to the sales and distribution. Its different ways of accessing customers may help overcome the problem in the distribution system and enable the company to manage the sales and distribution to its advantage. China should not be viewed as a single market. Regional differences and protectionism can characterize many markets across China.

The Resource-Based View

Differences in firms' performance are fundamentally attributed to the heterogeneity of firm resources. Value, rareness, imitability and substitutability of resources can be used to analyse the potential of resources for competitive advantage. As each firm possesses various resources, the case studies have focus on and analysed some intangible resources and capabilities that could be sources of competitive advantage.

Table 14.2 compares some resources and capabilities of the 5 joint ventures representing some of their salient characteristics. The table further illustrates the partnership and locational conditions in relation to the resources and capabilities for competitive advantage. For example, AstraZeneca China may enjoy organizational resources, which reside in its organizational structure and context. ERM China's teamwork is a critical part of the company's operation, and the teamwork capability as a resource can be a source of sustained competitive advantage. ERM China's ability to manage the tension of being global and local is also valuable and difficult for competitors to imitate. YARACO's constructive and dynamic partnership in many aspects is critical to the company's success and can be a source of sustained competitive advantage. All these joint ventures could benefit from these different kinds of organizational resources. In comparison, a particular technology, such as Marconi's SDH, GSK's aerosol production, and BP's chemicals production, is valuable and can contribute to efficient and effective operation. However, it is likely that these technologies are sometime substituted by other similar resources, and thus unsustainable. Moreover, patents and trademarks can be affected by locational conditions, and become ineffective in a location where they are not well protected.

Activities and Resources/Capabilities of the Multiple Cases

Some Patterns of Activities and Resources/Capabilities

The synthesized analyses of activities and resources of the five cases have shown certain characteristics common to some cases. First of all, some activities require multiple critical resources. Production activities of AstraZeneca China, Shanghai Marconi and GSK Chongqing depend on multiple resources, including, among other resources, production facilities, technologies, and human resources. Some activities may rely on limited critical resources, for example, warehousing of input materials

mainly depend on the physical warehouse, and also the automatic system in the case of AstraZeneca. The analysis of activities in terms of resources implies that the activities which require multiple resources are likely to be difficult for competitors to copy, for the chance of acquiring all those necessary resources is relatively small in comparison with a single or limited resources.

Secondly, some activities may rely on the critical resources that have the attributes for sustainable competitive advantage. This type of resources is likely to be difficult for competitors to acquire because they are considered as being rare, imperfectly substitutable, and non-imitable. For example, AstraZeneca's marketing and sales, ERM China's delivery of consultancy services, and YARACO's production activities all contain different created assets. These critical resources, such as product portfolio, R&D capabilities, the integrated global expertise and local knowledge and experience, and proprietary technology, all possess the resource attributes for sustainable competitive advantage. Owing to these attributes, it is unlikely that competitors could copy those related activities successfully.

Thirdly, an activity can also simultaneously depend on some related supporting activities in addition to the critical resources. There can be close interactivity linkages between one activity and other supporting activities. This characteristic is illustrated mostly in the ERM China case where delivering high quality consultancy services and the marketing activities of building the reputation and long-term relationship with MNEs can support and reinforce each other. YARACO's sales and distribution practices are also supported by the efficient production and the coordinated sales efforts by the parent firm in Asian markets. These two cases can imply that competitors may not be able to copy an activity even though they can acquire the necessary resources. In other words, in order to successfully copy the activity, competitors must be able to perform other supporting activities in addition to acquiring the necessary resources.

Fourthly, Shanghai Marconi and GSK Chongqing have relatively poor performance. Apart from other factors, for instance, unfavourable industry and market conditions, they have not configured some important activities well and achieved fit among them in line with their positions in the industry. In respects of resources and activities, Shanghai Marconi and GSK Chongqing lack critical resources to support their

activities. In the Marconi case, insufficient communication skills and language expertise, for example, can affect technical support and procurement activities and the coordination of the activities. GSK Chongqing lacks suitable marketing and sales expertise. Its sales and distribution is not managed by the people who really understand the distribution problem in the Chinese market. It is also important to overcome cultural and language barriers. In contrast, Johnson & Johnson used Taiwanese and Singaporean managers to have successfully dealt with the market.

Distinctive Characteristics

Moreover, there are also some characteristics associated with the individual cases. Shanghai Marconi has the leverage of equipment compatibility. Regarding this distinctive resource, there may be a need to distinguish two groups of customers: existing customers to whom this resource applies and new customers to whom this resource does not apply. This distinction of the market segments can suggest that the activities should be tailored more specifically to each of those customer groups. Especially, for new customers, the company could deploy more resources in some activities so as to compensate the lack of the leverage, such as in technical support before sales, better employee training for customers who adopt Marconi's system, more effective communication with new customers, or pricing the equipment and services. Marconi's second positioning (the needs-based positioning) can be intended for the two groups of customers.

The YARACO case illustrates an interesting characteristic of its resources. The main input materials for the production (e.g. natural gas, methanol and water) are usually critical to the operation in the chemical industry. These physical materials, in principle, can be purchased on the market. The distinction of tradable and non-tradable resources of the RBV can thus imply that these materials cannot be sources of sustainable competitive advantage. Our synthesized approach postulates that the firm requires resources to perform value activities in line with its position in the industry. In other words, the acquired resources must serve the activities and positioning of the firm. YARACO need to acquire these resources in a way in which they enable it to operate the efficient and low cost production, and therefore, simply being able to purchase them on the market is not good enough and meaningful. To acquire these resources on the market could be difficult in certain conditions in terms

of price and the access to the materials. The YARACO case demonstrates that acquiring these physical resources meeting particular conditions require the possession of other critical resources – not least the partnership with SVW. Hence, if other critical resources are hard to acquire, then these physical resources could virtually become the barriers to competitors' successful imitation.

Table 14.1 Multiple Case Comparison – The Positioning Perspective

Case	Industry	Positioning	Configuration of Activities	JV Partnership & Parent Networks	Locational Factors	Sources of Competitive Advantages
AstraZeneca China	Pharmaceuticals: rapid growth; intense competition; strong bargaining power of distributors; threat of counterfeit products	Variety-based positioning with a strong product portfolio to serve wide range of customers across the country	Integrated clinical trial, manufacturing and sales & marketing; well-configured production activities; sales & distribution carried out by HQ and branch offices across the country, complemented with other promotion means	Operating as WFOE within the quasi-JV structure; Chinese parties provides various supports; no misunderstanding and communication difficulties; AstraZenca global networks support operations in China	Favourable local business environment; complex sales & distribution channels in China; threat from counterfeit products	Strong product portfolio focusing on six therapeutic areas; integration of operations; activities aligned with the positioning; fit among activities; access-based positioning for sales & distribution at lower level
ERM China	Environmental Consultancy: growing industry; fragmented structure	Needs-based positioning with tailored high quality services targeting MNEs in China with international practices	Operations based on strategically located offices in China; customized services by teamwork, flexible operations responding to needs	Partnership served as platform for operational activities in China; parent networks fit into activities and aligned with the positioning	Government environment regulations as a driving factor of the industry; continuing FDI flow into China and expanding MNEs' operations; based in three regions where MNEs are concentrated	Positioning has trade-offs, offering only solution, no equipment or engineering work; activities are aligned with strategy and reinforce each others
Shanghai Marconi	Telecommunications: industry downturn leading to average or poor performance; intensified competition among MNEs and some domestic firms; strong bargaining power of customers	Variety-based positioning providing high quality products; providing customized services	Lack of fit among activities; inconsistency between activities based in China and supply in the UK	Lack of effective communication within the JV; cultural and language barriers hinder the operations; parent firm networks as the supply chain	Certain business practices in China increases difficulties of coordinating with the UK base; Shanghai offers advantages in human resources, and in import and logistics; China's low degree of internationalisation lowers prospects of localization	Variety-based positioning with high quality products; low profit margin due to intense competition and high manufacturing costs; lack of fit among activities to support the strategy

Case	Industry	Positioning	Configuration of Activities	JV Partnership & Parent Networks	Locational Factors	Sources of Competitive Advantages
GSK Chongqing	Pharmaceuticals: growing industry; moderate competition; strong bargaining power of distributors; no substitutes at present	Variety-based positioning offering a set of distinctive products to serve broad customers	Supply chain and manufacturing activities are well-configured in line with positioning; relatively low volume production results in higher unit costs; lack of fit between distribution and other activities	Complex partnership; lack of understanding between partners contributed to prolonged sales & distribution problem; restructuring management helped shift focus from production to sales & distribution; parent firm networks as supply chain; parent firm's management of sales & distribution does not fit into JV's activities	Government pricing regulations constrain the company's capacity to manage sales & distribution to certain extent; distribution practices affect JV's management and operation	Variety-based positioning and narrowly defined product; efficient production activities; ill-configured sales & marketing activity lacks fit with overall operations and positioning
YARACO	Chemicals: growing industry; moderate competition; relatively weak bargaining power of customers	Variety-based positioning offering a narrow set of undifferentiated products to a wide range of customers; access-based positioning at the sublevel to reach customers	Supply chain, production and sales & distribution are integrated; production operates at full capacity; sales & distribution operated in two main channels and supplemented by other sales strategy; overall activities are well aligned with the positioning	Partnership is constructive and dynamic and effective to the operations; parent firms networks are well aligned with the operations, from supply to production and to sales & distribution; partnership is critical and positive for the operations	Government regulations can have effect on the growth of the industry (acetate); the growing economy is a driving force of the industry; distribution systems are fragmented and diverse across regions, and there is regional protectionism	Variety-based positioning with narrow products to serve broad customers; access-based positioning to meet the distribution conditions; integrated operations aligned with the positioning; fit among activities

Table 14.2 Multiple Case Comparison – The RBV

Case	Resources	Effect of Partnership	Effect of Locational Factors	Competitive Advantage
AstraZeneca China	R&D capabilities of AstraZeneca	Dependent on parent firm	Clinical trial in Shanghai to support business operations in China and East Asia, and to provide data for R&D	Critical resource / source of sustained competitive advantage
	Patent, trademarks		Possible violation of intellectual property right, e.g. generic products and counterfeit products	Isolating mechanism: making position stable and defendable
	Socially complex resources	JV partnership, parent network, local employees, organizational culture are essential	Local context	Combining with physical resources can strengthen competitive strategy
ERM China	Teamwork		Local expertise and knowledge	Source of sustained competitive advantage, embedded in organization and tacitness
	Management approach: paradox of being global and local	JV partnership and parent firm help forge such unique resource	Locational factors critical: local knowledge; as a local authority on EHS to serve MNEs	Valuable, difficult to imitate
Shanghai Marconi	SDH technology		Demand SDH products	Valuable, but not give sustained competitive advantage
GSK Chongqing	Technology	From GSK parent firm	Similar resources from the local could be substitutes	Valuable
	Aerosol production	From GSK parent firm; depending on GSK supply chain		Valuable, but not sustainable
YARACO	Technology presently used	From BP	Substitutes	Valuable, not rare
	New technology	From BP		Valuable, rare, and first mover advantage

Case	Resources	Effect of Partnership	Effect of Locational Factors	Competitive Advantage
YARACO	Constructive and dynamic partnership		Local context	Valuable and rare, and difficult to replicate and substitute
	Sales and distribution management capabilities	JV and parent firms are critical	Local context	Valuable and rare, and difficult to replicate and substitute

Chapter 15
Theoretical Implications

A number of theoretical issues have emerged from the multiple case studies of Sino-British joint ventures. They concern positioning, industry conditions, firm resources and capabilities, joint venture partnerships, and location specific factors. Although various factors of these dimensions are relevant in general to the joint venture and competitive advantage, some factors may appear to be more salient than others for a particular case. Chapter 14 has examined some common characteristics concerning these dimensions as well as some distinctive characteristics of the individual cases. The following part will extend the case analyses to theory building and explore the implications of the case studies for understanding joint ventures in China and competitive advantage. The theoretical issues will be discussed from the positioning perspective, the resource-based view, and the synthesized approach of the two perspectives.

Strategic Positioning

The multi-perspective approach is useful for understanding those cases. Within the multi-perspective framework, strategic positioning provides a useful and powerful tool to examine the sources of competitive advantage. It not only explains the overall position of the firm and discrete activities, but also untangles the relationships between activities and strategy of the firm. The essence of competitive strategy is to configure activities in alignment with the positioning. The firm can achieve a distinctive position only when the best set of activities can satisfy the position. The case studies also show that partnerships and locational factors can be incorporated into the positioning perspective. These two dimensions mostly affect the operational activities though they can be related to the positioning of the firm. For example, cooperation between partners within the joint venture and the supply relationships with the parent firms can directly affect the overall operations and the configuration of individual activities.

Theories on strategic alliances can be used to study in depth the partnership within the joint venture. International strategy theory regards strategic alliances as a strategic

choice to overcome entry barriers and to gain competitive advantage. The broad boundary of alliances (Lu & Burton, 1998) appears to be an adequate context for analysing the nature of the relationship between the joint venture and parent firms. Parent firms provide various resources for the joint venture and can play a stakeholder in it. The case studies suggest there is a close relationship between the joint venture and the parent firms. The configuration of the joint venture's activities is dependent to a great extent on the provisions of technology, products, primary materials, knowledge and skills by the parent firms. From the market power perspective, the joint venture partnership is a means for business to adopt new configuration systems. Such systems, if effectively configured and used, can be difficult for competitors to emulate. Partner firms can use the joint venture as a device to increase the market power.

Strategic management theory can offer insights into the partnership within the joint venture. It is necessary that the partners work together constructively and learn from each other's organizational and cultural differences to develop constructive and dynamic relationship. The YARACO case is the best example of such a positive partnership. Misunderstanding and lack of effective communication between the partners often hinder the operational activities of the joint venture.

In respect of partnerships, a common theme has emerged from the five case studies. The joint venture largely depends on the parent firms for the provisions of critical resources. The Chinese and British partner firms have in general provided different types of resources for the joint venture's operation. The resources provided are complementary to each other and the types of resources include raw materials, human resources, technology, facilities, market knowledge, and managerial capabilities. Thus, in the value chain system, the supply conditions of the joint venture exhibit a vertical relationship between the joint venture and its parent firms. The GSK Chonging case also shows downstream activities organized by one partner firm, in sales and distribution channels. Figure 15.1 illustrates the vertical linkages mostly occurring between the parent firms and the value chain activities of the joint venture, generalized from our cases.

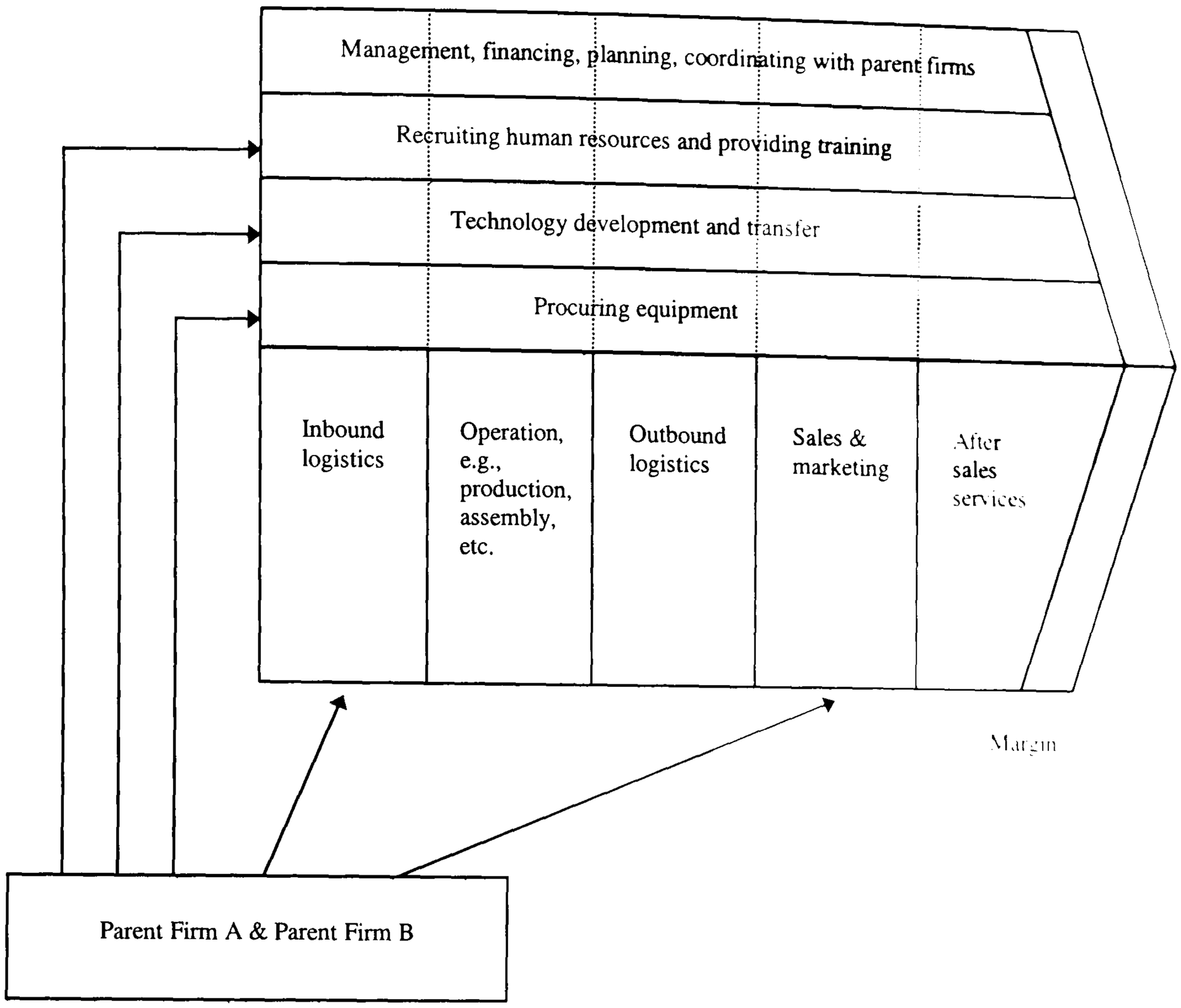

Figure 15.1 Likely Vertical Linkages of Joint Venture's Value Chain Activities with the Parent Firms
Source: adapted from Porter (1985)

The vertical relationship can have two implications for understanding competitive advantage of the joint venture. One is about the special supply conditions. The joint venture is likely in a better position than non-joint ventures in the marketplace to enjoy resource advantages in terms of access to resources, mostly critical resources, and competitive prices of resource inputs for the production or operation. The input supplies (often critical inputs) are not subject to the normal supply conditions of the industry structure or the factor market where bargaining power of suppliers may be significant (and/or the imperfection of the market may be significant as well). A particular supply condition can be translated into a certain effect on performance (conducive to cost leadership or higher quality product). The other implication is the vertical linkages between activities spanning from supply to operation and to sales

and marketing. The joint venture can exploit the linkages to achieve a better configuration of its activities in line with its positioning in the industry. Order placing, logistics, inventory, production, and distribution can be aligned in a way that they are consistent with each other and in support of each other. Porter has long been stressing the importance of exploiting the linkages between value chain activities as a way of achieving sustainable competitive advantage. The partnership, both within the joint venture and the broad structure, can facilitate making better linkages between activities through close cooperation and coordination. Cooperative strategy, effective communication, and IT system such as ERP or SAP, etc. may be used to enhance the vertical linkages across the value chain. In particular, cooperative strategy can be usefully employed in this respect to promote effective partnerships and avoid inter-partner conflicts and opportunism, which can be detrimental to the operation and positioning of the joint venture.

Chapter 2 has addressed theories of international production and host country conditions. As stated by theories of international production, locational advantages can augment competitive advantages of the firm. The FDI policy can influence investment decisions. When an enabling policy framework is in place, economic factors assert themselves as locational determinants, which include, *inter alia*, infrastructure, industries, market conditions, human resources and innovative capacity. Market size and growth, and access to the regional markets can be important determinants leading to market seeking investment. Knowledge-based assets, innovative capacity, and institution systems can be critical for efficiency and strategic asset seeking investment.

Regarding location specific factors, another theme arising from the case studies is the motives of investment. All five cases are broadly of market seeking investment. The products or services are aimed at domestic customers (in the ERM case, the MNEs in China). This may reflect the strategic interest of MNEs in the Chinese market. According to theories of FDI and host country conditions (UNCTAD, 1998 & 2003), economic determinants are relevant to the investment motives and fall within four categories: market seeking, resource seeking, efficiency seeking and strategic asset seeking (Dunning, 1998a & 2001a). However, the multiple case studies show that the economic factors under the market seeking motives may not be sufficient to determine

the locational choice of the firm. There can be certain factors which may be more specific and critical at the lower level to the firm's operations in China. For example, access to input materials was crucial to YARACO's operation and its competitive strategy, in spite of its market seeking nature at a higher level. This may be due to the very characteristics of the chemical industry. As a result, it was the factors of input materials that determine to a great extent its configuration of activities and the locational choice. The ERM China case appears to show that the factors under the market seeking are important, for its operational activities are defined by its interactions with customers. This may be due to its business nature as a consultancy company serving MNEs in China providing customized services. The company is based in three strategic locations: Beijing, Shanghai and Guangzhou. Other locational choices are largely defined by or related to the historical links or partnership of the firm, or in conjunction with other locational determinants. Therefore, to understand the locational choice, it may be more useful to examine specific factors which are critical at a lower level to the firm' operational activities and competitive strategy or associated with industry characteristics.

Resources and Capabilities

The RBV suggests another important aspect of the joint venture. The resources which can potentially give competitive advantage are usually those non-tradable resources such as intangible resources and capabilities. The joint venture is a means used by partners to acquire such valuable and necessary resources. If the joint venture can possess resources that are valuable, rare, imperfectly imitable and non-substitutable, the joint venture may be able to achieve sustained competitive advantage.

The analysis of some resources of the joint venture suggests that valuable and rare resources can often depend on the partnership including parent firms, and locational factors. For example, if we accept that ERM China's unique ability to manage the tension between globalization and localization is a resource that can give competitive advantage, many elements of partnerships and locational factors could be crucial for the company to acquire such a resource. According to the RBV, imperfect imitability can depend on unique historical conditions, causal ambiguity and/or social complexity. Therefore, many resources which can be potential sources of sustained

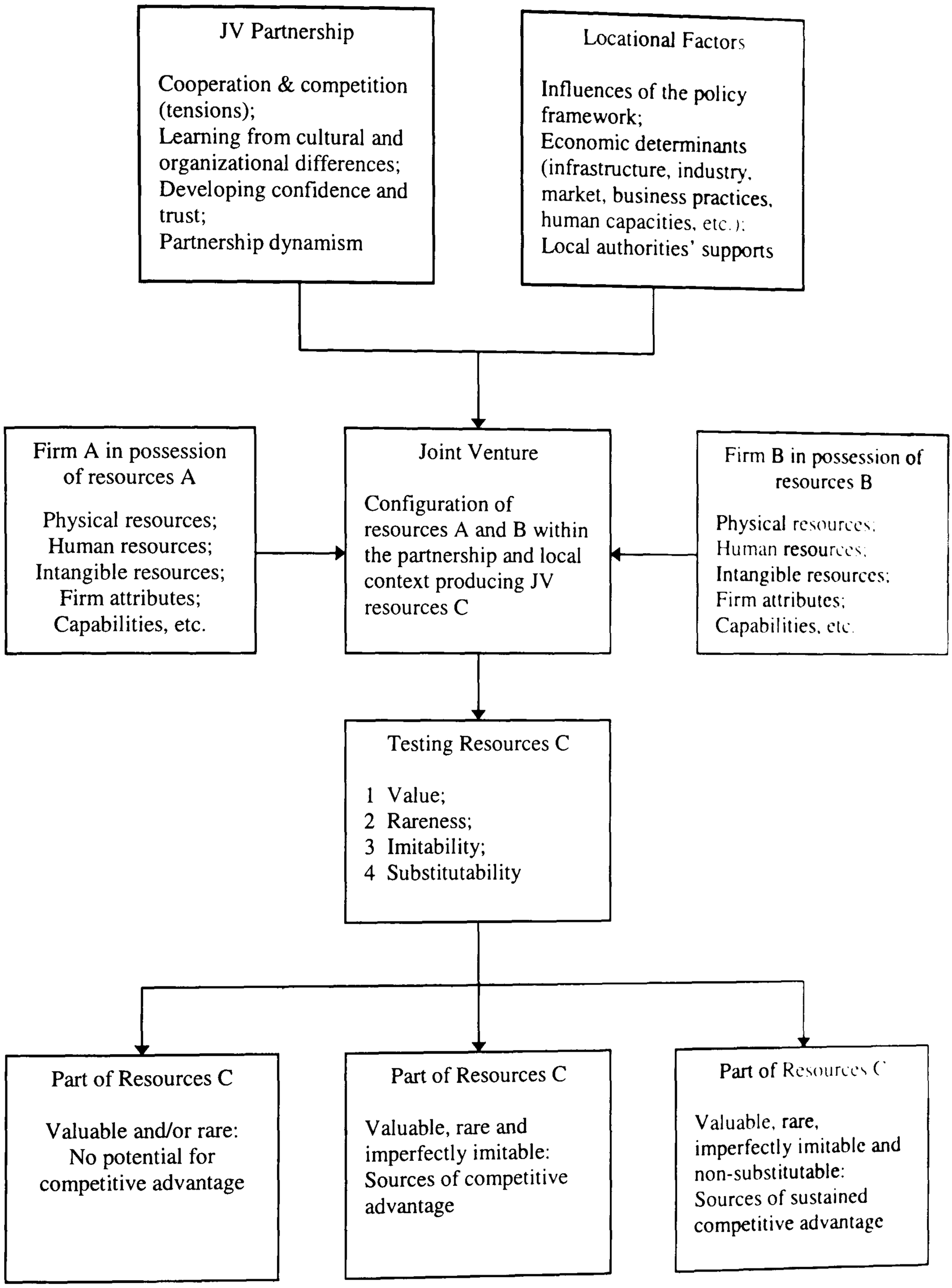

Figure 15.2 Conceptual Framework for Competitive Advantage of the Joint Venture (from the RBV)

competitive advantage can depend on the local context outside the firm. The firm's interactions with the local context could create those resources which are causally ambiguous and socially complex. On the other hand, the factors of the local

conditions may constrain the use of those valuable resources. For example, patents and trademarks of pharmaceutical companies, which are a type of isolating mechanism, can be affected by the lack of protection of intellectual property rights in a particular country.

To explain joint ventures from the RBV, Figure 15.2 above, shows a proposed framework which can be applied to analyse resources of the joint venture as potential sources of competitive advantage. To explain the model, assume that firm A and firm B possess various resources, including physical resources (land, plant, machinery, etc.), human resources, intangible resources (patents, trademarks, reputation, database, etc.), and capabilities (skills, organizational routines, R&D, etc.). The various resources can be categorized into three categories (Barney, 1991): physical capital resources, human capital resources and organizational resources. Physical resources include physical technology, plants and equipment, geographical location, and access to raw materials. Human capital resources include training, experience, judgement, intelligence, relationships, and insight of individual managers and workers. Organizational capital resources include formal reporting structure, planning, controlling, and coordinating systems as well as informal relations among groups within a firm and between a firm and those in its environment.

When firm A and firm B form a joint venture, their contributed resources are combined and become the resources of the joint venture. Resources C of the joint venture would not be a simple combination of resources A and resources B contributed by the parent firms. The deployment of resources C within the joint venture can result in a particular way of their configuration, which could involve the partnership of the joint venture and locational factors. Many attributes of the partnership, such as cooperation (or competition), learning, and trust, can be critical to the configuration of the resources. The partners can learn in their interactions from each other's skills, knowledge, and cultural and organizational differences. Resolving tensions or difficulties constructively between the partners could also generate confidence and dynamism. These attributes of the partnership as resources in their own right become part of the resources of the joint venture. It is often the case that the joint venture develops its own organizational routines, which are different from those of either parent firm. The case studies suggest that many critical resources including

processes or operational activities are not limited to the precise boundary of the joint venture. Coordinating systems, controlling, and other operational activities can involve parent firms. There is often a close relationship between the joint venture and its parent firms in the areas of technical support, introducing new technology or products, supply chain, and information exchange, which all can have a bearing on the joint venture resources.

As discussed above, the case studies indicate that some locational factors can positively or negatively affect the joint venture's activities in China. Firms are intrinsically historical and social entities, and their ability to acquire and exploit some resources depends on their place in time and space (Barney, 1991). Firms do not necessarily have to own resources in order to reap rents from exploiting them, and they may benefit from positive externalities (Dierickx & Cool, 1984; Foss, 1997). Culture, as a resource, and socially complex resources may depend on the local context. Relocating these resources to a different place may make them lose value. Figure 15.2 postulates that locational factors can interact with firm resources, and therefore firm resources that generate rents need to be contextually specific.

Firm resources must have four attributes to have the potential for sustained competitive advantage, which are defined as value, rareness, imperfect imitability and non-substitutability. Some resources C of the joint venture may be valuable and rare, but are likely to be imitated, for instance, a particular product or sales technique. They will not generate competitive advantage. Other resources may be valuable, rare and imperfectly imitable, but can be substituted by similar or different resources. These resources can be sources of competitive advantage, but not lead to sustainability. For example, a firm can gain competitive advantage from its possession of a particular leading technology which is hard for competitors to develop, but that technology could be substituted by other technologies. Substitution is always a matter of degree rather than having exactly the same implications (Barney, 1991).

The framework presented here can be used to analyse the potential of joint venture resources to be sources of sustained competitive advantage. The resources to have such potential can depend on the way that the partnership developed and on the interactions of the resources with the local context.

Synthesis of Strategic Positioning and the RBV

Strategic positioning and the RBV are two theoretical perspectives for studying competitive advantage. Strategic positioning can provide insights into competitive strategy in terms of the configuration of activities and its alignment with the product market, whilst the RBV can reveal resource attributes for competitive advantage. The relationship between the two perspectives cannot be characterized as the external approach versus the internal one. Some scholars (Porter 1998a, 1998b; Barney, 1991, 2001; Grant, 1991) have pointed out links between activities and resources and capabilities. In other words, performing an activity requires a particular set of resources or capabilities, and thus the deployment of resources and capabilities can contribute to the performance of activities and consequently the competitive position of the firm.

The analysis of positioning and resources in the case studies leads to the following findings regarding the two perspectives for competitive advantage. First, critical resources and capabilities can be identified as being required to perform a particular activity. Some activities may require a bundle of critical resources and capabilities; other activities may require one or two critical resources. If an activity requires more resources and capabilities, the activity may be difficult for competitors to copy because the chance of acquiring all those necessary resources and capabilities will be small. An activity that relies on a single critical resource is likely to be relatively easier to copy. Second, some critical resources may be easy to acquire on the market; others may possess the attributes of rareness, imperfect substitutability and non-imitability. If an activity relies on the resources or capabilities that possess these attributes for sustainable competitive advantage, then the activity can be difficult for competitors to copy because competitors are not likely to acquire those necessary resources and capabilities. Therefore, the resource position of the firm may constitute barriers to competitors' copying the activity or the market position. Thirdly, whether competitors can copy a particular activity can at the same time depend on the configuration of activities. If a particular activity is tightly linked with and supported by other activities, it can be difficult for competitors to copy this activity even though they can acquire those critical resources and capabilities. The strong interactivity linkages or fit may confer its sustainability. To successfully copy the activity,

competitors must be able to perform other related supporting activities or, alternatively, possess critical resources equivalent to the performance of those activities.

The integration of the resource perspective into the analysis of activities can help illuminate the activity base and the complexities involved in performing activities. Both the resource deployment and resource attributes can underline the potential barriers to performing the relevant activity. It should be pointed out, however, that the resource analysis is complementary to the value chain analysis rather than providing an independent explanation of activities for their sustainability.

The RBV has provided great insights into resource attributes for sustainable competitive advantage, but there is still a gap at present between resources and capabilities and the product market. Many scholars have pointed out that the value of resources is determined exogenous to the RBV (Priem & Butler, 2001a; Barney, 2001b) and realized in the marketplace, for example, the value of resources is measured by economic rents generated (Barney, 1991). The integration of resources and activities will help bridge this missing link between firm resources and capabilities and the marketplace. The positioning perspective is in essence about the industry conditions and the configuration of value activities in line with the position in the industry. If resources and capabilities are meaningfully deployed to support the activities and the position of the firm, their values are likely to be realized. Valuable resources and a distinctive position can support or reinforce each other across the boundary between the firm and the market. Resources and capabilities, in themselves, are insufficient for creating and assuring sustainable competitive advantage, and the way that they are deployed in the firm can play a decisive role in creating sustainable competitive advantage.

Regarding Question 2, the research has identified some locational factors which are considered significant for the joint venture's operation in China. The factors were discussed in the analysis of the individual cases. The analyses of the five cases from strategic positioning indicate whether the joint venture has exploited location specific advantages depends on how the joint venture configures its value chain activities in the light of the locational factors. The resource-based analyses seem to provide a limited explanation of the external conditions in relation to the joint venture, but the analyses suggest that the value of resources should be understood in the context of external factors.

Partnership raised in Question 3 was discussed in the analyses from both the positioning perspective and the RBV. The case studies have incorporated the partnership into the analysis of the configuration of activities and resource provisions. The joint venture's relationships with parent firms and the vertical linkages among activities are important elements for understanding competitive advantage of the joint venture.

Question 4 is the core of the research and embraces many dimensions and factors. The case analyses presented in Chapter 13 provide explanations from the positioning perspective, the RBV and the synthesized approach. The analyses from these viewpoints offer different insights into competitive advantage and strategy of the individual joint ventures. Chapter 15 has further explored theoretical implications of the competitive issues.

Regarding Question 5, the case studies cannot provide a grand generalization of the success or failure, which may be better achieved by other research methods, for example, survey research. The case studies are more orientated to the context and distinctive characteristics of the subject under the investigation. Nevertheless, the multiple case studies indicate some patterns of those successful joint ventures and less successful joint ventures along some dimensions, such as the configuration of activities, strategy of sales and distribution, and critical resources. The synthesized analysis of the relationship between activities and resources has also helped generate propositions about resources and activities for sustainable competitive advantage.

The issues raised in the research questions are also addressed in the following part that summarizes main research findings.

The Research Findings

First of all, the study shows that there can be hybrid forms of joint ventures in China. AstraZenca China has a unique characteristic. It can be considered as a *quasi*-joint venture. The Chinese partner does not have any equity ownership in the joint venture. It provides some support to the company. This phenomenon suggests a hybrid form of business entities which may be unique to China's business context. The case of AstraZeneca China reflects local authorities' initiatives to attract foreign investment and to develop the local economy. Another hybrid form can be a joint venture set up by a domestic firm without the real foreign partner. Some studies about foreign investment in China, for instance, reported by the World Bank, can corroborate this kind of practices on a wider scale.

Secondly, from the positioning perspective, competitive advantage of Sino-British joint ventures can rest on the configuration of their operational activities in line with their positioning. Activities need to be configured to achieve fit among them and to be strategy specific. The case studies suggest that both partnerships and locational factors are important elements which can affect the activities of the joint venture. In particular, a lack of communication between partners, assertive management style, and cultural and language barriers can adversely affect the operational activities. In contrast, constructive and dynamic partnership can be conducive to the operational effectiveness and distinctive positioning. The studies also show that the joint venture's relations with the parent firms are important to its operation. Joint ventures usually rely on the parent firms for technology, products, supply of prime materials, knowledge, and expertise. Competitive advantage of the joint venture can thus entail exploiting vertical linkages among the activities between the joint venture and the parent firms. Effective communication including language skills, and coordination mechanisms, such as exchange of information, IT systems, and supply chain networks between the joint venture and the parent firms, are critical in this respect.

Thirdly, location specific factors are often important for foreign partners. Failure to understand local conditions and practices can imply that the joint venture's activities

may not be well aligned with the overall strategy for operations in China. One of the difficult problems is complex sales and distribution channels in China, for example. Some pharmaceutical companies have experienced this problem. The distribution system is fragmented and there is also regional protectionism. It is necessary that the joint venture should establish an appropriate sales and marketing system in line with its other activities. Access-based positioning could be used to support the strategy, for example, set up regional offices, segment the market, and employ right people who have local knowledge and experience, to deal with a particular group of customers.

Fourthly, from the resource-based view, joint ventures may possess unique products and technology. These resources can be valuable and rare or even imperfectly imitable, but they are often not sufficient for the company to achieve sustained competitive advantage. It is possible that many other similar or different resources can substitute them. Accumulations and cultivation of other resources that are embedded in the organization and the local context may help achieve competitive advantage. It is important to nurture organizational and human resources in the light of the partnership, parent firm networks and specific locational factors. To encourage organizational learning between partners, to develop effective coordination and information exchange systems with parent firms, and to appreciate local practices can facilitate nurturing valuable resources which could become sources of sustainable competitive advantage.

Finally, strategic positioning and the resource-based view have offered different insights into competitive advantage of Sino-British joint ventures. The positioning perspective is an extremely useful framework to explain competitive advantage and to help devise competitive strategy. In comparison, the resource-based view reveals the attributes of particular resources, from where to develop strategy. It is often suggested in the extant literature that the positioning perspective is industry and environment orientated, whereas the resource-based view focuses on the internal aspects of the firm. The two perspectives are complementary.

However, there are other ways of understanding the two perspectives for competitive advantage. The activities focused by the positioning perspective are essentially about the way that resources are deployed within the firm. The synthesized analyses have

developed some propositions about the relationships between activities and resources/capabilities of the firm. The analyses imply that resources or capabilities are by themselves often insufficient for the firm to achieve sustainable competitive advantage. Resources and capabilities should be deployed in the firm in a meaningful way so that they can support activities and the position of the firm. Activities can connect internal resources and capabilities with the product market where the values of resources and capabilities are ultimately realized.

Contributions to Knowledge

The research seeks to make original contributions to knowledge in the following respects. First, the topic of Sino-foreign joint ventures has attracted a great deal of interest from scholars who study FDI and business management in China. Most literature is concerned with the issues associated with partnerships, such as ownership and control, transfer of technology, cooperative strategy, and cross-cultural issues. The competitiveness of joint ventures appears to be overlooked. This research concentrates on this topic and seeks to draw attention to the issues of competitive advantage so as to explain how joint ventures compete and why some are competitive while others are not. The author hopes this will help extend the studies of joint ventures by shifting the focus. Partnerships could be studied meaningfully in the context of competitive strategy. As Porter has suggested, there is a need that an alliance or partnership should be connected in some fairly clear way to competitive advantage and profit (Argyres & McGahan, 2002).

Second, the research aims to advance the study of joint ventures by developing a multi-perspective research framework. The multi-perspective framework combines theories of international production, strategic alliances, the positioning perspective, and the resource-based view, embracing industry, positioning, activities, resources, partnership, and locational factors. In this respect, the research undertaken on Sino-British joint ventures can help broaden theoretical perspectives for studying joint ventures and overcome the limitations of a single perspective. Changing perspectives may also lead to discoveries of new issues of the joint venture. The multi-perspective framework can be a useful guide for empirical studies as well as for interpretation of competitive issues of the joint venture.

Third, the research also underlines theory building through data analysis. This can be demonstrated in extending and synthesizing existing theories in explaining competitive advantage of the joint venture. For example, the case studies have revealed a common characteristic of the vertical relationship between the joint venture and the parent firms. Such linkages can have implications for understanding competitive advantage of the joint venture and deserve an exploration from the activity based analysis. Moreover, the synthesized analysis has indicated a complex relationship between activities and resources/capabilities for competitive advantage. Some propositions about the positioning and resources/capabilities were developed in the study. For example, resources and capabilities by themselves may not be sufficient for competitive advantage even though they possess the attributes for sustainable competitive advantage. This may challenge some existing views about resources and capabilities and underscore the importance of their connection with activities and the product market. The propositions can contribute to the debate about the positioning perspective and the RBV for competitive advantage.

Limitations of the Research and Future Agenda

There are some limitations of the research. First of all, concentrating on relatively large Sino-British joint ventures formed by well-known British MNEs, the research can lack a view of small or medium-sized joint ventures and joint ventures with partners based on a single country. These types of joint ventures may have different characteristics in terms of management, operation and partnerships. Secondly, as there were merger and acquisition activities in the investing British companies, for example, GSK and AstraZeneca involve MNEs from other countries, these joint ventures may be better understood as partially Sino-British joint ventures.

The synthesized analysis of the positioning and resources was conducted based on the joint venture entity. Many critical resources and capabilities are provided by the partner firms. In other non-joint venture entities, resources are likely acquired on the factor market and subject to the market conditions. Firms may not be able to acquire certain critical resources on the market as the joint venture. Therefore, the deployment of resources and capabilities in relation to the configuration of activities in these entities may exhibit different characteristics from those of the joint ventures in the research.

A number of areas can be expanded in the future research of joint ventures and competitive advantage. First of all, some studies suggest wholly foreign owned enterprises in China become increasingly a preferred form of investment and could have better performance in general than joint ventures. Government statistics also indicate an increase of investment in WFOEs in China in recent years. From the perspective of competitive advantage, it can be interesting to investigate whether Sino-British (or Sino-foreign) joint ventures as a form of investment are better positioned in China in terms of competitive advantage, compared with WFOEs. Porter has some reservations about alliances and partnerships in achieving competitive advantage. Many alliances are associated with poor performance or failure.

When the partnership is incorporated into the positioning perspective, a close vertical relationship is shown between value chain activities of the joint venture and the parent firms, as illustrated in the research. The case of YARACO can be regarded as a showcase of joint ventures in creating powerful vertical linkages within the broad alliance structure. Porter (1985 & 1996) emphasizes the importance of achieving better linkages and coordination between value chain activities to enhance competitive advantage. Alliances including joint ventures may create a special type of vertical relationship between partners. Such a relationship can be viewed from the parent firm's governance structure as well as from the joint venture's. Especially, for international joint ventures, this will provide an opportunity to study the joint venture from a global perspective by examining their vertical linkages across national boundaries. The global strategy perspective of the configuration of activities may shed different lights on competitive advantage of the joint venture.

The propositions developed in the case analyses about activities and resources/capabilities need to be examined in a wider population and among other forms of business entities. The author's approach rejects the interpretation of the positioning perspective and the RBV as the environmental analysis versus the internal analysis of the firm or by the SWOT framework. Nevertheless, there is a need to link firm resources and capabilities to the product market where their values are ultimately determined. The future research can also investigate how industry conditions and location specific factors, namely, supply conditions in the industry (Porter, 1979 & 1980) – the strategic factor market and market imperfections (Barney, 1986a; Amit &

Schoemaker, 1993) – and regulatory frameworks (UNCTAD, 1998), can affect, for non-joint venture entities, the relationship between the configuration of activities and the deployment of resources in creating sustainable competitive advantage.

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Appendix A

Proposed Questions Based on the Conceptual Framework of Sino-British Joint Ventures for Semi-Structured Interviews

Industry Profitability and Structure

1. What are the general situations of the pharmaceutical industry in China?
   - Is it highly competitive, or can most firms make good profits?
   - What is the growth of the industry at large in China?

2. What are the major factors driving competition in the industry?
   - Any potential entrants (economies of scale, product differentiation, capital, access to distribution channel, government regulation);
   - Who are the suppliers of inputs? Are they powerful suppliers (a few companies, concentrated, its products unique or differentiated, integrating forward);
   - Who are the major customers? Are they powerful buyer groups (purchase in large volume, products standard or undifferentiated);
   - Substitute products;
   - Intensity of rivalry (number and size of competitors, industry growth, high fixed costs, high exit barriers)

Competitive Advantage and Strategy – Positioning in the Industry

3. How would you assess your company's performance in the industry?
   - Has your JV achieved good returns (profitability)?
   - Does your JV meet the objectives of individual partner firms?
   - To what degree are the agreed goals of your JV achieved?
   - What other factors (criteria) would you use to measure your company's performance?

4. What are the distinctive characteristics of your company (or how different from other joint ventures and domestic firms in China)?
   - Products;
   - Cost advantage;
   - Production;
   - Relationship to customers

5. What do you perceive as the major competitive advantages of your company compared with your rivals (e.g. the position of your company in the industry vis-a-vis Bayer, AstraZeneca, Roche, and domestic pharmaceutical firms)?
   - What is the range of your healthcare products? How many kinds of your drugs are on the market?
   - Are any products differentiated (having special values or particular medical usage)? How about their prices compared with the similar products on the market? What about the cost of the products?
   - Do any kinds of drugs generate high profits? What percentage of profits do they account for?

6. What major activities does your firm perform as a pharmaceutical firm? (e.g. production, testing, R&D, distribution, marketing, quality control, etc.)
   - Are any of these activities incompatible with each other (allowing trade-offs)?
   - How are various activities organised in creating values (achieving efficiency and reducing costs)
   - What activities incur the highest cost?

Competitive Advantages - Resources within the JV

7. What resources does each partner contribute to the JV (e.g. buildings, materials, capital, machinery, technology, knowledge, management skills, market access, etc.)?
   - Which of them are most critical to the success of your JV?
   - Would it be easy to obtain them if not provided by your partner? Can other companies acquire them?
   - Are the resources provided by two partners complementary to each other's, or is there a surplus or a lack of certain resources?

8. Is information technology widely used in your company? Is it advanced (latest)?

9. Does your JV transact its inputs and outputs directly with one or both parent companies, for instance, through your parent companies' network or distribution channel?
   - Do any inputs come from domestic sources or are some inputs imported?
   - Does your parent company handle the export of your products (if for foreign markets)?

10. Does your company conduct R&D itself or in conjunction with other GSK units in China? Expertise in medicine and R&D facilities?

11. How significant are those resources, such as technology, R&D capacity, patents, and GSK reputation or brand, coordinating systems with other GSK units in China to your company's competitiveness and performance?

Partnership within the JV

12. How do the two partners cooperate within the JV?
    - What are the goals of each partner in forming the JV, and any congruence or conflicts between them?
    - Any difficulties or problems in partnership (e.g. over operations, managerial style, workers, investment, profits, marketing strategy, culture, communication, etc.); if so, how do you resolve them (e.g. through regular meetings, or a special mechanism set up to deal with the issues arising from partnership)?

13. How is the cooperation between two partners related to the overall JV's position in the industry? Does cooperation compromise the distinctiveness of the strategy (widening the range of products, pursuing both costs and differentiation, losing trade-offs, or blurring strategy)

14. Does the reconfiguration of the resources provided by both partners help position the JV more favourably in the industry (modifying the structure of the industry)?

15. Is competition between two partners apparent (competition and collaboration can go hand-in-hand when working with partners)? Any opportunistic behaviours by each

party, for example, technology or skills acquired from the other partner may be used somewhere in an unanticipated way, e.g. outside the JV by one party and beyond the legal agreement?

16. Does the JV provide an opportunity to learn new intangible skills from your partner. e.g. tacit or organisational embedded knowledge or skills. and to accumulate knowledge-based assets?

Locational Advantages

17. How is your company's performance affected by government policy on FDI (taxation, imports, exports, foreign currency control, regulations of healthcare products, or any other relevant regulations)?

18. Is the local investment and business environment conducive to your JV's operation? What support does the local authority provide (e.g. good administrative institutions, simplifying procedures, and providing necessary facilities for foreign expatriates)?

19. How are the locational factors (economic determinants) related to your JV's operations and performance?
    - Healthcare product market;
    - Local infrastructure (high ways, railroad, ports, airports, telecommunications);
    - Competitive pricing of relevant resources and facilities (e.g. input materials, energy, water, etc.);
    - Labours' education and skills;
    - Access to regional or international markets,
    - Local business networks (clustering of economic activities);
    - Technology and innovative capacity;

20. Are any of the above factors significant in contributing to cost reduction, bigger market shares, efficiency, or upgrading the overall competitiveness of your JV?

21. How was the decision originally made of forming your JV in this location? Were any above factors relevant in that context?

Appendix B

Case Data Coding System

Data Content	Codes	Ref. to Questions
Industry Characteristics	IND	
Industry growth	IND-GRO	
Supply and demand	IND-S/D	
Firms/competitors	IND-COM	
Suppliers	IND-SUP	
Customers	IND-CUS	
Substitute products	IND-SUB	
Potential entrants	IND-ENT	
Positioning	POS	
Products/services	POS-PRO	
Cost advantage	POS-COS	
Customers with regard to products/services	POS-CUS	
Distinctive characteristics	POS-CHA	
Tradeoffs	POS-TRA	
Operations and Activities	OPE	
Operational units	OPE-UNI	
Operational processes	OPE-PRO	
Organization of and fit amongst activities	OPE-FIT	
Resources	RES	
Physical resources	RES-PHY	
Knowledge and management skills	RES-KNO	
Technology and patents	RES-TEC	
Workforces	RES-WOR	
Reputation	RES-REP	
Capabilities	RES-CAP	
Organizational culture	RES-CUL	
JV Partnership	JV	
Partner objectives	JV-OBJ	
Resource provision by partners	JV-RES	
Cooperation/Competition between partners	JV-COO	
Parent networks	JV-PAR	
Management models	JV-MAN	
Locational Advantages/Host Country Conditions	LOC	
Laws and regulations	LOC-LAW	
Economic determinants	LOC-ECO	
Market	LOC-ECO-MKT	
Physical infrastructure	LOC-ECO-INF	
Input materials and other resources	LOC-ECO-RES	
Distribution system	LOC-ECO-DIS	
Business network	LOC-ECO-NET	
Technology and innovative capacity	LOC-ECO-TEC	
Business facilitation	LOC-FAC	
Administrative institutions	LOC-FAC-INS	
Local government support	LOC-FAC-GOV	

Data Content	Codes	Ref. to Questions
Competitive Advantage and Performance	ADV	
Long-term financial performance	ADV-PER	
Achievement of objectives	ADV-OBJ	
Distinctive position in the industry	ADV-POS	
Operational effectiveness	ADV-OPE	
Non-imitability of resources	ADV-RES	

Appendices C and D

Appendix C: Paradox Paper

The Paradox of Co-operation and Competition of Strategic Alliances: Towards a Multi-Paradigm Approach. Published in *Management Research News*, Vol. 26, No. 1, 2003, pp. 1-20.

Note: As a reference to the materials used in Chapter 3 of the thesis.

Appendix D: Sino-British Joint Ventures Paper

Sino-British Joint Ventures in China: Investment Patterns and Host Country Conditions. Published in *European Business Review*, Vol. 16, No. 1, 2004, pp. 44-63.

Note: As a reference to the materials used in Chapter 5 of the thesis.

The Paradox of Co-Operation and Competition in Strategic Alliances: Towards a Multi-Paradigm Approach

by Colin Clarke-Hill, Huaning Li and Barry Davies

Abstract

Co-operation and competition characterise the inter-firm relationships in strategic alliances. This article proposes a paradox approach to studying co-operation and competition. It explains the paradox perspective and provides an analytic framework for the paradox of co-operation and competition. In the light of the paradoxical nature, it advocates a multi-paradigm approach to co-operative and competitive strategies, which combines strategic positioning, the resource-based view and game theory. The article suggests that the multi-paradigms can not only encompass the contradictions of the paradox from the different perspectives, but also emulate the individual ones and provide a holistic picture. The multi-paradigm approach therefore establishes a better methodology basis than fragmented orthodox theories in exploring the contradictory, interactive and dynamic nature.

Keywords: paradox, co-operation, competition, strategic alliances, multi-paradigm

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Introduction

In the 1970s and early 1980s, the strategic challenge for business was viewed primarily as protecting its potential profits from erosion through either competition or bargaining. This view of strategy underwent a change in the late 1980s. The need to pursue multiple sources of competitive advantage led to the need for building collaborative relationships with suppliers, customers, competitors, and a variety of other institutions (Bartlett & Ghoshal, 2000). Many companies shifted strategic focus and began to embrace both competitive and co-operative strategies. The growing role of co-operative strategy is manifest particularly in the phenomenon of strategic alliances (Bartlett & Ghoshal, 2000), which are inter-firm co-operation agreements to share or transfer skills and resources to meet mutually agreed goals.

Co-operation or collaboration can be considered as a counterpart to the pursuit of competitive advantage. It can offer significant advantages for companies, which are lacking in particular competencies or resources to secure these through links with others possessing complementary skills and assets (Child & Faulkner, 1998; Dyer & Singh, 1998). Some authors describe this kind of advantage as collaborative advantage (Kanter, 1994; Bur-

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ton, 1995; Huxham, 1996). This article will use competitive advantage to refer to advantage obtained through both competitive and co-operative (collaborative) strategies.

Some members of (what might be called) this Collaborationist School argue that a new style of co-operation is starting to replace old style competition and inter-firm confrontation; and that guru of strategic management analysis Tom Peters has pronounced strategic networks and business alliances to be the very wave of the future (Burton, 1995). Lorange and Roos (1993) propose that there may be a legitimate rationale for a more mature, long-term, win-win emphasis regarding strategic alliances; an emphasis on more lasting relationships where benefits and costs can tip both ways in the short run but even out in the long run. In contrast to the above views, other authors stress the existence of both competition and co-operation. Co-operation can exist alongside of competition but not without tensions (Child & Faulkner, 1998). In particular, De Wit and Meyer (1999) explains that the inter-organisational relationship is a paradox of competition and co-operation.

Collaboration and competition can go hand-in-hand when working with the partner (Lei, 1997). Some studies show, for example, alliances between Asian companies and Western rivals seem to work against Western partners (Hamel *et.al.,* 1989).

Although this paradoxical nature is acknowledged, there are few discussions about it in the existing literature on alliance theory and competitive and collaborative strategies. Moreover, no attempt has been made to explicitly explore the paradoxical relationship of competition and co-operation, and in particular to apply it to alliance strategy. Thus, there is a need to develop a paradigm to explain the concept of paradoxical relationships (Lu & Burton, 1998).

This article is concerned with the paradox of co-operation and competition in strategic alliances. It focuses on the implications of the paradox for co-operative and competitive strategies for strategic alliances. It will explain the paradox concepts and the analytic framework. In the light of the paradoxical nature, the article advocates multi-paradigms as the methodological approach to examine co-operative and competitive strategies, which combine strategic positioning, the resource-based view (RBV) and game theory. The combination of strategic positioning and the RBV can help exhibit an overarching view of alliance strategies to achieve competitive advantage from the market positioning and resource configuration. Moreover, game theory will help explain the interaction of co-operation and competition from the behavioural modelling perspective. The article aims to better capture the paradoxical nature of co-operation and competition in the real setting and to provide a multi-paradigm framework for understanding co-operative and competitive strategies.

The Paradox of Co-operation and Competition

Paradox

An awareness of the inevitability of paradox is evident in organisational and management studies. Scholars are becoming more sensitive to the presence of simultaneous opposites or contradictions. More and more writers recognise that paradoxes are indigenous to effective organisational functioning (Cameron & Quinn, 1988). According to Cameron and Quinn, paradox means an apparent contradiction, a state in which contradictory elements operate at the same time. It differs from other concepts such as dilemma, irony and inconsistency in that no choice needs be made between two or more contradictions. The key characteristic in paradox is the simultaneous presence of contradictory, even mutually exclusive elements.

Several authors have explicitly acknowledged in their research the presence of paradoxes associated with organisational effectiveness. For example, Cameron reported research on colleges and universities in which paradox was found to be central in explaining how institutions overcame decline and improved in effectiveness (Cameron & Quinn, 1988). Peters and Waterman's (1995) analysis of corporate America also suggests that today's excellent firms possess a variety of paradoxical characteristics. Moreover, some authors also state that paradox can offer a powerful framework for examining the impacts of plurality and change and aiding understanding of divergent perspectives (Lewis, 2000; Stacey, 2000). Lewis also advocates using paradox as a thought-provoking tool or perspective.

Ford and Backoff (1988) point out the central component of paradox is the notion of oppositional tendencies or dualities. Distinctions give rise to dualities, systems composed of two different things united by a non-trivial binary relation. Dualities establish a tension field of opposites.

> The idea that paradoxes must be solved and the tension they cause must be released to be successful, is part of the paradigm that equates success with the dynamics of stability, regularity and predictability. The notion that paradoxes can never be resolved, only endlessly rearranged, leads to a view of organisational dynamics couched in terms of continuing tension generating behaviour patterns that are irregular, unstable and unpredictable, but lead to creative novelty, (Stacey, 2000:13).

Organisations must continuously balance differentiation and integration, change and stability, collectivity and individuality. De Wit and Meyer (1999) explain the paradox of competition and co-operation in the following way.

On the one hand, inter-organisational relationships can be primarily competitive. Such antagonism between organisations can vary from open "war-

The Paradox of Co-operation and Competition

Paradox

An awareness of the inevitability of paradox is evident in organisational and management studies. Scholars are becoming more sensitive to the presence of simultaneous opposites or contradictions. More and more writers recognise that paradoxes are indigenous to effective organisational functioning (Cameron & Quinn, 1988). According to Cameron and Quinn, paradox means an apparent contradiction, a state in which contradictory elements operate at the same time. It differs from other concepts such as dilemma, irony and inconsistency in that no choice needs be made between two or more contradictions. The key characteristic in paradox is the simultaneous presence of contradictory, even mutually exclusive elements.

Several authors have explicitly acknowledged in their research the presence of paradoxes associated with organisational effectiveness. For example, Cameron reported research on colleges and universities in which paradox was found to be central in explaining how institutions overcame decline and improved in effectiveness (Cameron & Quinn, 1988). Peters and Waterman's (1995) analysis of corporate America also suggests that today's excellent firms possess a variety of paradoxical characteristics. Moreover, some authors also state that paradox can offer a powerful framework for examining the impacts of plurality and change and aiding understanding of divergent perspectives (Lewis, 2000; Stacey, 2000). Lewis also advocates using paradox as a thought-provoking tool or perspective.

Ford and Backoff (1988) point out the central component of paradox is the notion of oppositional tendencies or dualities. Distinctions give rise to dualities, systems composed of two different things united by a non-trivial binary relation. Dualities establish a tension field of opposites.

> The idea that paradoxes must be solved and the tension they cause must be released to be successful, is part of the paradigm that equates success with the dynamics of stability, regularity and predictability. The notion that paradoxes can never be resolved, only endlessly rearranged, leads to a view of organisational dynamics couched in terms of continuing tension generating behaviour patterns that are irregular, unstable and unpredictable, but lead to creative novelty, (Stacey, 2000:13).

Organisations must continuously balance differentiation and integration, change and stability, collectivity and individuality. De Wit and Meyer (1999) explain the paradox of competition and co-operation in the following way.

On the one hand, inter-organisational relationships can be primarily competitive. Such antagonism between organisations can vary from open "war-

fare" to more subtle forms of friction, tension and strain. Under conditions of competition, behaviour between rivals is characterised by calculation, bargaining, manoeuvring and the use of power to achieve results. On the other hand, inter-organisational relationships can be primarily co-operative. Such symbiosis between organisations can vary from occasional collaboration to virtual integration. Under conditions of co-operation, behaviour between partners is characterised by trust, commitment, reciprocity and the use of co-ordination to achieve results.

Strategists employing the discrete organisation perspective view companies as independent entities competing with other organisations in a hostile market environment. The best strategy is to strengthen their competitive position in relation to external forces. Collaboration is embodied with the hazard of opportunism. Strategists taking the embedded organisational perspective are fundamentally at odds with discrete organisation perspective and argue that the relations between organisations are characterised by a dynamic mix of competitive and co-operative behaviour. Firms must balance their competitive and co-operative posture depending on the circumstances. Firms can embed themselves in a web of collaborative relationships. These embedded relationships include relationships backward to supply and forward to the customer. Paradoxically, while this may reduce transaction costs and increase transactional value, it can also lead to the reduction in consumer welfare by creating networked monopolies. Examples here are the car industry in Europe through the use of the black exemption system, computer software operating systems and Internet browser systems.

Forms of Paradox

According to Ford and Backoff (1988) the forms of paradoxical construction can be distinguished according to directional dualities (horizontal and vertical) and time dualities (synchronic and diachronic) (See Figure 1). Antinomies are paradoxes that apparently occur within the same system level at the same time. Semantic paradoxes occur at the same point in time, but involve different system levels. Pragmatic paradoxes also appear to involve different levels, but at the same time. Diachronic paradoxes can occur at the different point in time, but within the same system level. Figure 1 can suggest that current concepts of paradox are framed as synchronic dualities. However, this may be more the functions of individuals' tendencies to collapse the time frame than the limitation of paradox to that form. Thus, a paradox may stem from the collapse of a diachronic duality into a synchronic duality, and at worst, from the collapse of a diachronic and vertical duality into a synchronic and horizontal duality.

The paradox of co-operation and competition within strategic alliances may be understood as stemming from the collapse of a diachronic duality into a synchronic one at the same level. In a similar but reverse process, pre-

Figure 1. Forms of Dualities

		Directional Dualities	
		Horizontal	Vertical
Time Dualities	Synchronic	same level same time e.g., antinomies	different level same time e.g., semantic & pragmatic paradox
	Diachronic	same level different time e.g., contingency theory paradoxes	different level different time e.g., developmental paradoxes

Source: Ford & Backoff (1988).

scriptions for dealing with paradox of one form have been to treat the paradox as another form. In our example, the alliance partners may be advised to oscillate between co-operation and competition (diachronic and horizontal). In diachronic dualities there is a temporary separation between the poles. The movement to a different level or temporal distinction is transcendence. Similarly, Stacey (2000) states that paradoxes are arranged or orchestrated to yield a transcending new configuration. An effective organisation may continuously cope with paradox through shifting patterns or focuses for some purpose at different times.

Formal Logic and Dialectics

Different views and treatment of paradox can be understood by examining formal logic and dialectics. Formal logic is concerned with identity - determination of what or who something is or is not. It provides for the identification of things and the reduction or elimination of uncertainty through those identities; something is either "A" or not "A", but not both or something in between (Lebeck & Voorhees 1984, cited in Ford & Backoff, 1988). Under formal logic oppositional tendencies are conceived of as separate and distinctly identifiable entities of the form "A" and not "A". In this way, the duality is framed as an "Either/Or" bipolar dichotomy wherein one pole must be chosen over the other.

While formal logic emphasises identity, dialectics emphasises change. As Ford and Backoff explain, dialectics recognises two interdependent types of change - quantitative and qualitative. Gradual increases or decreases in quantity are seen as leading to sudden leaps of change in quality, that is, a new form. Take an example of organisational growth. Gradual increases in size and age bring about periodic qualitative revolutions in management structures and practices. Dialectics also recognises two sources of

oppositions - internal and external. However, change is seen as stemming from the struggle of internal contradictory opposites. The contradiction is contained within the unity and is only exacerbated or made apparent by external events. Once the unity of contradictions can no longer be maintained, they negate each other and a new unity is created.

> Under dialectics, contradictory opposites can be characterised as "Both/And" relationships, which recognise their mutual interdependence (Gharajedaghi, 1982). Unlike the either/or relationships of formal logic, dialectical relationships allow contradictory opposites not only to co-exist and interact, but also to form something different from either. In this respect, dialectics provides for change through opposition and conflict (Ford & Backoff, 1988:97).

Comparing the above two points of view, paradoxes are something to be avoided under formal logic. Because change is not allowed through the process of becoming, it must occur through replacement or substitution. The change is not seen so much as a functional structure becoming a product structure, as it is a product structure replacing a functional structure (Ford & Backoff, 1988). In contrast the dialectical perspective embraces paradox by holding that every object or phenomenon is a unity of contradictory oppositional tendencies and that change stems from the struggle of these tendencies (Ford & Backoff, 1988). For example organisations need to achieve both differentiation and integration, stability and change, collectivity and individuality, centralisation and decentralisation.

The above comparison of formal logic and dialectics can shed new light on competition and co-operation. It appears to be a fallacy that business practice is regarded as being driven by competition or co-operation. Thus, the strategic issue is not to choose between competition and co-operation, but to manage the tension between the two. It is their contradictory duality that forms the unity of this paradoxical relationship and the complex business reality. In this dialectical paradigm, co-operative strategy therefore can not substitute competitive strategy. In addition, change in alliances is seen as stemming from the struggle and interactions of co-operative and competitive forces and this can be exacerbated by external events.

The dialectical interaction conception also means that it is possible to reframe continua as dialectical interactions, and convert contradictions to alternatives (Ford & Backoff, 1988). If the relationship between co-operation and competition is considered as dialectical, then four categories of the interactions are realised: high co-operation/low competition, high co-operation/high competition, low co-operation/low competition, and low co-operation/high competition (see Figure 2). This is in contrast to the treatment of the tendencies as unidimensional continua, which lead to a dichotomy of co-operation and competition.

Figure 2. Different Combinations of Co-operation and Competition

Co-operation	Competition: Low	Competition: High
High	merger	mutual learning
Low	poor results	appropriation risk

Source: Child & Faulkner (1998), adapted from Stiles (1997).

Figure 2 illustrates how co-operation can exist alongside of competition but not without tensions and variable results. Child and Faulkner (1998) explain the diagram as follows. Where co-operation is high and competition is low, there will be strong pressures for the partners to merge once the alliance has demonstrated its success over a period of time. Where both competition and co-operation are high, the abiding tensions between the partners will be apparent but both partners will be concerned to learn from each other rapidly, lest its partner defect. Where both co-operation and competition are low, the alliance will cease to engage the minds of top management and is likely to achieve only limited results. However, where competitive forces between the partners are very apparent even after the alliance has been set up, yet actual co-operation is low, the risk of one partner appropriating the skills and knowledge of the other is high. This is often seen in technological alliances where one partner is seen to have superior power over others and dominates the relationship to their advantage.

Towards a Multi-Paradigm Approach

Theorising Paradox

Orthodox theories are largely based on linear and consistent analysis, and they are unidirectional, atomistic, and incompetent to capture mutualistic, heterogentic, and interactive relationships of paradox, which are embedded in organisations (Cameron & Quinn, 1988; Lu & Burton, 1998; Stacey, 2000). Thus, they frequently simplify the reality into polarised either/or distinctions that conceal complex interrelationships (Lewis, 2000). Stiles (2001) points out that previous research on alliances have tended to bias investigations towards either the co-operative or competitive aspects of the phenomenon.

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Lewis states (2000) that exploring paradox requires remaining acutely aware of contradictions and anomalies and expanding our strategies accordingly. In this light, paradoxes may offer challenging, even frame-breaking experiences, pushing researchers to question approaches that oversimplify and over-rationalise complex phenomena. Cameron and Quinn (1988) suggest several principles of paradox that might prove fruitful in future research and theory building. The followings are three of them

1. Ignoring contradictory nature of organisations may be dysfunctional for managers and researchers. Many theories do not consider contradictory elements - they simply assume away one of the competing elements. This may lead to dysfunction and researchers seeing part of the phenomenon.

2. Theories of congruence have an order bias. Synthesis is desirable but not required in organisations. Achieving a perfect fit or congruence may lead to a tensionless state in which the system becomes static. Paradox need not be always resolved.

3. Paradoxes are paradoxical. Paradoxes are predictable and symmetrical by themselves. They are both confusing and understandable, common and surprising.

In line with these principles, conceptualising paradox entails building constructs that accommodate contradictions. Rather than polarise phenomena into either/or notions, researchers need to use both/and constructs for paradoxes, allowing for simultaneity and the study of interdependence (Lewis, 2000). Lewis also suggests that theorising paradox entails developing a frame that encompasses opposites, enabling a more complicated understanding of their co-existence and interrelationships. It may be necessary to depict the challenges of plurality and change embedded in cognitive, emotional and social processes, and to use the notion of time and space to explain paradox.

Lewis (2000) states that a multi-paradigm approach entails using divergent or opposing theoretical perspectives. A paradigm denotes a way of thinking about phenomena based on distinct epistemological and methodological assumptions. It is therefore recommended in our case to employ multi-paradigms as a methodological approach to encompass the duality and to explore the paradox of co-operation and competition. In addition, as the tension of paradox can lead to organisational change, a dynamic perspective need be incorporated into the multi-paradigms. One side of paradox is assumed to hold at one time and the other at a different time. There may also be mutual influence over time, with swings from one side to another, as in morphogenesis theory of system development (Van de Ven & Poole, 1988). Our methodology is to employ a perspective with a time dimension or with an emphasis on the interactions of the opposites.

Many theoretical perspectives can be used to study alliance strategy and behaviour. They may include strategic positioning, international business theory, transaction cost theory, the RBV and game theory. Stiles (2001) favours game theory and the RBV out of these perspectives for studying co-operative and competitive aspects of strategic alliances. She suggests that game theory can provide a useful basis to study alliance behaviour. The RBV can help provide further insights relevant to this form of investigation. Child and Faulkner (1998) note that strategic positioning and the RBV can be applied to study co-operative strategy as well as competitive strategy as the two traditions of thinking.

Various schools of thought have emerged and crystallised in strategic management. Elfring and Volberda suggest nine schools of thought to be identified based on the classification developed by Mintzberg. They can be seen as institutionalised paradigms (Elfring & Volberda, 2001). Strategic positioning falls within one of these schools. In comparison, Stonehouse and other authors (2000) note that there are four well established approaches in strategic management. They include the prescriptive approach, the emergent approach, the competitive positioning approach, and the resource, competence and capability approach (the RBV). Each school of thought or approach is understood to represent a specific angle to strategy formulation. The often implicit assumptions and methodology underlie their paradigmatic differences. Though game theory is not included in the above classification, we believe that game theory has its distinct approach to strategic behaviour, which may be closely related to economics and mathematics.

In the light of the above understanding, we regard strategic positioning, the RBV and game theory as different paradigms, and therefore we shall employ them in our paradox framework to examine the paradox of co-operation and competition. Strategic positioning is concerned with the industry structure and the pursuit of generic strategies to achieve competitive advantage. It highlights the competitive aspect of the firm and emphasises the external environment. Its framework can still be employed to study co-operative behaviour. In comparison, the RBV draws attention to the unique resources and competencies from which the firm can obtain competitive advantage. It concentrates on the internal aspects of the firm, and has more emphasis on the potential advantages of co-operation. Stiles (2001) states that the RBV appears to provide an unbiased basis from which to view the co-operative and competitive aspects of intent. In summary these two traditions can illustrate how the firm can enhance its competitive position in the industry and gain access to resources and competencies through co-operation with other firms.

Game theory has been used to model the independent decision making in various fields, and its application especially in economics proves to be use-

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ful for understanding co-operative and competitive behaviours. It can also highlight the interdependency aspect of the alliance relationship (Stiles, 2001). In particular, the power of game theory rests on its ability to help conduct a rigorous analysis and to provide a dynamic picture of the interactive process of co-operation and competition (defection).

To summarise our approach we shall examine these paradigms in relation to the paradox of co-operation and competition (see Figure 3).

Figure 3.
Analytical Framework for the Paradox of Co-operation and Competition.

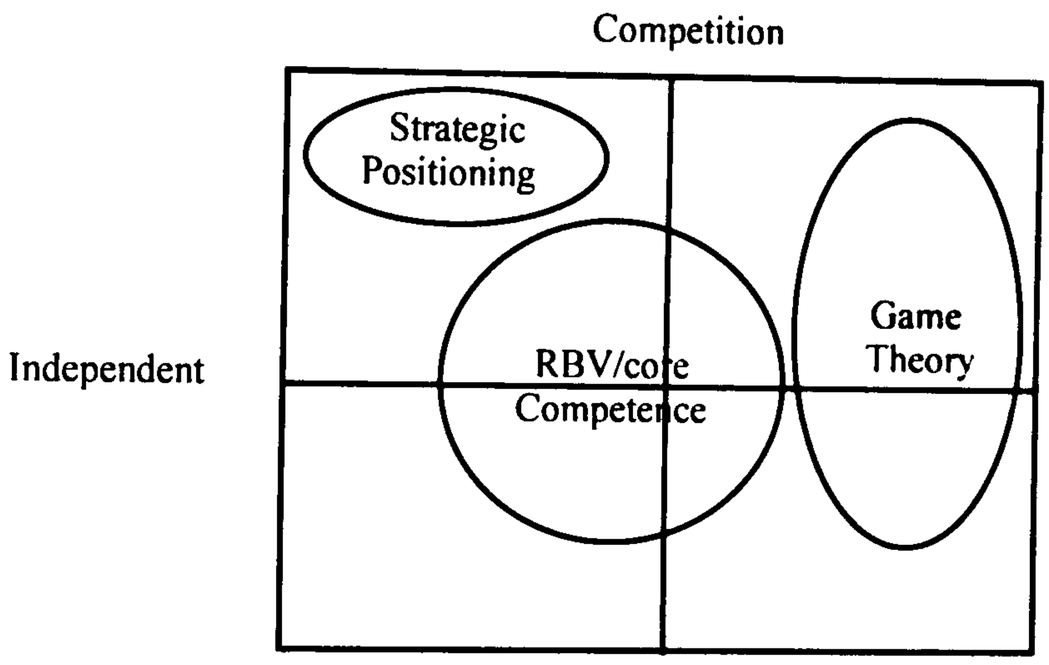
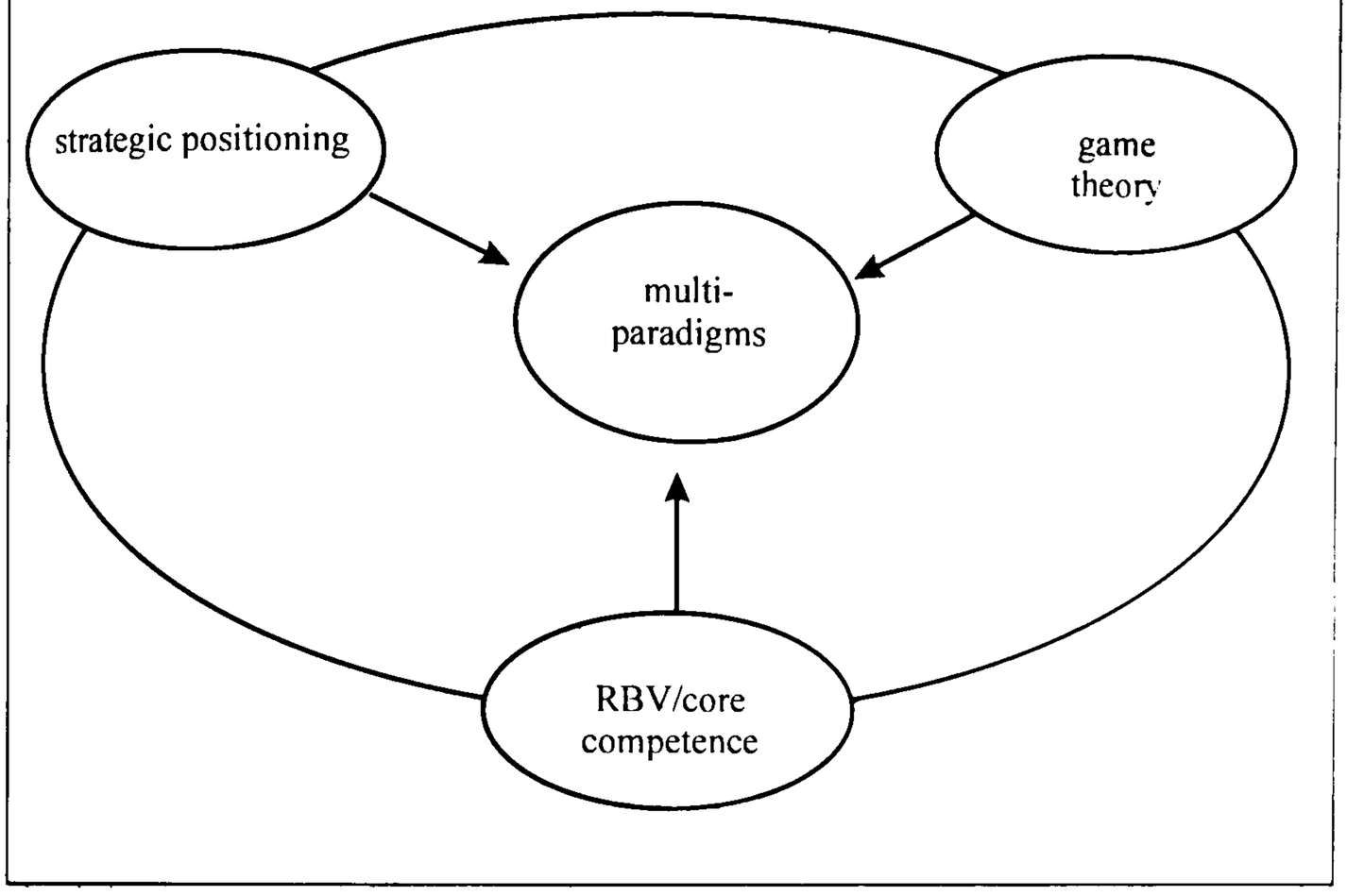


Figure 3 provides a paradox framework. It conceptualises the paradox in terms of duality and interaction. The duality is represented by co-operation and competition between alliance partners. The interaction is shown by interactive and independent nature. Based on the relevance of the above theoretical perspectives to the two dimensions, we position strategic positioning, the RBV and game theory in different locations in the diagram. Strategic positioning is mainly concerned with competition and gives little attention to the interaction. In comparison, the RBV has a more balanced emphasis on co-operation and competition. It also pays some attention to the interaction of the two elements. In particular, core competence theory explains the interactive nature of co-operation and competition, for example, the risk associated with skill learning and knowledge transfer reinforces competition. Finally, game theory assumes rationality and the Prisoners' Dilemma presumes competitive intent. Co-operation can only be achieved in an infinite game with the intent to maximise the utility. The interaction is high with conjectural variations.

The combination of the three perspectives is further illustrated in Figure 4.

Figure 4.
Multi-paradigm Approach to the Paradox of Co-operation and Competition



It represents our multi-paradigm approach to the paradox of co-operation and competition. The multi-paradigms can offer divergent yet complementary views, and enable a more complicated understanding of the coexistence and interaction of co-operation and competition. It is essential that they provide a holistic picture of the phenomenon. As a methodological approach, seeing the system as a whole may help reveal qualities over and above those that are apparent from an analysis of its respective parts. It denotes a higher-level analysis.

Examining Co-operative and Competitive Strategies

Strategic Positioning

According to Porter, a firm's performance is determined by the industry structure and profitability differences among competitors, which consist of operational effectiveness and strategic positioning. The industry analysis concerns the competitive environment using the five forces framework. It can indicate the potential profitability of the industry and assist to identify the appropriate generic strategy to acquire competitive advantage. The value chain analysis examines the value adding activities of the organisation and the linkages between them. The essence of competitive strategy is the search for a favourable competitive position in an industry. A sustainable

strategic position requires both trade-offs which makes imitation of the strategy difficult and strategic fit among value chain activities.

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Although Porter's theory highlights competition rather than collaboration (Stonehouse *et.al.,* 2000), its framework can still be applicable to collaborative relationships. The ability to maintain both the structure of an industry and a firm's position within it can be enhanced by co-operation with competitors (Child & Faulkner, 1998). The position can be modified through collaboration as follows. Regarding the relative power in the market, alliances can be distinguished as offensive from defensive alliances or coalitions. Offensive coalitions are intended to develop firms' competitive advantages and strengthen their positions by diminishing other competitors' market share or by raising their production and/or distribution costs (Child & Faulkner, 1998). Some alliance examples can give partners an unfair competitive advantage and provide the basis for restrictive behaviour. Firms to construct entry barriers that are intended to secure their position and stabilise the industry so as to increase their profits form defensive coalitions. Firms that have a weak position in the market in order to defend themselves against dominant players may also seek defensive coalitions. There may also be co-operation between a partner with a defensive intent and another with an offensive intent for entering the alliance. Moreover, an alliance which starts off with primarily defensive intentions can become offensive in nature if it is successful in the market (Child & Faulkner, 1998).

Positioning choices determine not only which activities a company will perform and how it will configure individual activities but also how activities relate to one another. Strategic fit among business activities is fundamental to sustainable competitive advantage (Porter, 1996). These activities refer to the concept of value chain. Collaboration has made it possible for business to adopt new configuration systems which are difficult for competitors to emulate and which can also sometimes enhance organisational responsiveness (Stonehouse *et.al.,* 2000). In this respect, collaboration can be regarded as an avenue to achieving strategic fit and competitive advantage through internal and external linkages in the value chain system. There can be a complementary effect.

Porter's theory provides several insights into competitive and co-operative relationships.

> One is that greater market power, with consequentially enhanced returns, can be attained through co-operative strategies. Co-operation may be a quicker and cheaper way to gain market power. All-out competition is not the only option. At the same time, the choice between competitive and co-operative strategies describes what is often an uneasy balance of partner calculation. One of the reasons for the breakdown of alliances is when one partner decides that it can in future gain more from resuming competition than from continuing the co-operation (Child & Faulkner, 1998: 19).

The Resource-Based View

According to the RBV, firms possess individual resources and their differential performance is fundamentally due to the heterogeneity of the resources each firm owns. Firms that are able to accumulate and acquire resources and capabilities that are rare, valuable, non-substitutable, and difficult to imitate will achieve a competitive advantage over competing firms (Wernerfelt, 1984). Valuable resources and competencies are often available only from a partner, or from sharing their development with the partner. Alliances may enable firms to gain access to partners' high technology or share the high cost of developing new capabilities through research and development. Co-operation between firms can also permit the pooling of their complementary strengths so as to secure creative synergies (Child & Faulkner, 1998). Some authors argue that it is best for a company to concentrate on activities which are directly related to its core competencies and that other non-core activities can be outsourced to other businesses for which those activities are core. Consequently outsourcing is often associated with collaborative behaviour (Stonehouse. *et.al.*, 2000).

Building on the concept of resources, some authors developed core competence theory and they stress the importance of knowledge and organisational learning (Prahalad & Hamel, 1990; Kogut & Zander, 1992). Collaboration between partners is definitely an important avenue to and process of organisational learning. Hamel *et.al.*, (1989) believe that collaboration is a different form of competition and interfirm relations are largely competitive and governed by power and calculation. Through the study of 15 strategic alliances involving European, American and Japanese competitors, they highlight the tensions between collaboration and competition, as what they call "competitive collaboration". They suggest that co-operation has limits. A strategic alliance is a constantly evolving bargain whose real term goes beyond the legal agreement or the aims of top management. In addition, learning from partners is paramount. Successful companies view each alliance as a window on their partners' broad capabilities. Each partner believes it can learn from the other and at the same time limit access to proprietary skills. Furthermore, competitive collaboration provides a way of getting close enough to rivals to predict how they will behave when the alliance unravels or runs its course. By revealing competitors' management orthodoxies, collaboration can increase the chances of success in future head-to-head battles.

Lei (1997) also points out the risks associated with co-operation. Entering into an alliance can pose a considerable strategic risk for those firms that are unaware of how skills and ideas acquired from working with one set of technologies may be applicable somewhere in unanticipated ways. Numerous production and technology-based interrelationships have begun to blur once-distinct industry boundaries and lessen the rigidity of sharing manufacturing processes. Western firms, with few exceptions, have been unable

to utilise alliances to learn new skills as effectively as Japanese and other Asian partners. One critical reason is that senior management often fails to realise that collaboration and competition can go hand-in-hand when working with partners.

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Many authors, for example, Hamel, Doz, Prehalad, de Wit, Meyer, and Lei recognise that co-operation can represent another form of unintended competition. Successful companies may never forget that their new partners may be out to disarm them (Hamel *et.al.*, 1989). Companies are not destined to become "hollowed out" once they understand the duality of alliances (Lei, 1997). Table 1 attempts to capture some of the most significant dimensions of duality underlying co-operation and competition within alliance mechanism. Along each dimension, there is a tension between potential benefits and costs.

Table 1.
The Dual Role of Strategic Alliances

Co-operation	Competition
* Economies of scale in tangible assets (e.g., plant and equipment).	* Opportunities to learn new intangible skills from partner, often tacit or organisational-embedded.
* Upstream/downstream of division of labour among partners.	* Accelerate diffusion of industry standards and new technologies to erect barriers to entry.
* Fill out product line with components or end products provided by supplier.	* Deny technological and learning initiative to partner via outsourcing and long-term supply arrangement.
* Limit investment risk when entering new markets or uncertain technological fields via shared resources.	* Encircle existing competitors and pre-empt the rise of new competitors with alliance partners in "proxy wars" to control market access, distribution and access to new technologies.
* Create a "critical mass" to learn and develop new technologies to protect domestic and strategic industries.	* Form a cluster of learning among suppliers and related firms to avoid or reduce foreign dependence for critical inputs and skill.
* Assist short-term corporate restructuring by lowering exist barriers in mature and declining industries.	* Alliances serve as experiential platforms to "de-mature" and transform existing mature industries via new components, technologies or skills to enhance the value of future growth options.

Source: Lei (1997).

The Game Theoretic Approach

Game theory is concerned with interdependent decision making. Two-player game is the most elementary and it can provide for the essence for

co-operative and competitive strategies. Our analysis of co-operative and competitive strategies can be based on Prisoners' Dilemma game, for its situation is relevant to co-operative and competitive behaviours of alliances. The rational strategy of defection (competition) applies on the assumptions of a zero-sum game, and non-repeatable experience (Child & Faulkner, 1998). Our study of alliances is therefore concerned with the non-zero sum and repeated game that involves co-operation.

Child and Faulkner (1998) note that within strategic alliances defection can be used as the short-term dominant strategy in a one-shot Prisoners' Dilemma game, but this does not apply to multiple-shot game with an indeterminate end. Nor does it apply if the penalty for defection is very high. Nor does it apply if the partners value working together and care about their reputation in the wider business community. Under iterated conditions co-operation increases significantly. It is maintained as each firm compares the immediate gain from cheating with possible sacrifice of future gains that may result from violating an agreement. Co-operation can be matched by co-operation in the next move, and a defection can be met with a retaliatory defection.

Kay's (1993) distinction between two broad categories of strategic alliances is helpful for understanding co-operation and competition. They refer to "common objective" and "mutually beneficial exchange" alliances. The former is typically one in which one party's distinctive capability requires the other's complementary asset, or two distinctive capabilities complement each other. The latter is an alliance where each partner has skills, information, or expertise that is of value to the other. Applying the logic of game theory, in the common objective game, the result - success or failure - is common to both parties and the pay offs are symmetric. Thus co-operation is the dominant strategy for both partners - it pays both partners to put maximum effort into attaining the common objective. In the mutually advantageous exchange game, however, the outcome may be asymmetric. It is possible for one party to gain from the other - and that is a result that each may try to secure. The dominant strategy for both partners is to hold back. It is always better to engage in strategic manoeuvres to get as much as possible while giving as little as possible - and this is true despite the clear mutual benefits from full co-operation (Kay, 1993).

In the mutually beneficial exchange alliances, the outcome of the Prisoners' Dilemma game could be modified if it were played repeatedly. It must be infinite, or uncertain in length. An important feature of this solution is that both parties expect the alliance to continue. If it is likely to come to an end, each party begins to see the benefits of holding something back, of behaving strategically rather than of maximising the joint gains from the alliance. Alliances with anticipated finite duration are unlikely to work (Kay, 1993).

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Game theory has an important assumption of rationality. The standard assumption is instrumental rationality. It assumes that agents have well behaved preferences and act to satisfy their preferences in the most efficient way possible (Hay *et.al.,* 1996). Hay and other authors also emphasise that there is a need to examine the belief system (rationality) that characterises a particular outcome of a game. Some authors have pointed out the limitations of game theory, such as too restrictive about the model of instrumental rationality (Hay *et.al.,* 1996), and inability to encompass the personality of players, social ties, communications, social conventions and institutional rules (Child & Faulkner, 1998). For restrictive instrumental rationality alternative models of rational behaviours may be required, for example, bounded rationality and procedural rationality (Hay *et.al.,* 1996). Bounded rationality suggests that agent's rationality is bounded by some form of computational or informational limitation (Hay *et.al.,* 1996; Stacey, 2000). It can involve taking shortcuts and trial-and-error process (Stacey, 2000). Procedural rationality suggests that faced with computational limitations agents follow well-established procedures or norms rather than following strictly maximising behaviour. Behaviour has been described as satisfying rather than maximising. Procedural rationality must be viewed in a historical and social context (Hay *et.al., 1996).*

If we take bounded rationality or procedural rationality to revisit common objective alliances where co-operation is the dominant strategy, the strategic choice of the partners could be affected and the outcomes could differ from those attained from strict instrumental rational behaviour. When historical norms and customs are injected into the game, the real situation would be more complex than co-operation as the dominant strategy. In the second category of mutually beneficial exchange alliances, defection (competition) goes hand-in-hand with co-operation. Even in the infinite game, co-operation would still be subject to the assumption of rationality. Discovering changes, taking shortcuts, historical and social norms and experience all could give rise to altering co-operative behaviour. In addition, information structure could influence players' behaviour. It may affect the credibility of threats and promises. Simultaneous moves represent imperfect information. If the future pay offs are foreseen low, there is a possibility of assuming defection. Finally, the belief that the game will continue indefinitely is problematic. Uncertainty about the length of the game is temporary and relative.

The above application of game theory is to help understand the paradox of co-operation and competition. It seems that game theory treats co-operation and defection (competition) as separate strategic choices or behaviours. This is an atomistic view focusing on a single player or play. Nevertheless, if we take a holistic view of the game as a whole and a process, game theory can reveal the complex interaction of co-operation and competition. It also demonstrates that co-operation and competition are inherent in the interdependent partner relationship within strategic alliances. Neither of the oppo-

sites can be removed from the game. Child and Faulkner (1998) point out that game theory has tremendous potential for advancing our understanding of the intrinsic nature of business co-operation. In particular, in the light of the historical, social and institutional environment and information structures, game theory can provide an insight into the intricate interactive nature of co-operation and competition in reality. In this respect, it can shed new light on the paradoxical nature of the two elements from its own perspective.

Summary and Conclusions

This article discussed the paradox of co-operation (collaboration) and competition in strategic alliances. It proposed an explicit paradox approach to alliance strategy. Co-operation and competition are simultaneously present and their oppositional tendencies form duality. Dialectics embraces paradox by holding that an object or phenomenon is a unity of contradictory oppositional tendencies. Paradox can be made manifest through an interaction of the two opposites. Dialectics also explains that change stems from opposition and conflict. Hence, the strategic issue of alliance partners is not to choose between co-operation and competition, but to manage the tension between them. It is this contradictory duality of co-operation and competition and their interaction that form the complex business reality.

In the light of paradox, the article advocated a multi-paradigm approach to study co-operative and competitive strategies. Multi-paradigms can reflect divergent perspectives and encompass the duality of co-operation and competition. Our approach combined strategic positioning, the RBV and game theory. Strategic positioning highlighted competitive strategy, and its framework was also used to explain co-operation with other firms or competitors as to enhance the strategic position. Co-operation could also enable the firm to reconfigure value chain activities and to achieve strategic fit. The RBV suggested that co-operation enables one party to gain access to the other's unique resources and capabilities, and thus to acquire competitive advantage. In addition, competence theory showed the interactive nature of co-operation and competition and the dynamic process. These two traditional perspectives can provide an overarching view of competitive and co-operative strategies, and insights into competition and co-operation in strategic alliances. All-out competition is not only the option. Co-operation can enhance competitive advantage. There is an uneasy balance of partner calculation. Co-operation and competition interact with each other and the tension underlies the difficulties involved in managing alliances.

Game theory was also used to explore the complex interactions of competitive and co-operative behaviours. It provided a rigorous approach to and a dynamic picture of the two opposing tendencies under instrumental rationality. While taking into account bounded rationality and procedural rationality and imperfect information, which can bring the analysis close to the reality, it can help demonstrate that the intricate interaction of the two ele-

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ments makes their paradoxical nature manifest. This implies that each player must manage the tension between co-operation and defection (competition) throughout the game in order to achieve his objective. Belief, new information, discovery, experience, historical norms, and institutional conventions all should become part of his strategy making.

The combination of the strategic positioning and the RBV and game theory explained the paradox of co-operation and competition from each of these perspectives. These alternatives can offer divergent yet complementary views, and enable a more complicated understanding of the coexistence and interrelationships of the two elements. Moreover, it is essential that the combination of these perspectives provide a holistic picture of the phenomenon by emulating the individual ones so as to reveal the paradoxical nature. It could help bring about consensus amongst protagonists and antagonists of each paradigm, and avoid fragmentation leading to ambiguity or confusion. Finally, the multi-paradigm approach can illustrate the divergent methodological stances amongst them. Therefore, it may help better understand their underlying propositions in relation to the duality and interaction of the opposites. This stands in contrast to a single orthodox methodology based on uni-directional, linear, atomistic and static way of thinking.

It is also worthwhile to point out that the article did not attempt to synthesise the three perspectives. As strategic positioning and the RBV have different focuses, there is a need to study both co-operative and competitive behaviours from each of them. The former reflects the industry and the environment, and latter reflects the internal and firm-specific capabilities. Nevertheless, there is a good fit between the RBV and game theory. Kay's distinction between "common objective" and "mutually beneficial exchange" alliances saw the synthesis of the two approaches. In particular, the game theoretic framework can well incorporate the core competence theory of skills learning and knowledge transfer. This attempt can prove to be fruitful and necessary within the multi-paradigm framework.

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Sino-British joint ventures in China

Investment patterns and host country conditions

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Keywords *Investments, Joint ventures, Economic growth*

Abstract *This paper analyses the investment patterns of Sino-British joint ventures in China. The research is based on the data of 551 Sino-British joint ventures formed over the period of 1983 to 1996. It aims to provide an overview of Sino-British joint ventures' investment in China and to explain the investment conditions. The article analyses the investment patterns from the dimensions of investment value, geographical location, industry sector and equity ownership. To explain the formation of the patterns, it further explores the host country factors of investment based on the policy framework, economic determinants and business facilitation. It reveals the investment trend, the uneven spatial distribution, the sectoral characteristics and the ownership structure of joint ventures. Suggests that government economic strategy and policies towards FDI are imperative in shaping the investment patterns. Locational advantages, economic growth, industrial structures and reform process are major economic factors influencing the investment decisions. Decentralisation of decision making and local governments' facilitation efforts also play a complementary role in attracting foreign investment.*

Introduction

Since China began the economic reforms in 1979 and adopted the "open door" policy, it has received a large amount of foreign investment. In recent years it has remained the second largest recipient of foreign direct investment (FDI) in the world only after the USA. As China has joined the World Trade Organisation (WTO) and is expected to maintain its fast economic growth, it will continue to attract significant amounts of foreign investment. Joint ventures have become a major form of investment used by overseas firms. By the end of the year 2000, foreign investment in joint ventures, including equity and contractual joint ventures, accounted for 66 per cent of total FDI in China. Amongst the investing countries, the UK ranks eighth in China in terms of FDI by value, and is the leading European investor. The UK invested US$1.164 billion in China in 2000 and has an accumulative FDI of over US$8.7 billion.

Joint ventures have attracted a great deal of interest from scholars who study foreign direct investment in China. Most literature is concerned with Sino-foreign joint ventures and treats foreign partners as a general category rather than distinguishing them by their country of origin. A review of literature indicates that the studies that have a country specific focus tend to concentrate on joint ventures with American and Japanese partners. It is

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recognised that there are differences in strategic alliances due to the national origins of alliance sponsors and national comparative advantages (Culpan, 1993 cited in Osborn and Hagedoorn, 1997). The studies on Sino-British joint ventures could help shed light on some characteristics that may not be apparent in Chinese firms' joint ventures with other foreign partners, but evident in joint ventures with British partners.

Most studies focus on certain aspects of international joint ventures in China, for example entry mode (Wu, 1997; Yan and Warner, 2001), ownership and control (Child and Yan, 1999; Chadee and Qiu, 2001), performance (Child and Yan, 1997; Dong *et al.*, 1997) and cross-cultural issues (Tung, 1996; Hu and Warner, 1996; Li *et al.*, 2001). There is limited literature on the patterns of foreign investment in China (Broadman and Sun, 1997). As a result, there lacks an overview of the structure and the patterns of investment made by British firms and their Chinese partners.

Some studies on FDI in China suggest that there are differences in FDI distribution in terms of geographical location (Broadman and Sun, 1997; Wei, 2000) and industry sector (Broadman and Sun, 1997). There are also differences in the ownership structure of joint ventures (Chadee and Qiu, 2001). These differences indicate the varying investment conditions and economic activities in the country and the different investment strategies pursued by foreign firms. In addition, the Chinese government has set out investment policies in the economic reforms to direct FDI in compliance with the national economic planning. In this context, foreign investment activities have been subject to the constraints of the various factors.

This paper will examine the aggregate patterns of Sino-British joint ventures in China. The research is based on the data of 551 Sino-British joint ventures formed over the period from 1983 to 1996. The paper will analyse the investment patterns in respect of investment value, geographical location, industry sector and equity ownership. Furthermore, it will explain the relevant factors concerning the investment conditions and government policies in shaping these patterns. The paper aims to provide an overview of Sino-British joint ventures and to help understand the investment environment in China.

The host country determinants of FDI

Theories of international production can be relevant to our research on joint ventures. They can be grouped under four headings:

(1) market power approach;

(2) internalisation theory;

(3) competitive international industry approaches; and

(4) macroeconomic developmental approaches (Cantwell, 1991).

A general framework developed by John Dunning is known as the eclectic paradigm. It incorporates elements from these different approaches (Cantwell, 1991).

According to Dunning (2001), the extent, geography and industrial composition of foreign production undertaken by multinational enterprises (MNEs) are determined by the interaction of three sets of interdependent variables, which are ownership advantages, locational attractions and internalisation advantages. The greater the ownership and internalisation advantages possessed by firms and the more the locational advantages of creating, acquiring (or augmenting) and exploiting these advantages from a location outside its home country, the more likely FDI will be undertaken. The eclectic paradigm recognises the importance of the locational advantages of countries as a key determinant of foreign production of MNEs. The variables that can explain locational specific advantages differ according to the motives for FDI, its sectoral composition, the home and host countries of investing firms, and a variety of firm specific considerations. Research has also extended the standard theories of location to embrace new locational variables, e.g. exchange rate and political risks, the regulations and policies of supranational entities and inter-country cultural differences (Dunning, 2001).

The eclectic paradigm offers a common analytical framework for accommodating a variety of economic theories of FDI and MNEs. Based on this paradigm, the United Nations Conference on Trade and Development (UNCTAD) has set out three broad categories of factors regarding the host country determinants of FDI. They are the policies of host countries, the proactive measures countries adopt to promote and facilitate investment, and the characteristics of their economies. The relative importance of different location-specific FDI determinants depends on the motive and type of investment, the industry in question, and the size and strategy of the investor (UNCTAD, 1998).

Economic determinants of FDI can be classified under several headings:

- market seeking;
- resource seeking;
- efficiency seeking; and
- strategic asset seeking (Dunning, 1993, 2001).

Figure 1 shows the framework of the host country determinants of FDI by taking into account these four types of motives. Our study on Sino-British joint ventures can employ this framework to investigate the underlying factors of the investment patterns in China. As our research examines the aggregate patterns of joint ventures' activities, we will not focus on firm-specific factors in the analysis.

Methods and data

The research draws on the existing literature on FDI, Sino-foreign joint ventures, China's economy and government policies. It is conducted by

Host country determinants
1. Policy framework for FDI • economic, political and social stability • rules regarding entry and operations • standards of treatment of foreign affliates • policies on functioning and structure of markets (especially competition and M&A policies) • international agreements on FDI privatisation policy • trade policy (tariffs and NBTs) and coherence of FDI and trade policies • tax policy
2. Economic determinants
3. Business facilitation • investment promotion (including image-building and investment-facilitation services) • investment incentives • hassle costs (related to corruption, administrative efficiency, etc.) • social amenities (bilingual schools, quality of life, etc.) • after-investment services

Type of FDI classified by motives of MNEs	Principal economic determinants in host countries
A. Market seeking	• market size and per capita income • market growth • access to regional and global markets • country-specific consumer preferences • structure of markets
B. Resource seeking	• raw materials • low-cost unskilled labour • skilled labour • physical infrastructure (ports, road, power, telecommunication)
C. Efficiency seeking	• costs of resources listed under B and knowledge-based assets, and technology and innovative capacity • other input costs, e.g. transport and communication costs and costs of other intermediate products • spatial clusters and membership of a regional integration agreement conducive to the establishment of regional corporate networks
D. Strategic asset seeking	• knowledge-based assets, including localised tacit knowledge and interactive learning • synergistic assets to MNEs, technological and innovative capacity and other created assets (e.g. brand names) • different cultures, institutions and systems

Source: Adapted from host country determinants of FDI in UNCTAD (1998) and variables influencing the location of value-added activities by MNEs in Dunning (2001)

Figure 1.
Host country determinants of FDI

analysing the data of 551 Sino-British joint ventures. To explain the underlying factors of the investment patterns, the research employs the framework of host country determinants of FDI and examines economic as well as legal, social and international dimensions. The data have been re-ordered to examine the investment patterns based on investment value, geographical location, industry sector and equity ownership. Descriptive statistical methods are used in explaining the investment patterns.

The database of Sino-British joint ventures was obtained from the Ministry of Foreign Trade and Economic Co-operation (MOFTEC) of the Chinese government. The data include all the joint ventures (including joint ventures with partners from British Virgin Islands) that were formed and began their operation before 1997. However, the data may not be an exhaustive list of all the joint ventures formed before 1997, for there is a possibility of missing individual firms in the registration and compiling process. There are also a small number of joint ventures with some missing details related to industrial activities and total investment, and thus in our study, industry sectors are analysed using 545 joint ventures, and investment is calculated from 470 joint ventures. The statistics on China's economy were collected from *China Statistical Yearbook* (National Bureau of Statistics of China, 2000) and from the MOFTEC.

In order to ascertain the geographical distribution of joint ventures, the data were coded according to the address of the joint venture. The data were subsequently sorted into 20 provinces, two autonomous regions and three municipalities (Beijing, Shanghai and Tianjin). To examine the investment trends, the data were assorted based on the operational date of the joint venture. In order to analyse the industry sectors, the data were coded according to the main business activities of the joint venture. Due to the complexity involved in sorting industrial activities, the study employed the UK Standard Industrial Classification – SIC (92) for coding. Our coding system only used the first level of the SIC to give an aggregate description of industrial activities of joint ventures.

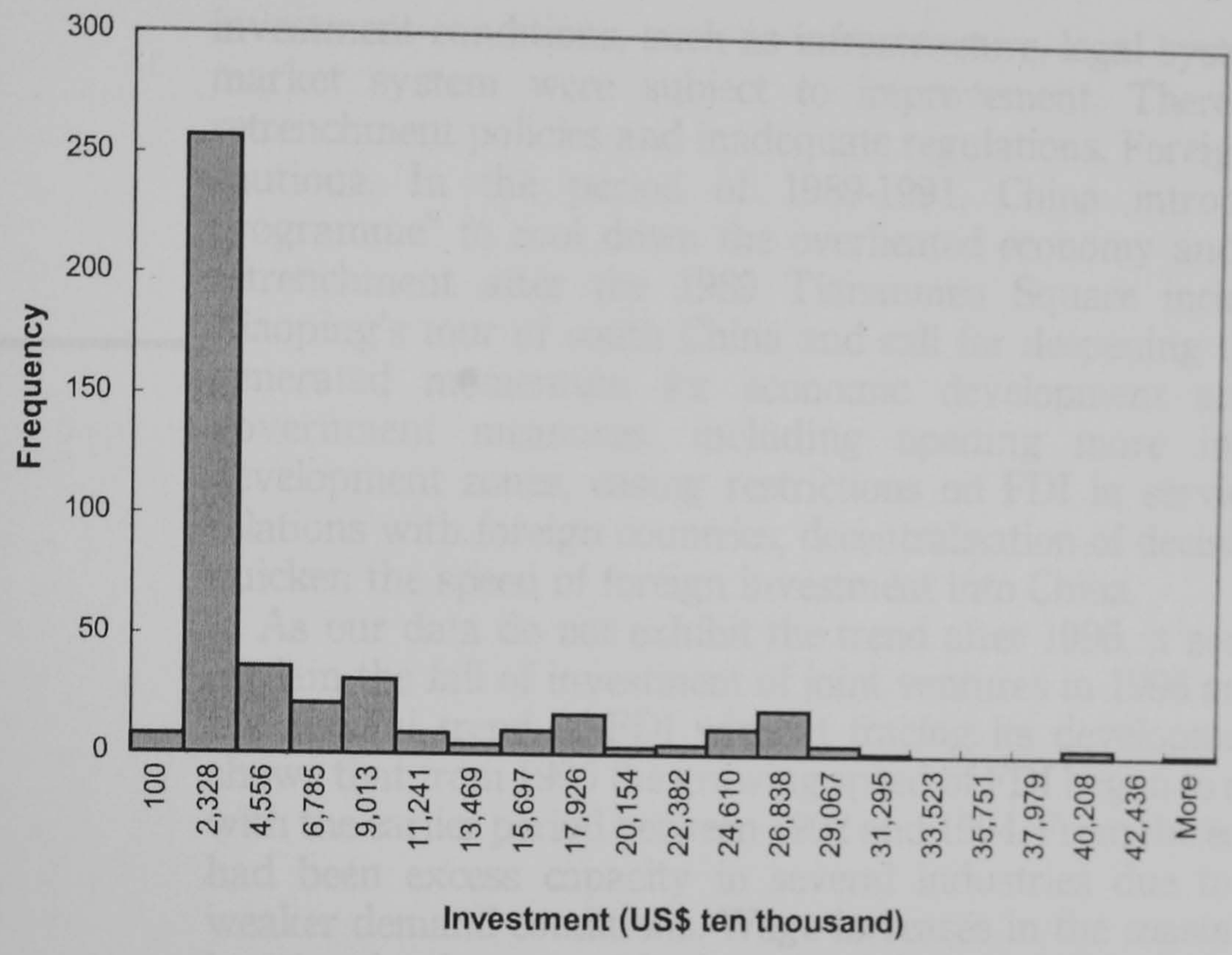
The investment patterns of Sino-British joint ventures and the major host country determinants

Investment of Sino-British joint ventures

The UK has remained the largest EU investor in China in recent years. Our study examines total investment contributed by both British and Chinese partners in the form of joint venture. The data suggest that 470 Sino-British joint ventures have made a cumulative total investment of US$31,200 million. The investment ranges from the smallest amount of US$113,960 to the largest of US$1.3 billion. The parameters indicate that there are extreme values in the dataset and the distribution is greatly skewed to the right. After removing the outliers smaller than US$1 million and bigger than US$500 million, our study shows that the distribution is still rather skewed to the right. In Figure 2, the histogram exhibits the variability of 439 investment measurements with a high concentration in the interval around the value of US$23,280,000. The statistics suggest that at least 75 per cent of the measurements fall within the range between US$1,000,000 and US$221,140,000 (two standard deviations of the mean). In summary, our study shows that more than half of the Sino-British joint ventures have made investment between US$12 and US$34 million (centred at US$23 million). At least 75 per cent of the joint ventures have made investment between US$1 million and US$220 million. There are only very few cases that involve more than US$300 million investment.

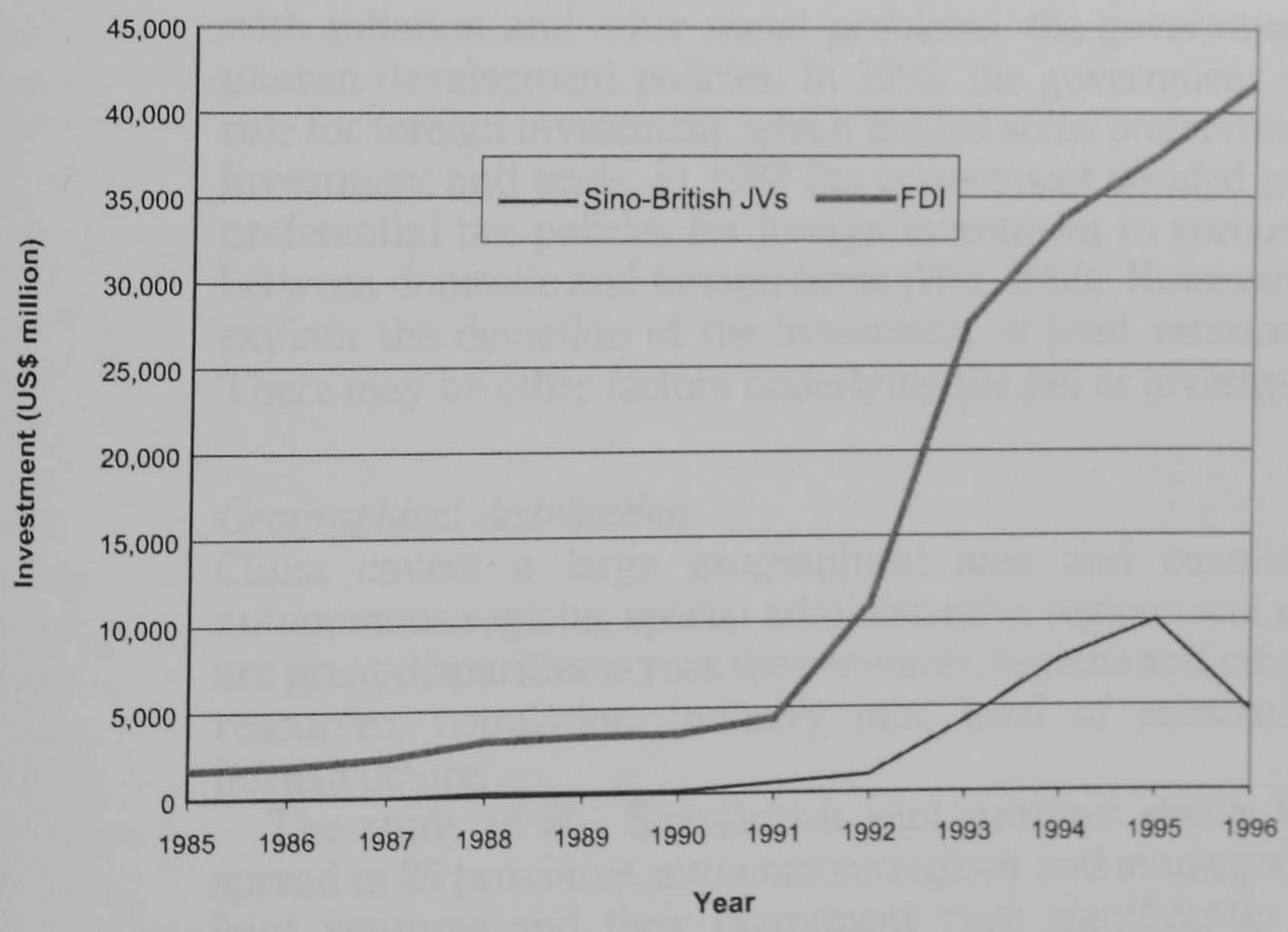
Figure 3 shows the investment trend of Sino-British joint ventures from 1985 to 1996. Investment had remained very small up until 1992. From then it began to increase sharply and reached US$10,000 million in 1995. Until 1995 the trend moved largely in line with the total FDI in China. Investment by Sino-British joint ventures fell in 1996. Because investment of Sino-British joint ventures refers to the total capital investment made by both Chinese and British parties, the trend of FDI can only be regarded as a reference rather than a comparison.

The following factors may be associated with the trends. The period of 1985-1988 witnessed a rapid opening up of the Chinese economy and an increase of foreign investment flows. The amount of FDI remained small, as the



Source: Calculated based on the data from MOFTEC

Figure 2.
Histogram for investment of Sino-British joint ventures



Source: Based on the data from MOFTEC and China Statistical Yearbook (2000)

Figure 3.
Investment trend of Sino-British joint ventures

investment conditions, such as infrastructure, legal system, labour skills and market system were subject to improvement. There had been frequent retrenchment policies and inadequate regulations. Foreign investors remained cautious. In the period of 1989-1991, China introduced an "austerity programme" to cool down the overheated economy and experienced further retrenchment after the 1989 Tiananmen Square incident. In 1992 Deng Xiaoping's tour of south China and call for deepening the economic reforms generated momentum for economic development and investment. The government measures, including opening more interior regions and development zones, easing restrictions on FDI in service sector, improving relations with foreign countries, decentralisation of decision making, began to quicken the speed of foreign investment into China.

As our data do not exhibit the trend after 1996, it seems to be difficult to explain the fall of investment of joint ventures in 1996 and its deviation from the general trend of FDI without tracing its development path. The graph shows that from 1995 the growing speed of FDI began to slow down compared with the earlier period between 1992 and 1994. From the economic aspect, there had been excess capacity in several industries due to over-investment or weaker demand conditions. Wage increases in the coastal areas were eroding locational advanatage in low-cost labour intensive investments, and poor infrastructure in the interior provinces hindered investment in low-wage activities (UNCTAD, 1998). The then government policy could be considered as a factor as well. While foreign invested enterprises, with ownership and policy advantages, seriously challenged state-owned enterprises (SOEs), intertwined with inflation and other social problems, the government began to ease the uneven development policies. In 1995, the government introduced a guiding rule for foreign investment, which limited some preferential policies for foreign investment and trade. In 1996 the government decided gradually to eliminate preferential tax policies for foreign investment to encourage fair competition between domestic and foreign firms (Wei, 2000). However, these factors do not explain the deviation of the investment of joint ventures from FDI in 1996. There may be other factors underlying the fall of investment of joint ventures.

Geographical distribution

China covers a large geographical area and consists of 34 provinces, autonomous regions, special administrative regions and municipalities. There are great disparities across the provinces, regions and cities in terms of natural resources, population, industry mix, level of economic development and infrastructure.

The study of 551 Sino-British joint ventures shows that they are widely spread in 25 provinces, autonomous regions and municipalities. The number of joint ventures and their investment vary significantly across the regions. Table I shows that Jiangsu, Shanghai and Guangdong have the largest number

Region	Number	Per cent	Investment US$ million	Per cent
Anhui	6	1.1	66	0.2
Beijing	33	6.0	1,719	5.5
Fujian	18	3.3	3,123	10.0
Guangdong	55	10.0	1,807	5.8
Guangxi	4	0.7	98	0.3
Hainan	1	0.2	5	0.0
Hebei	34	6.2	3,093	9.9
Heilongjiang	3	0.5	1,04	0.3
Henan	11	2.0	1,347	4.3
Hubei	13	2.4	271	0.9
Hunan	7	1.3	320	1.0
Inner Mongolia	4	0.7	187	0.6
Jilin	6	1.1	1,886	6.0
Jiangsu	107	19.4	5,556	17.8
Jiangxi	6	1.1	38	0.1
Liaoning	28	5.1	2,474	7.9
Qinghai	1	0.2	36	0.1
Shanghai	70	12.7	2,915	9.3
Shaanxi	10	1.8	123	0.4
Shandong	35	6.4	1,088	3.5
Shanxi	2	0.4	8	0.0
Sichuan	21	3.8	923	3.0
Tianjin	38	6.9	2,221	7.1
Yunnan	2	0.4	28	0.1
Zhejiang	36	6.5	1,764	5.7
Total	551	100.0	31,200	100.0

Note: Investment is calculated based on 470 joint ventures
Source: Calculated based on the data from MOFTEC

Table I. Geographical distribution of Sino-British joint ventures

of Sino-British joint ventures with 107, 70 and 55 recorded partnerships respectively. Other regions follow them with more modest figures, such as Tianjin, Zhejiang, Beijing, Shandong *et al.* In comparison, Hainan, Qinghai, Shanxi and Yunnan have the smallest number of joint ventures. In terms of total investment by Sino-British joint ventures, Jiangsu tops the list again with US$5,556 million. Fujian, Hebei and Shanghai follow it with investment values of some US$3,000 million. These four regions account for 47 per cent of total investment. Hainan and Shanxi have only US$5 million and US$8 million respectively. The data show that the remaining nine provinces and autonomous regions mostly in central and western China (not included in the table) have no recorded Sino-British joint ventures activity. The pattern predominantly indicates that the eastern (coastal) region is the major destination of investment by British firms and their Chinese partners.

The geographical distribution of Sino-British joint ventures is consistent with the general pattern of foreign investment in China. By the end of 1998, the

eastern region had received about 88 per cent of total FDI in China. The central and western regions had received about 9 per cent and 3 per cent respectively. This pattern of FDI had not changed significantly from the early stages of the reform. Wei (2000) identified several factors that contributed to the leading role of the coastal provinces in attracting FDI. They include preferential policy treatment, locational advantages, globalisation and decentralisation of power. The economic data show that from 1992 to 1996 GDP growth in the eastern region was higher than in other regions, with Jiangsu and Guangdong in the lead. Market growth and size are considered as important factors, especially for market seeking investment. The eastern region has, in general, better-developed infrastructure, more productive economies, a well-trained labour force, closer linkages with the central government and foreign countries, in particular the neighbouring Asian countries. These characteristics have also been traditional economic factors of FDI location, particularly important for efficiency seeking investment. The concentration of FDI in coastal provinces is also due to the efforts of local provinces in promoting inward foreign investment. They have obtained more decision making power through decentralisation, marketisation, globalisation and uneven development policies (Wei, 2000).

In tandem with the economic conditions and the local business promotion, Chinese government policy has played a central role in shaping the distribution of foreign investment in China. First, the government opened the special economic zones (SEZs) in the south of China in the early stage of the reforms. The investment areas then gradually expanded to other coastal cities, provincial capital cities and the economic-technology open zones in the interior regions. Second, the preferential treatment allows foreign-invested enterprises to enjoy tax-exempt status for a certain period of time or reduced-rate taxation in the SEZs, and in economic and technology zones designated by the state council. Third, the investment policy also has an objective of promoting export and this may give advantage to those designated zones and cities in the coastal regions in attracting foreign investment.

The investment policy should be viewed in the context of the development strategy of the economic reforms. Wei (2000) suggested that the regional policy was influenced by the "ladder-step theory" – a Chinese version of the growth pole and inverted-U theories. China, as a developing country, should concentrate its resources in the more developed coastal region, which is similar to a higher step; gradually the emphasis of development will be shifted to the central and western regions, and the diffusion of the coastal development will stimulate the development of the interior.

Jiangsu province provides a good example for FDI and Sino-British investment. It ranks first in terms of total investment of Sino-British joint ventures, and hosts a large number of firms in textiles, chemicals, electrical equipment, real estate and business services, food and non-metallic materials industries. The province is located in the coastal area with its historical ties to

Shanghai and its increasing linkages with foreign countries. It has a relatively small proportion of SOEs in its economy. Its dynamic non-state sector, particularly township and village enterprises (TVEs), has contributed to its rapid growth (Wei, 2000; Jacobs, 1999). Moreover, local governments and enterprises have gained greater autonomy in investment decision making. Local governments also pursue active preferential polices in the approval of foreign investment, tax relief, tariff reduction on imports, and the retaining of exchange earnings (Wei, 2000). The Kunshan Zone in Jiangsu illustrates effective business facilitation measures taken by the local government. The local authorities have used its natural advantages, creating a physical and administrative environment that helps promote foreign investment (Ellman, 1998).

However, there is a difference in the geographical concentration of investment between Sino-British joint ventures and FDI in general. Jiangsu tops the list of the investment by Sino-British joint ventures, followed by Fujian and Hebei. In comparison, the general pattern of FDI shows the largest amount of investment in Guangdong followed by Jiangsu, Fujian and Shanghai as in 1997 and 1998. This may be partly due to the discrepancy of the measurements of total investment of Sino-British joint ventures and FDI from the overseas sources including other forms of investment. Despite this measurement problem, another two factors are important in explaining the difference. First, locational patterns of FDI in China clearly relate to the source composition of FDI. Hong Kong investors prefer south China, especially Guangdong, due mainly to policy incentives, geographic proximity and cultural linkages. Taiwan investors prefer Jiangsu, Guangdong, Fujian and Shanghai. Investment projects from the USA and other western countries prefer major economic centres and regions, such as Shanghai, Beijing, Tianjin, and the coastal provinces (Wei, 2000). Second, some investing countries or regions, particularly in Asia, have become the dominant source of FDI in China. Hong Kong alone accounted for over 50 per cent of total FDI in China by 1996 and 1997.

Sectoral characteristics

In our dataset, 545 Sino-British joint ventures have details of industrial activities. They are classified into 24 broad sectoral categories according to the standard industrial classification (92). Table II shows the number of joint ventures and the total investment in different sectors. In the dataset 468 joint ventures have the details of investment value.

The food sector (food products and beverages), the chemicals sector (chemicals, chemical products and man-made fibres), and the real estate, renting and business activities sector have the highest percentages both in terms of the number of joint ventures and investment value. There are also a large number of firms in electrical and optical equipment, but their investment value is relatively low. The utility sector (electricity, gas and water) has a small

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Industrial sectors (SIC 92)	Number	Per cent	Investment US$ million	Per cent
Agriculture, hunting, forestry	9	1.7	42	0.1
Fishing	4	0.7	7	0.0
Mining, quarrying	3	0.6	19	0.1
Food, beverages	54	9.9	4,273	13.7
Textiles, textile products	43	7.9	1,340	4.3
Leather, leather products	5	0.9	20	0.1
Wood, wood products	2	0.4	171	0.5
Paper, paper products, publishing, printing	14	2.6	1,282	4.1
Refined petroleum products	2	0.4	262	0.8
Chemicals, chemical products	53	9.7	3,326	10.7
Rubber, plastic products	14	2.6	311	1.0
Other non-metallic mineral products	42	7.7	2,737	8.8
Basic metals, metal products	29	5.3	2,015	6.5
Other machinery, equipment	27	5.0	474	1.5
Electrical, optical equipment	60	11.0	1,312	4.2
Transport equipment	16	2.9	2,293	7.4
Other manufacturing	31	5.7	599	1.9
Electricity, gas, water supply	14	2.6	4,201	13.5
Construction	9	1.7	1,348	4.3
Wholesale, retail, repair	4	0.7	135	0.4
Hotels, restaurants	10	1.8	25	0.1
Transport, storage, communication	7	1.3	328	1.1
Real estate, renting, business activities	74	13.6	3,252	10.4
Community, social, personal services	19	3.5	1,376	4.4
Total	545	100.0	31,148	100.0

Note: Investment is calculated based on 468 joint ventures
Source: Calculated based on the data from MOFTEC

number of firms but has a high investment value. In contrast, agriculture (agriculture, hunting and forestry), fishing, mining, leather (leather and leather products), wood (wood and wood products), petroleum products, wholesale and retail (also including repair of vehicles, and personal and household goods), and hotel and restaurants have the lowest percentages both in terms of the number of firms and investment value.

The further examination reveals the following details of the industrial activities. About 25 per cent of firms in the chemicals sector produce household chemical products and 23 per cent produce pharmaceutical products. In the category of real estate and business services, more than half of the joint ventures are involved with real estate and property development. Many firms are involved with economic and financial information services, consultancy and advertising. Some firms also provide computer software and hardware services. In the sector of electrical and optical equipment, about one third of the firms manufacture computers and communications equipment.

If we classify these industries into three broad categories of primary industry (agriculture, forestry, animal husbandry and fishing), secondary industry (mining, manufacturing, utilities and construction) and tertiary industry (transportation, telecommunications, wholesale and retail, finance, various services, education, and public services), we can see significant gaps of investment between them in terms of investment value and growth. Figure 4 shows the trends of these three broad categories. Investment in primary industry by Sino-British joint ventures started from 1990 and remained insignificant (not shown in the graph). Investment in tertiary industry had been very small until it began to pick up in 1993, but it still remained a small portion of total investment and relatively low growth. In contrast, investment in secondary industry increased in 1991, and from 1992 it experienced a high-speed growth. A big fall in 1996 shown in the graph is in agreement with the overall trend of Sino-British investment exhibited in Figure 3.

The basic industrial structure and the trend of investment of Sino-British joint ventures are in agreement with the national economic situation. The larger proportion of investment in the sectors of food, chemicals and electrical equipment by Sino-British joint ventures could be attributed to the high-speed growth of secondary industry and the government industrial policy on foreign investment. Before the reforms, China's economy was characterised by heavy

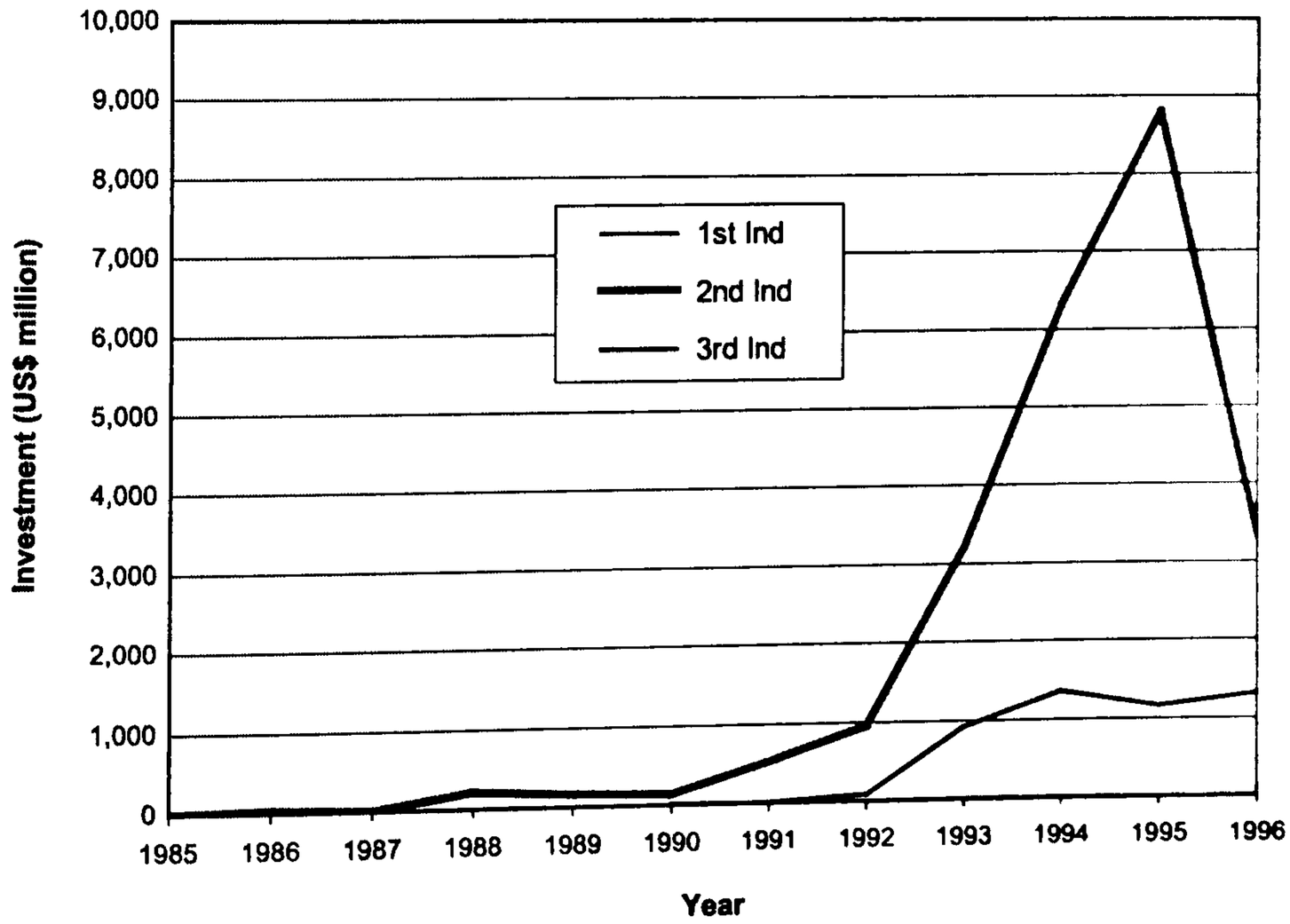

Figure 4. Sino-British joint ventures – investment trends of primary, secondary and tertiary industries

Source: Calculated based on the data from MOFTEC

Note: Investment in primary industry is insignificant, and is thus not shown in the graph. According to the classification used in China, primary industry includes agriculture, forestry,animal husbandry and fishing. This may be different from the classification used in other countries

industry and disproportionate and lagging agriculture and light industry. The reforms have brought change to the industrial structure. Guo (2001) pointed out that the imbalance in industrial structure in the early period of the reform was somewhat mitigated by fairly rapid development of tertiary industry in the 1980s, but in the 1990s the high speed growth of secondary industry once again made the structural discrepancy obvious.

The above sectoral pattern of investment is consistent with the general industrial characteristics of capital flow in the world. The industries of food, beverages, chemicals and pharmaceuticals, electronic and electrical equipment were the most transnational among the world's top 100 firms (UNCTAD, 1998).

In respect of policy, the government formulated in 1995 the Interim Regulations on FDI Directions and the Industrial Catalogue Guiding Foreign Investment. The regulations and catalogue classified foreign investment projects into four categories:

(1) encouraged;
(2) permitted;
(3) restricted; and
(4) prohibited projects.

The industrial catalogue highlighted priority industries alongside the principles of structural adjustment and the introduction of advanced technology. The projects to encourage foreign investment mainly include agricultural new technology and agricultural comprehensive development, energy project, transportation, vital raw materials, high tech projects, technological upgrading of traditional industries. The regulations may underscore the bigger proportion of investment in those industries by joint ventures, which fall in the encouraged categories.

The data analysis shows that the utility sector has a small number of joint ventures but high investment value. Several factors may help explain this. First, this sector was under-developed before the reforms. Naughton (1995) noted that in the reforms the robust economic growth increased the need for government investment in public goods and infrastructure. The result was the pressure on the government to concentrate investment on infrastructure provision and strategic industrial sectors, such as energy. Second, the natural resources sector and utilities were dominated by state ownership. They were usually large SOEs and exhibited economies of scale (Naughton, 1995). They required a large amount of investment. Third, the government industrial policy has been encouraging foreign investment in infrastructure, energy and technology enhancement throughout the reforms. This is reflected in the preferential treatment of FDI and the industrial catalogue including these projects as items to be encouraged for FDI.

Agriculture, fishing, mining, leather, wood, petroleum products, wholesale and retail, and hotel and restaurants have the lowest percentages both in terms

of the number of firms and investment value. Several factors may explain the low investment in these sectors. First, secondary industry has experienced a fast growth disproportionately to primary and tertiary industry (Guo, 2001), and thus leaving investment in agriculture and service sectors behind. Second, the industries including, *inter alia*, petroleum, refining, logging, utilities, have the biggest share of SOEs in gross output, and they were non-competitive sectors (Naughton, 1995). SOEs have been undergoing restructuring since the industrial reform in the 1980s, and foreign investment was channelled to some of these sectors later in the further industrial reform. Third, oil refinery had been restricted for foreign business until the relaxation set out in China's recent WTO agreement. Finally, the government had largely restricted foreign investment in the retail sector. Since 1992 the State Council decided to launch trial operations of foreign-invested commercial retail businesses in a few major cities and the SEZs. In late 1996 there were two joint venture chain stores approved involving a Dutch company and a Japanese consortium (Kahal, 2001). The Interim Procedures on Establishing Pilot Sino-Foreign Joint Venture Wholesale Business was approved in 1996 and it became a major step toward expanding the opening up in the service sector.

In contrast to the limited investment in retail distribution and hotel and restaurant business, there is a large amount of investment in real estate and business services. The large investment value in these areas may be due to the classification of the data based on the SIC(92), for they cover many specific sectors at the lower levels, and thus their combined investment value can be large at the aggregate level. Moreover, the data also show that there is no investment in some sectors, such as banking, insurance and telecommunications. This was due to the restrictions imposed by the government. The further opening of these sectors was drawn in China's WTO agreement.

Offering additional locational advantages over and above traditional low-cost labour and resources becomes increasingly important. The study shows a salient characteristic of industrial composition in three municipalities (Beijing, Shanghai and Tianjin). All these municipalities have at least 22 per cent of Sino-British joint ventures in real estate and business services and have at least 15 per cent in electrical equipment. Most firms in these sectors are engaged in providing economic and financial information, consultancy, and computer hardware and software services, and manufacturing electronic, telecommunication and computer related products. In contrast, other regions have much lower percentages of joint ventures in these sectors. Various industries are more evenly distributed in those regions, or in some cases their industrial composition reflects the local traditional industry base. There may be a propensity that the three municipalities are more likely to attract some types of investment, which require a higher content of skills, knowledge-based assets and technology.

Ownership structure

In general, both Chinese and foreign partners make investment within the joint venture. In equity joint ventures both parties jointly make investment, operate, and share profits and risks in accordance with their proportions of equity investment. As a general rule, the ratio of investment by the foreign party shall not be lower than 25 per cent. In the form of contractual joint venture, the rights and obligations of both parties are defined in the contract. Usually foreign parties may provide all or most of the joint venture's capital. The histogram in Figure 5 shows the variability of the investment ratios. The intervals between 21 and 60 have obviously high relative frequencies with the concentration in two intervals 21 to 30 and 51 to 60. The intervals larger than 50 contain about 48 per cent of the measurements. In short, our data suggest that in most cases the British party provides about 20 per cent to 60 per cent of total investment. In 48 per cent of joint ventures the British party has the majority equity ownership. The study also shows that the remaining 52 per cent of joint ventures contain 11 per cent with the equal equity ownership and 41 per cent with the Chinese majority equity ownership.

The investment ratio of British partners is related to the control issue in joint ventures. Equity share, especially a majority share, confers certain legal rights to determine the overall direction of a joint venture, at least in the Western corporate tradition. There is evidence to indicate that equity share conveys

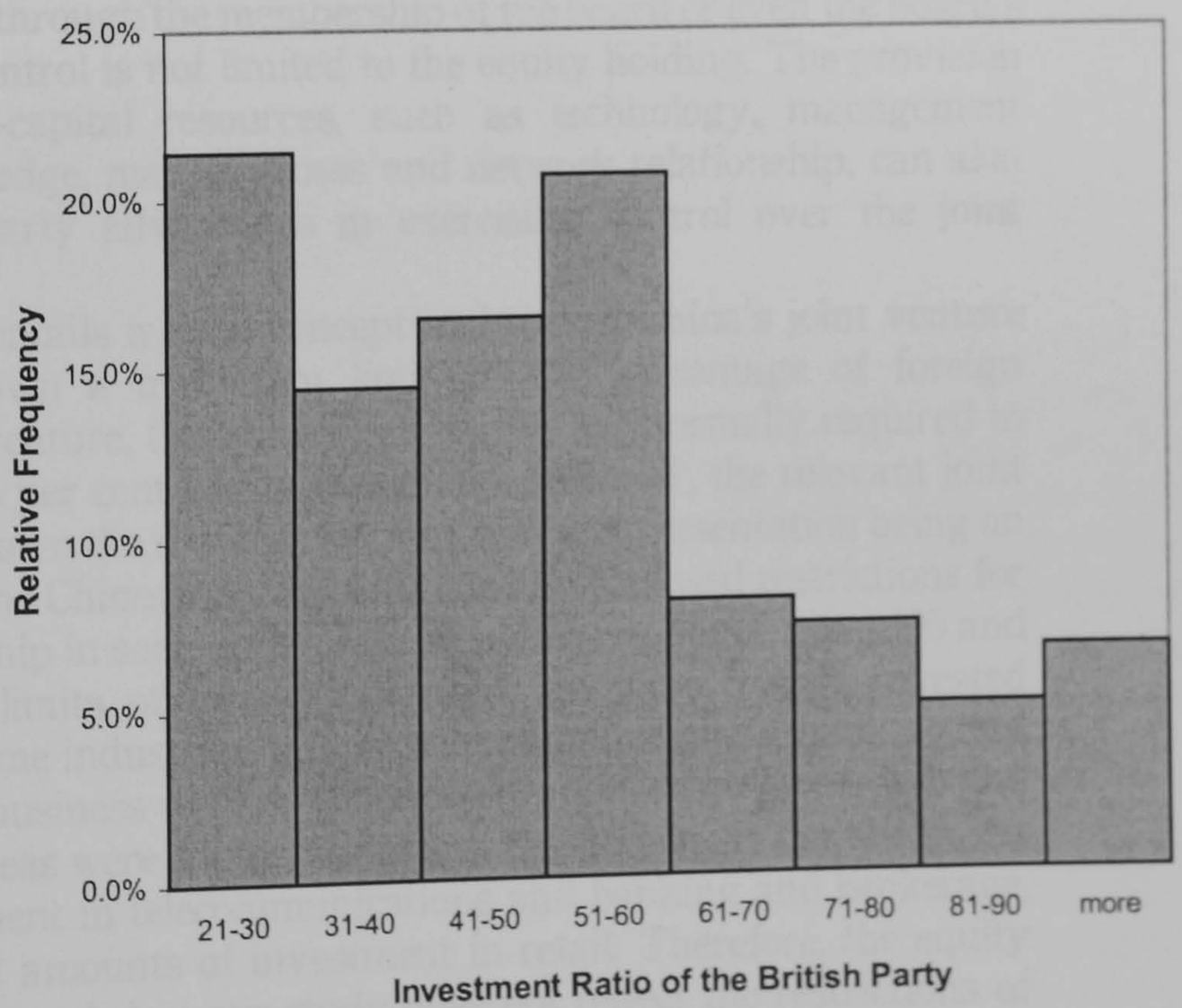

Figure 5.
Histogram for the investment ratio of the British party

Source: Calculated based on the data from MOFTEC

control leverage in developing countries as well (Child and Yan, 1999). Child (1994) also stated that the control of foreign investment had been a particularly sensitive issue in China due to its culture, history and ideology.

There are two channels of control in China – external control and internal control. External control is exercised through government economic regulations and institutions; internal control is exercised through Chinese management partners (Child, 1994). Although majority equity holding *per se* does not necessarily secure the control of joint ventures, there could be an expectation in many cases that the representation on boards of directors or the occupancy of key managerial positions may reflect the division of equity between the partners. A study by Pearson (1991, cited in Child, 1994) reported that the potential link between majority ownership and control was a salient issue for government officials in the early years and that as a result Chinese majority or equal ownership was the most common arrangement for joint ventures formed in the first half of the 1980s. One of the rights associated with equity position is the right to appoint members to the joint venture's board. Equity may also confer the right to appoint the chairman of the joint ventures (Child and Yan, 1999). Our study suggests that of 48 per cent of the joint ventures, the British party may have advantage over the Chinese party in exercising internal control due to the majority ownership. For those 41 per cent of the joint ventures with Chinese majority holdings, the Chinese party would likely exercise control through the membership of the board or even the board's chair. Nevertheless, control is not limited to the equity holding. The provision of other critical non-capital resources, such as technology, management expertise, local knowledge, market access and network relationship, can also give the providing party advantages in exercising control over the joint venture.

Equity ownership entails a legal concept and rights. China's joint venture law does not lay down a maximum limit on the percentage of foreign ownership of a joint venture, though foreign parties are normally required to hold a minimum of 25 per cent equity ownership. However, the relevant joint venture law has laid down the requirement for Chinese representation being on boards of directors. The Chinese government has also imposed restrictions for foreign equity ownership in some industries. The industrial catalogues (95 and 97) specified certain limits of foreign ownership in some foreign invested projects. Moreover, some industries, such as telecommunications, banking and brokerage, and retail business were not liberalised, and foreign ownership and investment in these areas were subject to various restrictions. In our study, the data show no investment in telecommunications and banking and brokerage, and only insignificant amounts of investment in retail. Therefore, the equity ownership structure revealed in our study does not reflect the restrictions of foreign ownership in these industries.

Equity ownership can also be understood from the perspective of bargaining power. The ownership structure is usually the outcome of complex negotiations between the foreign partner, the local partner and possibly the host country government (Chadee and Qiu, 2001). Various sources of bargaining power include technology, degree of product differentiation, level of control over market access, capital contribution, and tax policy of the host country's government. The study by Chadee and Qiu suggested that location, the origin of the foreign partner, sectoral characteristics, and the duration of the joint venture could influence the bargaining power and therefore the ownership structure. From this perspective, the equity ownership structure in our study may reflect the relative bargaining power of Chinese and British firms in their negotiation. As a legal concept, the ownership structure may also reflect to some extent the bargaining power of governments in the global context. China's agreement over its accession to the WTO, through difficult negotiations, has a direct bearing on the level of foreign ownership in the telecommunications, banking, insurance and retail industries.

Conclusions

The investment value of Sino-British joint ventures varies considerably, with about 50 per cent of joint ventures having made investment between US$12 million and US$34 million. Investment had remained very small until in 1992 it began to accelerate. The improvement of the economic environment and government policy could be important factors contributing to this investment growth. Geographically, most Sino-British joint ventures spread in the eastern regions with investment concentrated in Jiangsu, Fujian, Hebei and Shanghai. The uneven spatial distribution of investment was partly explained by locational advantages and regional disparities. It could also be the result of government development strategy and investment policy as well as local authorities' initiatives and promotion measures. The sectoral study shows disproportionate investment in various industries with the concentration in food, utilities, chemicals, electrical equipment, and real estate and business services. It largely reflects the country's industrial, structure during the economic reforms – rapid growth of manufacturing industries and lagging agriculture and tertiary industry. The industrial reform and locational advantages are important economic factors as well. The government industrial policy has been critical for the sectoral distribution highlighting priority industries alongside the structural adjustment in the economic reforms. Regarding equity ownership, in about 41 per cent of joint ventures the Chinese party has majority holding. The party with the majority ownership may be able to exercise internal control through its representation in the senior management. As the control of foreign ownership is a sensitive issue in China, government regulations have been designed to some extent to protect Chinese parties' certain control powers.

The investment patterns were analysed employing the framework of the host country determinants of FDI – regulatory framework, economic determinants and business facilitation. Our study suggests that government policies, regulations and international agreements are imperative in shaping the investment patterns. This was particularly demonstrated in the context of China's economic reforms and transition from a closed to an open economy. With the policy framework in place, economic factors, including market growth, infrastructure, access to regional and global markets and economic systems assert themselves as locational determinants for the investment patterns, corresponding to the motives of investment – market seeking, resource seeking, efficiency seeking and strategic asset seeking. Business facilitation measures may have become a means of competing for foreign investment targeting individual investors, especially at the regional level. On the whole, the various factors can influence investment decisions simultaneously though they have relative importance.

China's regulatory framework has been undergoing a significant change with its entry into the WTO. When the improved regulatory regime becomes commonplace and taken for granted by MNEs and the market becomes more liberalised, the economic determinants are likely to exercise greater influence than ever before on foreign investment alongside regulations and business facilitation measures. In particular, the distinctive combination of locational advantages – including human resources, infrastructure, market access, economic level, knowledge and innovative capacity – are critical for foreign investment corresponding to the strategies of MNEs. As the strategic asset acquiring investment has become more important (Dunning, 2001), the focus on the distinctive locational advantages can be an interesting theme for the future research on joint ventures in China.

Our preliminary analysis suggests that the host country determinants of FDI are a useful framework for studying Sino-British joint ventures and advancing our understanding of the investment conditions in China. Not least, it helps to focus on China's country conditions and to identify key variables in the multifaceted system in the transitional process. In applying the framework, it appears to be necessary to emphasis the relevance of China's *sui generis* context to the foreign investment activities embracing historical, social, legal and economic dimensions.

According to the framework, the economic determinants influence MNEs' investment activities corresponding to their motives. As our research concerns the investment issues at the aggregate level, firm-specific factors have not been included in the study. In this respect, there seems to be a limitation of using this framework without examining the investment motives of individual firms. Nevertheless, the limitation might be mitigated by the theoretical foundation of the framework resting on the eclectic paradigm. While the eclectic paradigm acknowledges the significance of firm specific characteristics in determining

international production, its main focus is on the country and industry characteristics. It is interested in identifying and evaluating the most significant variables affecting the level and patterns of international production (Dunning, 1993). The framework of host country determinants of FDI can be better employed at the firm level study, where the limitation of this study can be averted. This can represent a potential approach to the empirical research on Sino-British (foreign) joint ventures by incorporating strategy into the eclectic paradigm. The idea has been introduced by Dunning in his recent thinking about firms' strategic response in international production (Dunning, 1993, 2001).

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