

**Overseas Investment Patterns:
A Case Study of The Strategic Practices of
Emerging Chinese Gold Mining Companies**

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Thesis submitted as partial requirement for the conferral of the degree of

Doctor of Management

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OVERSEAS INVESTMENT PATTERNS: A CASE STUDY OF THE STRATEGIC
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Abstract

This dissertation explores the overseas investment pattern of the Chinese gold mining industry. We focus on the case of Zijin Mining Group Ltd. This company has taken a leading role in the internalisation of the Chinese sector and its shareholding structure, being partially state-owned, is distinct when compared with its domestic peers. We use a “case study” approach to test whether the “Uppsala model” provides an appropriate analytical framework for accounting and explaining the outward expansion movement of such a company from an emerging economy. We address two main research questions: *a)* how have Chinese gold mining companies been conducting overseas investment? And *b)* why have these strategies performed the way they have been. We conduct an extensive literature review and move on to carry out an analysis drawing on a rich array of primary resources to understand the internationalization process of Zijin. We document a number of project-cases and take an in-depth examination of Zijin’s mining investment. We identify gaps between the Uppsala model and the development of its resource theories such as evolutionary theories of the firm, and evolutionary economics. Understanding the fundamental mechanisms behind trajectories of adaptations to foreign environments is a crucial task. In the context of the emerging Chinese gold industry we find that firm-specific and path-dependent knowledge is a causal determinant of performance in overseas investment processes. Our findings are relevant to the design of context-sensitive strategies by participants in movements of outward investment, and especially to managers of emerging Chinese gold companies which are influenced by state policy and exploring new roads to the overseas market.

Key-words: Chinese gold mining companies, overseas investment, Uppsala model

JEL: F63, M16, O54

Resumo

Esta tese explora o padrão de investimento estrangeiro na indústria chinesa de mineração de ouro. Explora-se o caso da empresa Zijin Mining Group, Ltd. Esta empresa tem tido um papel de liderança na internacionalização da indústria chinesa e sua estrutura accionista, parcialmente estatal, é diferente em comparação com outras empresas. A investigação emprega uma abordagem de “estudo de caso” para apurar se o “modelo de Uppsala” fornece um quadro analítico apropriado para explicar o movimento de expansão externa de uma empresa de uma economia emergente. Abordamos duas principais questões de investigação: a) como é que esta empresa de mineração de ouro da China fez investimentos no exterior?, e b) porque razão essas estratégias são realizadas na forma como o são. Realizamos uma extensa revisão da literatura e procedemos a uma análise com base numa ampla gama de fontes primárias para compreender o processo de internacionalização da Zijin. Documentamos uma série de projetos de casos e assinalamos uma apreciação do processo de investimento de Zijin Mining que revela diferenças com o modelo de Uppsala mas, que alternativamente, mostra sintonias com os novos desenvolvimentos das teorias baseadas nos recursos, tais como a família das teorias evolucionistas da empresa. A compreensão dos mecanismos fundamentais por trás das trajetórias das adaptações a ambientes estrangeiros é uma tarefa crucial. No contexto da emergente indústria chinesa de ouro argumentamos que o conhecimento específico à empresa, que é dependente do seu percurso histórico, é um determinante causal do seu desempenho em processos de investimento no exterior. Os nossos resultados são relevantes para a concepção de estratégias sensíveis ao contexto por parte de participantes em movimentos de investimento directo estrangeiro e, especialmente, potencialmente informativos para gestores de empresas de ouro que são influenciadas pela política estatal de países emergentes e que tentam explorar novos caminhos em mercados geograficamente distantes.

Palavras-chave: empresas chinesas de mineração de ouro, investimento externo, modelo de Uppsala

JEL: F63, M16, O54

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List of Abbreviations

ECGMCs Emerging Chinese Gold Mining Companies

IPT International Process Theory

Chapter 1: Introduction

1.1 Introduction

The objective of the dissertation is to analyse the internationalization practices of emerging Chinese gold mining companies (ECGMCs). We investigate the internationalization process of a leading ECGMCs from the perspective of evolutionary theory, in particular the dynamic capabilities view of the firm. On the basis of this theoretical background we appraise how the Uppsala model, which is a theory about how firms progress in their internationalisation process. We do this by providing an appreciative, context-based account of a case study: the outward investment movement of a company like Zijin Mining Group Ltd.

Our research over the overseas investment patterns of Zijin seeks to answer two questions. First, how have Chinese gold companies been conducting overseas investment? Second, why have these strategies performed the way they have been?

Explanations of internationalisation processes, especially the Uppsala model, have mostly developed from the angle of limited geographical areas. Notwithstanding, we depart from this existing analytical tool and try extending in two ways:

- a)* by considering an emerging developing country that has for the past years been on the foreign direct investment emitting side, rather than on the receiving side.
- b)* by supplementing the existing range of case studies with a leading example from the gold mining field.

The case study approach is the main research methodology of this paper: it will focus on Zijin Mining Group Ltd. (Zijin, for short). Following Yin's (2004) definitions and distinctions of case study methodology, it will be a longitudinal, single case, single level, and embedded study. In other words, we cover the history of one company that we happen to know from the inside.

On the basis of detailed empirical knowledge and access to internal sources we find this case to be a significant instance from the point of view of the theory. In particular, we find that Zijin's case substantially is at variance with Uppsala model in its overseas investment features, namely

in its investment location, investment method, investment strength, etc. Through Zijin we find that the internationalization process of ECGMCs is similar to their domestic pattern due to path dependence and features such as fixed appetite of method, fixed appetite of location, and non-gradual increase of investment size. The pattern is the interact result between capability paradox factors and dynamic capabilities, influenced by entrepreneur factors, under the context of state policy and industry influence. Moreover, past experience is no good guide beyond the initial local context and that the companies need to nurture an ability to learn (“dynamic capabilities”) as they internationalize.

1.2 Background and motivation

With the rapid development of the Chinese economy, from 2003 to 2011, output of Chinese mining industry has increased from 88.9 billion dollars to 930 billion dollars (Chen et al., 2015), the supply of gold increased from less than 200 tons in 1994 to about 600 tons in 2013 (see Figure A2 of the appendix) and ECGMCs like Zijin and Shandong gold have begun to acquire mining projects in overseas markets. Thus, emerging markets are no longer passive recipients of economic initiatives from abroad: companies from these countries have started to be themselves active agents of globalisation.

What is more, any light the Uppsala model can cast over these internationalisation phenomena may have practical implications. Johanson and Vahlne (1990: 11) explained that:

“The internationalization of the firm is seen as a process in which the enterprise gradually increases its international involvement. This process evolves in an interplay between the development of knowledge about foreign markets and operations on one hand and an increasing commitment of resources to foreign markets on the other.”

Given that the commodities business has figured high in the connections that China has begun developing with economies from the southern hemisphere it makes sense to investigate a sector like the gold business. At the same time some of ECGMCs such as Zijin mining, and Zhaojin mining have transformed themselves into internationally big players (Xia and Zhou, 2015).

Hence, our potential finding may be of interest for a variety of stakeholder, namely, for actors from the private realms (corporate decision makers, engineering experts, market analysts,

etc.) and public (export promotion agencies, business regulators, sectoral institutions, etc.) As China officially is set to invest heavily abroad into complex heavy projects under the “One Belt, One Road” initiative, new international management expertise will be on demand. After all, resource industry is also a focus of the strategy. According to “Vision and Actions on Jointly Building Silk Road Economic Belt and 21st Century Maritime Silk Road” issued by the National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce of the People’s Republic of China, cooperation in the exploration and development of coal, oil, gas, metal minerals and other conventional energy sources should be increased.

The learning process of leading ECGMCs can yield relevant knowledge as to how and why one specific business as a whole is venturing abroad. This experience of a particular company (Zijin) in a particular branch of the mining industry (gold) in a variety of foreign theatres of operation (developing economies in Africa and South America) may be difficult to extrapolate but is surely an important illustrative instance of the new “going out” trend. ECGMCs are a particular group of business units with the special background of rapidly growing country, the largest developing country and the most dynamic emerging country in the world. Moreover, gold mining companies are significantly different from manufacturing and service firms, and suitability of related theories on mining is open to further research.

As such, the objective of this Dissertation is to analyse and appraise the strategic practice of ECGMCs of overseas investment patterns. This study will be based on the Uppsala model and controlled through theoretical sources such as evolutionary economics.

The Uppsala model has mostly developed from the angle of limited geological areas such as Sweden and other developed countries and the expectations stemming from it may be at variance with evidence of coming out from emerging-developing markets interactions. However, armed with latest theoretical tools of evolutionary economics and theory of the firm, we want to explore new internationalisation dynamics from integrated understanding framework, based but not necessarily bound by the classic Uppsala model.

It is also important to refer to what remains outside our scope of analysis. Non-mining companies, non-China based companies and non-gold companies also need an internationalization tool or pattern to enter into the overseas market. This lies in the backdrop of our analysis but is not our focus, although our finding may bring new context to this broad

picture.

1.3 Analytical framework

In this Dissertation, three layers of theories within an integrated theoretical framework are discussed. Among the three theories, evolutionary economics provides economics foundation (a wider level of understanding), the “dynamic capabilities” concept (DCs) provides firm-level instruction, and the Uppsala model provides a narrower level of explanation of the internationalisation process at stake.

Economics is the first level of the framework. Zhu and Dong (2011) point out that Uppsala model is one kind of FDI theory (foreign direct investment theory) which belongs to economics. In this sense, Uppsala model is still a component of economics. Within the scope of economics, based on research of some scholars (Madsen and Servias, 1997; Moen and Servais, 2002; Manalova, 2003; Vahlne et al., 2011), evolutionary economics may be the important economics sources of internationalization process research and so it may be the appropriate economics to analyse Uppsala model. For example, Manalova (2003) argue that internationalization process is evolutionary. Madsen and Servias (1997) further indicate that evolutionary economics may be one of the most “*promising theoretical avenues*” in terms of internationalization process research. Vahlne et al. (2011) put forward that the Uppsala model should be put in a context as opposed to a neo –classical type market. It means that neo-classical type economics may not be appropriate to be adopted as economics source for Uppsala model. Vahlne and Johanson (2013) argue that Uppsala paradigm is a tool by which we are out to explain how the individual MNE (multinational enterprises) evolves over time. Vahlne and Johanson (2013) also think that dynamic capabilities are grounded in the resource-based view, and are a key concept within evolutionary economics.

In this sense, evolutionary economics is a top level concept and dynamic capabilities/ resource –based view is middle level concept. Accordingly, Uppsala model is a bottom or more basic level concept. So, it is safe to say that evolutionary economics may be the important economics sources and tool to study internalization process or further amendment of Uppsala model. Thus, evolutionary economics needs to be reviewed and discussed.

In chronological order, the theoretical development path of evolutionary economics is from Schumpeter to Nelson & Winter (Langlois and Everett, 1994; Kelm, 1997; Hodgson, 2004) and focus of future research is on achieving mélange of hierarchies of explanation and how to conduct explanation in industry and individual firms (Yang, 2008; Jia, 2013; Dollimore and Hodgson, 2014). Definition and ontology are two key issues of evolutionary economics. Different economists provide different definition for the term, evolution economics. Foss (1994) argues that evolutionary economics explores creation and dissemination of knowledge in the economy and resulting structure change. Hodgson (1999) put forward three standards to define it, namely: ontological criteria (acceptance of genuine novelty as a key characteristic of the real economy), methodological criteria (against the reductionism of taking representative agents as unit of analysis) and epistemological criteria (adoption of the biology metaphor as tool for understanding the economy, but in a not uncritical way). For Geoffrey Hodgson this stance is construed as his famous NEAR evolutionary economics (Novelty-Embracing and Anti-Reductionist). Foster and Metcalfe (2001) and Jia (2004) also agree with this stance.

The theory of the firm is the second level of the framework and “dynamic capabilities” theory is direct and latest theoretical tool within the theoretical system of theories of firms. Basic theories of firms from evolutionary perspective include theory by Schumpeter (1934), theory by Penrose (1959) and evolutionary theory of Nelson and Winter (1982). Based on these theories, the understanding of the firm evolved through two routes, i.e. the first one is “resource-based view”/“dynamic capability” view that takes resources, especially knowledge, as the cornerstone of what is a firm (see Gu and Ding, 2009; Wu and Liu, 2011) and the second one is the Austrian economics route based on the Schumpeterian notion of the creative individual actor and his focus on entrepreneurs (Wang and Ahmed, 2007).

Referring to theoretical gaps in the theory of the firm, Priem and Butler (2001), and Wu and Liu (2011) indicate that, although RBV (resource-based view) and its related theories have an origin of evolutionary economics, most of their research is static/equilibrium research oriented. In this sense, dynamic methodology should be adopted and this is why dynamic capabilities theory has been paid attention by researchers. But, DCs also has its theoretical boundaries, for example, environmental conditions and types and size of firms (Ting Kuei Kuo, 2012).

Uppsala model is the basic tool for understanding internationalization and the bottom theory in the framework. Johanson and Vahlne (1977) analysed the characteristics of internationalization

process and they found that internationalization is the result of gradual decision of firms. Uppsala Model is originally based on Swedish firms' experience, and the two researchers identified four different steps of entering an overseas market, which is subject to company's market knowledge. Besides the staged process of internationalization, they put forward the concept of "psychic distance" think that firms tend to expand in a psychic nearby country. This model is also called IPT theory (internationalization process theory), i.e. process theory of internationalization (Xiao and Chen, 2008). In terms of research state of Uppsala model, some researchers such as Bilkey and Tesar (1977), Cavusgil (1980), Czinkota (1982) Root (1987) focus on process oriented research and others such as Kogut and Singh (1988) and Barkema et al. (1996) focus on psychic distance research. Besides focus on process and psychic distance, researchers also conducted research from the perspective of social network of firms (Arenius, 2002; Jensen, 2003; Prashantham and Young, 2004) and innovation (Oviatt and McDougall, 1994).

With respect to the conceptual underpinning of the Uppsala model, its scope of application and the role of learning are still issues which need further exploration. For example, some scholars (Moen and Servais, 2002; Bengtsson, 2004; Zhu and Dong, 2011) are sceptical about its limited application to the early stage of firms' internationalization. They say the more does work well for advanced stages of internationalisation. Other scholars such as Dicht et al. (1984) argue that Uppsala model researchers tend to oversimplify extremely complex internationalization process. In this view internationalisation processes of different firms can hardly be made to fit only one model. Turnbull (1987) and Andersen (1993) both think that such oversimplifications are risk or even completely wrong. Moreover, the overlap between internationalization and entrepreneurship is the focus of other body of academic research. Bengtsson (2004) put forward that when founder of firms are persons with an overseas background this will help firms to earn experience: this type of knowledge makes firms moving faster in the road of internationalization. But, research of entrepreneurship is not the focus of traditional Uppsala model. Acquisition dynamics is also outside of the research scope of traditional Uppsala model (Forsgren, 1990).

1.4 Research methodology

The case study is the main research method of this paper and its focus is on Zijin Mining Co. Ltd. According to Yin's (1984, 1994, 2001), Leonard-Barton (1992) and Pratt (2009), the case study is an appropriate method to deal with how and why issues. Moreover, Zijin mining is a special case in a peculiar background, i.e. a rapidly developing company from a rapidly developing country. A case study is useful for studying this sort of salient circumstances (Pattern 1990). The topic of the dissertation is in line with the definition of case. It is a bounded system and there is certain behaviour pattern in the system. Last, but not least, this research is also an in depth and in process research, which is appropriate to the research topic, internationalization (Forsman et al., 2002).

In this case study research validity is paid attention to. Internal validity is a paramount quality criteria. According to Merriam (1988), Patton (1990), and Yin (2001), triangulation, peer examination, member checking, researcher prejudice avoidance and constant observation, should be considered as five main strategies to secure the internal validity. With respect to this dissertation, triangulation is the key tool. More explicitly speaking, different information collection methods will be used (method triangulation), different information resource will be examined (resource triangulation), different theories will be adopted to analyse information (theory triangulation). But, while there is only one researcher and analytical triangulation is difficult, peer examination can make a compliment to some degree. With respect to this dissertation, according to Le Compte et al. (1993), background of research examples such as society, culture and economics, value independence, validity of information, characteristics of research examples should be examined. However, due to the nature of single case study, it is very difficult to improve external validity, or validity to peers of the example firm. In terms of reliability, according to Merriam (1988), triangulation and improvement of researcher's ability can be considered as the two useful tools. Moreover, instrument and protocol crafting, and database construction is also useful to secure the reliability.

Zijin is an appropriate example for the case study, with respect to its position in world gold mining industry, characteristics of shareholdings, long overseas development history, and convenience of access of the author to required information. According to the World Gold

Council (2013), Zijin is one of the leading gold producers in China. Shareholding of Zijin is very special and it is a partially state owned company. In other words, it is characterized by state owned company and private company. Zijin has over 10 years of history in overseas development and there are 16 cases which can be analysed. The list of countries includes Australia, Myanmar, Canada, Peru, Tajikistan, Mongolia, etc. This gives the author incomparable advantages in comparison with outsider researchers. To some degree, the author is not just an insider researcher for the research, but is part of the sources himself.

1.5 Findings, value, and contribution of the research project

The overseas investment pattern of ECGMCs includes two questions: how and why, i.e. How have Chinese gold companies been conducting overseas investment? And, why have these strategies performed the way they have been?

We find that, with respect to extant research, Uppsala model, features disconnection between ontology and methodology which is against the understanding framework in the Kuhnian sense. Moreover, development of Uppsala model did not keep up with the development pace of its theoretical sources such as evolutionary economics and theory of the firm.

As far as the example of the case study (Zijin) is concerned, Uppsala model is not applicable, as graduality cannot be seen in Zijin's case. Zijin did not invest in overseas market gradually, on the contrary, it invested periodically. Zijin's overseas investment is like its domestic investment due to path dependence. Moreover, its investment method is fixed as acquisition and it has fixed style for target areas and it is a new pattern. We name it as "Uppsala+" model (or "U+" model for short).

Uppsala model has mostly developed from angle of non-mining industries in limited geological areas. Notwithstanding, we depart from this existing perspective and tried extending in two ways: a) by adding the dimension of an emerging developing country that has been a source of Uppsala model rather than being on the receiving side, b) by supplementing the existing range of case studies with examples from the gold mining field. We discovered that the Uppsala model is not applicable to the case in the gold mining field with a background of emerging developing country and an amendment of Uppsala model is summarized, which can be seen as a contribution to the extant study, in terms of theoretical development of internationalization. In addition, with

respect to practical application, Zijin's behaviour summary or the new pattern is meaningful to its domestic peers, as China government is pushing them to conduct overseas investment.

1.6 Overview of the dissertation

This dissertation includes five chapters, covering this introductory chapter, literature review, research methods, case study, and conclusion. Chapter 2 offers an integrated theoretical framework in the Kuhnian sense by analysis of evolutionary economics, the resource/capability-based theory of the firm and the Uppsala model. In Chapter 3 the background of the case is introduced, and the process of data collection and analysis is discussed. In Chapter 4 grounded theory is adopted as the major stance from which to conduct the case study. Here eight core categories are identified, and then new five core categories are grouped. These five new categories can explain accurately the limits of Uppsala model in the case of Zijin and underpin "Uppsala+" model (or "U+" model). Finally, Chapter 5 rounds up the findings, contributions and limitations of the study.

Chapter 2: Literature Review

2.1 Introduction

In this chapter an integrated theoretical framework is offered for research of internationalization phenomena of firms. Theoretical and analytical perspectives are drawn from evolutionary economics, the resource/capability-based theory of the firm and the Uppsala model (U model).

Based on research of some scholars (Madsen and Servais, 1997; Moen and Servais, 2002; Manalova, 2003; Cantwell et al., 2010; Vahlne et al., 2011), evolutionary economics may be the important economics source of internationalization process research and so it may be the appropriate economics to analyse the internationalization of firm strategy and development of Uppsala model. In this sense, evolutionary economics can provide an underpinning to internationalization challenges a higher-level theoretical background. This perspective leads one to assume that learning by actors is a trial-and-error process that is subject to intense feedback from the specific selective environment they find themselves to be operating in. Strategies that work in one context do not necessarily are the best fit in other, more distant settings. The ability to learn from evolving experience and adapt to different success criteria is, therefore, crucial for organisational survival and growth.

With respect to firm dynamics, the resource-based view (RBV) provides an operational set of concepts and propositions that understand firms' choices in terms of knowledge assets and adaptation to different market environments. Following the pioneering work by Edith Penrose authors such as Kor and Mahoney (2004) and Bengtsson (2004), also regard this approach as a guide for understating corporate paths to internationalisation. Indeed, referring to the Penrosian research stream, Pitellis and Verbeeke (2007: 139) have suggested that "the international transferability of knowledge is a strategic management challenge that calls for a separate field of inquiry".

Finally, in our project, the Uppsala model will provide the basic and mainstream theoretical tool for considering internationalization processes (Bengtsson, 2004; Zhang, 2008). That is, it

provided the guiding research device to explore business internationalisation as the specific inquiry that is of concern to our thesis. Notwithstanding, the Uppsala model has limitations and gaps that are necessary to be made clear in the context of this dissertation.

2.2 Paradigms and modes of evolutionary explanation

2.2.1 Kuhnian way to explain growth and change in knowledge

As far as the theoretical background is concerned, evolutionary economics is the most general source from which we try to understand the internationalization of firms (Madsen and Servais, 1997; Moen and Servais, 2002; Vahlne et al., 2011). RBC is an evolutionary-friendly theory of the firm provides theoretical that helps to understand how knowledge is leveraged to allow the company to adapt and grow (Kor and Mahoney, 2004; Bengtsson, 2004). They make a theoretical chain. To understand this chain, an integrated theoretical tool or a general theory is needed to analyse them from a perspective of framework and history.

Kuhn's concept of paradigm is appropriate to play this role. Although Kuhn (1962) indicates that use of paradigms in social science is still a unsettled issue, later on Kuhn (1981) shows that the term paradigm is plastic and it may be used for any person or any discipline. Kuhn (1981) further explicitly pointed out that research of social science is still in the pre-paradigm stage. Laudan (1977) believed that something akin to paradigms exist in the social sciences. Li and Chen (2006) and Zhang (2010) also indicate that paradigm theory has been widely applied in the field of social science. Indeed, Dosi (1982) famously used the paradigm framework in economics to unpack and understand the evolutionary dynamics of technologies.

The paradigm concept is, in fact, a "foundational statement of the evolutionary economics perspective" (Nightingale et al., 2008: 467). Kuhn (1962) originally referred to a paradigm a language pattern or a template of solutions that certain discipline research seeks to develop. It is a discipline tradition and analysis pattern in certain discipline based on certain philosophy. Paradigm is a conceptual framework recognized by scientific (or technological) community which aims to observe, explain and interact with the reality (Kuhn, 1970).

Kuhn (1970) defined the process of knowledge evolution in four steps. First, a pre-paradigmatic period during which there is no united explanation to reality among communities of

learners. Then, a normal scientific period emerges, during which a consensus among a knowledge community is formed. However, scientific revolutionary period erupts during which it is difficult for paradigm to provide persuadable explanation to challenging abnormal cases. In time, the scientific community manages to adjust its assumptions and methods and new normal scientific period starts. Figure 2-1 illustrates the four steps.

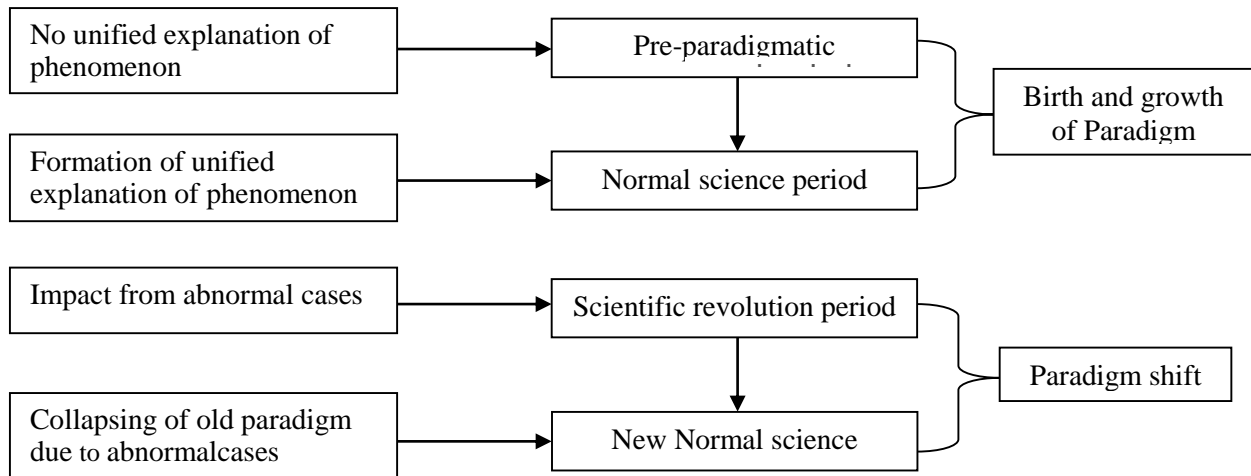


Figure 2-1: Summary of revolutionary process in a paradigm perspective.

Source: elaborations on Kuhn (1970)

2.2.2 Advances and challenges in explanations of the firm and its internationalization

As discussed in previous section, Kuhnian analysis has been applied to social science research itself. Kuhn (1981) pointed out that research of social science is still in the pre-paradigm stage. When applied to the field of evolutionary economics itself the concept of paradigm has been deemed to be very productive (Nightingale et al., 2008). Foster and Metcalfe (2001), for instance, indicate that there are some key internal problems which are still left unsolved in the field of evolutionary economics. One issue has been the whole area of the theory of the firm. With respect to the theory of the firm, Priem and Butler (2001), and Wu and Liu (2011) argue that although resource-based view and its related theories of firms has a connection to evolutionary economics, most of research is still static/equilibrium oriented.

From the point of view of the evolutionary school of thought Nightingale et al. (2008) nonetheless see significant progress in the theory of the firm. Nightingale et al. (2008) has argued that the recent progress in the theory of the firm is itself evidence of a transformation taking place in the very foundation of social sciences. According to the author, the new evolutionary theories

of the firm show that the theoretical assumptions about productive organisations call into question the role of knowledge to explain diversity and differential performance in markets. In fact, and still following Nightingale et al. (2008), the internal cognitive structure of builds from hierarchy of assumptions that are in part derived from experience in different businesses and markets. So, the new evolutionary literature on the firm (resource/capability-based research) rather than being exotic new stream of research aimed at challenging more orthodox and established theories (like the neoclassic theory of the firm) has in fact contributed to unite the current analysis of the firm in both economics and management (see Nightingale et al., 2008: 481).

If we consider internationalisation as a selection event for firms we have here a test for the evolutionary view of the firm. The Uppsala model faces challenges on this respect. For example, scholars disagree among another on application scope of Uppsala model (Dicht et al., 1984; Turnbull, 1987; Andersen, 1993; Bengtsson, 2004; Zhu and Dong, 2011). Researchers have begun to think about taking into account more variables such as relationships and networks (Coviello and Munro, 1995; Uzzi, 1997; Johanson and Vahlne, 2009) and risk (Tykesson and Alserud, 2011), strategy (Oviatt and McDougall, 1994; Welch and Lawrence, 1996). So, it is safe to say that internationalization research is still in pre-paradigmatic period and that a more integrated frame of analysis is needed.

2.3 Evolutionary theorising

2.3.1 Foundations of evolutionary economics

Lin (2004) indicates that there should be an evolutionary economics mode of explanation which is behind key modern economic phenomena. Madsen and Servais (1997), Moen and Servais (2002), and Vahlne et al. (2011) all argue that evolutionary economics may be useful to explain the internationalization of firms from different angles. So, there is theoretical support for taking this as a general background for the topic of this dissertation. However, what is evolutionary economics should be made clear.

As far as the history is concerned, Zenburg (2002) made a characterisation of economics that, although there is a risk of over simplification, economics can be divided into two groups,

Newtonian (mechanistic metaphor) type economics and biology type economics. Marshall (1961) had already put forward a view that the “Mecca” of economics is economic biology, rather than economic mechanics; he referred to the former as more complex and dynamic. In fact, the mainstream economics is often criticized by its equilibrium methods by a number of researchers (Kapp, 1968; Blatt, 1983; Swaney and Premus, 1983; Brunner, 1984; Robert, 1985; Clark and Juma, 1987; Saviotti and Metcalfe, 1991; Silverberg, 1992; Saviotti and Mani, 1993; Leydesdorff and Besselaar, 1994; Whalen, 1996; Yang, 2006). Evolutionary economics has grown as a paradigm in the social sciences and Hodgson (2007) argues that evolutionary economics may become the mainstream economics in the future. In this dissertation, evolutionary economics is regarded as the appropriate economics worldview to describe the economy and the source of explanatory devices to deal with specific economic issues.

In chronological order, the theoretical development path of evolutionary economics is as follows: from Schumpeter to Nelson and Winter (Langlois and Everett, 1994; Kelm, 1997; Hodgson, 2004; Yang, 2008). While its trajectory is more or less clear, different economists provide different definitions for the term, evolutionary economics. Foss (1994) argues that evolutionary economics explores creation and dissemination of knowledge and the resulting structural change. Saviotti and Mani (1993) said that modern evolutionary economics is a complex of biology, non-equilibrium thermodynamics, and enterprise theory and bounded rationality. Hodgson (1999) put forward three standards to define it, namely: ontological criteria (acceptance novelty in a theory), methodological criteria (non-reductionist theorising or no) and metaphorical criteria (adoption of Darwinian or biological language, however adapted to the economic object of analysis). To Hodgson evolutionary economics is NEAR, i.e. *Novelty-Embracing and Anti-Reductionist*. In this study, we adopt the general definition of Hodgson.

2.3.2 Key evolutionary concepts

After outlining evolutionary economics, it is necessary to clarify some concepts. According to Yang (2006), key concepts or assumptions of evolutionary economics include appropriateness of “generalized Darwinism”, “population thinking/hierarchical views”, “satisficing”, “path dependence”, etc.

Silva and Teixeira (2006) state that specific characteristics of evolution are still a puzzling issue. Some disputes originate from differences at the ontology or philosophy levels. Some

scholars (Hodgson, 2010; Hodgson and Knudsen, 2010; Deng, 2011; Wang, 2012) argue that the philosophical evolutionism is generalizable although other scholars criticize it to every domain (Smith, 2009). Some other scholars even want to adopt self-organization theory to replace Darwinism (Witt, 1997), which is criticized by Hodgeon who insists Darwinism (Jia, 2005). Generalized Darwinism indicates that, Darwinism is not only applicable in biology domain, but also useful in social science domain or any open system (Yang, 2006). Although Generalized Darwinism also recognizes the big difference between biology and economics, it states that variation and selection can be applied both in economics and biology (Yang, 2008). Our research assumes that concepts such as these can indeed be applied to the analysis of economy, namely firm investment in foreign territories.

Population thinking and hierarchical views are both important terms for evolutionary economics. Hodgson (1999) suggest that the world may be seen as an integrated hierarchical structure. Every layer has dual nature. In terms of the layer itself, it is a whole, but at the same time, it is part of the other layer. It should be noted that every layer is not the sum of its component layer. Based on Hodgson's findings, Dopfer (2004) argues that, there exists simultaneously upwards and downwards causation and feedback relationship. Population thinking is similar to the hierarchy view and points out that actors should be analytically placed in an interrelated dynamic system or group of individuals. The aim is to analyse the dynamics of interactivity between individuals in the group. It is the counterpart term of typological thinking of mainstream economics which regards variance as deviation from ideal world and the distortion caused by temporary interventional force (Jia, 2004). The core of both notions is the principle of "emergence". This principle indicates that lower layer constitutes material high layer units of analysis, but, at the same time, novelty occurs at the more general level entities cannot be linearly inferred from the lower levels. Due to novelty or creation, sum of parts is not equal to the whole of individuals and the former cannot be explained by the latter. This perspective causes this thesis to be cautionary when extrapolating lessons to the industry level from case study evidence

Satisficing behaviour is opposed to optimization. The assumption is that, when individuals are not satisfied, they continue searching for superior solutions. If the possibility of achieving the original target is low, individuals tend to lower the standards of satisfaction and suboptimum is the practical option. But when individuals find satisfactory results by searching, their appetite for satisfaction is higher accordingly (Witt 2001; Yu, 2013). The satisficing hypothesis was put

forward by Herbert Simon and applied by James March and colleagues to the behavioural theory of the firm (Hodgson, 1999, 2004). Evolutionary economics accepts this view and the justification is that the creation of novelty cannot be achieved once and for all and the specific outcomes cannot be predicted either. And so decision-making is a process and not an isolated choice event (Yu, 2013). For our thesis this implies that strategy-making in the real business world is not a simple question of right and wrong, but a discovery process that is marred by radical uncertainty and that progress builds on past experience but is not necessarily predictable from it.

Time is also an important term. Robinson (1962) explains time in the following way: history advances towards unknown future from past which has gone forever. Bergson (2000) and Ebner (2003) also hold a similar view. Winter and Nelson (1992) see economic development a process in which the situation of a certain period results from the opportunity distribution of situations in the previous period. In this way, the economic phenomenon is time conditioned. Furthermore, Ebner (2003) further indicates that it is not only time conditioned but also area conditioned. David (1985, 2001) encapsulated these insights with the concept of “path dependence”, which has origins from evolutionary economics (Lee and Silke, 2015) and is based on research of technology history analysis (Nelson and Winter, 1982) and habit evolution.

Liebowitz and Magolis (2000: 981) proposed a definition of path dependence: “Most generally, path dependence means that where we go next depends not only on where we are now, but also upon where we have been. History matters.” In other words, the concept assumes that history is crucial to understand final outcomes. The past is held to matter, but in specific ways. Development is subject to small historical accidents and these occasional random factors impact dynamic systems through feedback mechanisms (Arthur, 1989; Cao and Xi, 2008). This may lock-in particular states of affairs that are not necessarily the most efficient (North, 1997). These assumptions are crucial for us because, as Johanson and Vahlne (1977) showed for international business studies, present conditions and current activities not only condition present performance but also impact future knowledge assets and market positions.

2.3.3 Remaining limitations

With respect to theoretical gaps, Dopfer (2004) indicates that, opinions vary on methodology and research interests of evolutionary economics. Silva and Teixeira (2006) even argue that specific characteristics of evolution are still a puzzling issue. Foster and Metcalfe (2005) submit that the existence of internal problems should be considered as a potential for further development of evolutionary economics. Yang (2008) indicates that the two main problems are vague wording and lack of a totally finished research paradigm. Hodgson (2007) also support this view but he argues evolutionary thought can still achieve a higher level of generality. In terms of research targets, Liu (2005) points out that research interested have shifted from industry to individual firms. It means that the micro level has become a more sophisticated area though the application of evolutionary economic theory. Thus, to this area of analysis we now turn. In addition, as a top level theory, evolutionary economics is not systemized well and it may directly leads to the some theoretical problems of the whole framework, such as maturity and logic.

2.4 Theory of the firm

2.4.1 Origins and key concepts

RBV, which is based on Penrose's theory, is credited as a direct theoretical source in the development of the Uppsala model (Bengtsson, 2004; Kor and Mahoney, 2004). Thus, analysis of RBV and, especially, developments of its related theories of the firm are helpful to identify the development trends (and gaps) of the Uppsala model. In other word, theory of the firm provides a broader explanation or theoretical underpinning to the Uppsala model. In the Uppsala model the firm is the carrier of the internationalisation process and the specific methods of internationalisation are in turn trajectories for firms to acquire and sustain competition. So, what is a firm and what is the nature of competitiveness of firms are crucial issues to be reviewed.

Based on research of Hu and Liu (2014), and Zhao (2014), it can be said that the theory of the firm experienced same development path as economics, from equilibrium to evolution, from static analysis to dynamic analysis, and from external focus to internal focus. Following Gu and Ding (2009) and Li et al. (2011) we can say that early inspirations for the evolutionary theory of

the firm are Marshall (internal resources that have to be combined to achieve production) and Schumpeter (the essence of economic activity is innovative effort) and modern basic building blocks are Penrose (it is not resources by themselves but what are the services the firm is able to extract from resources) and Nelson and Winter and (firms are repositories of knowledge and learning platforms). Based on these four pillars the theory of the firm evolved through two approaches. The first one is the research stream from the resource-based view (RBV) to the dynamic capability (Gu and Ding, 2009; Wu and Liu, 2011). On the other hand, although we are not to deepen this strand in this thesis, there is the Austrian school which emphasises discovery taking place with open-ended market processes and refers to entrepreneurship as a process of continuous creation of rents and economic profit (Lewin and Phelan, 2000).

According to Marshall (1920) there is division of labour among industries and division of labour inside the firm between internal departments. As Marshall himself put in his book *Industry and Trade* he was concerned not with pure economics but with “industrial technique” and “business organisation”. He was emphasising knowledge as a core factor of production and that knowledge of the firm was more than the skills of the workers in it.

Schumpeter (1934) also points out that the enterprise is a combination of factors of production. By making new combinations “creative destruction” can operate through firms. Equilibrium of economy is interrupted frequently by economic development, and firms are implicated in the new knowledge producing activities that disturb the economic process. This consideration about the purpose of firms in the capitalistic system makes Schumpeter a key contributor to the modern understanding of firms (Zhang, 1993).

Penrose (1959) argue that firm is a management organization and it is a combination of resources such as human resources and other resources. If we say Schumpeter escaped from the influence of mainstream economics we can say that Penrose provided the operational basis of evolutionary theory of firm understanding. Internal resources are the ultimate engine of firm development but management is the spark. In her analytical frame at firms generate economic value not by merely possessing resources; the key is the knowledge of how to deploy them effectively and take advantage of them by growing in the same line of business and diversifying through new product applications (Kor and Mahoney, 2004).

In turn Nelson and Winter (1982) argue that the “DNA” of firms is a series of routines,

which is a combination of internal procedures and recurrent methods of organising which simultaneously save on bounded rationality and solve technical problems that have value from the point of view of potential customers. These evolutionary authors emphasise that routines are repository of knowledge but that mutations occur in routines that make the firm as a whole evolve and master new techniques of production and come up with new kinds of products. Transformation, adjustment, and learning are what keep companies competitive, not knowledge *per se*.

2.4.2 Resources, knowledge and dynamic capabilities

RBV originates from the research on firm-specific abilities. This research stems from the research of Lippman and Rumelt (1982), was further developed by Wernerfelt (1984, 1995), and peaked through the research of Barney (1986a, 1986b, 1991) and Peteraf (1993). The birth of RBV is a departure in the nature of explanations of enterprise competition and competitiveness (Zhou and Xiang, 2008). This approach shifted the locus of explanation from external factors to internal factors (Xiong and Xiong, 2014).

Lippman and Rumelt (1982) were the first scholars to articulate a RBV. He argues that difference of enterprise performance results from certain special abilities that were difficult to imitate. The work by Wernerfelt (1984) further escaped the hurdle of analysis from product angle and emphasised the importance of internal resources themselves. To these he assigned the causal powers in the maintenance of competitive advantage. This author agrees with the view that internal accumulation of resources and knowledge are the forces by which the firm gain excess earnings or rents (Liu, 2002).

Based on the view of Wernerfelt, Barney (1991), in turn, developed the theory more systematically. He argues that a firm's bundle of resources must be valuable, rare, imperfectly imitable and appropriately organised in order to be source of a sustained competitive advantage. In his famous VRIO approach:

- “Valuable” means that resources can be accounted as a measure to identify opportunities and deal with dangers;
- “Rare” means that the key resources are scarce, they cannot be owned by majority of firms at low cost;

- “Imperfectly imitable” means that the competitors cannot get the resources by purchasing, so dependence on historical circumstances and social complexity make the resource base of the firm quite unique;
- “Organisation” means that the assets need active coordination and to be geared to strategic goals to make an economic impact.

So, what are resources? A resource is the basic concept of RBV and it means the firms’ physical and HR resources, tangible and intangible resources, controlled proprietary assets and capabilities, organisational processes and characteristics, information and knowledge, etc. (Hall, 1992; Hafeez et al., 2002). They are the infrastructure for the execution of strategy and the basis for improvements in efficiency and profit. The VRIO criteria mean the firm has a source of a sustained competitive advantage (Barney, 1991).

And what are capabilities? For Winter (2000) “capabilities” represent a repository of historical experiences and organizational learning. Prahalad and Hamel (1990), and Leonard (1992) argue that “core competences” that distinguish a corporation from competition. Leonard (1992) defines “core capabilities” as a combination of operations by which competition advantage can be identified and achieved. Following this account four dimensions are of note: they exist at the employee level, they are embedded in technological systems, they are directed by management system, and they are related to value and rules.

And how can resources and capabilities be contrasted understood? Wu and Liu (2011) distinguish between capabilities and resources: capabilities are the skills by which resources are used to complete activities and are rooted in processes and practices; whereas resources are the basic unit and capabilities are how these units are connected to generate competitive advantage. As Schreyogg and Kliesh-Eberl (2007: 914) synthesise:

“There seems to be a consensus that a capability does not represent a single resource in the concert of other resources such as financial assets, technology, or manpower, but rather a distinctive and superior way of allocating resources.”

So, capabilities are knowledge about the ways to allocate resources. Then, what are firms in this knowledge perspective? Firms come out has combination of intangible resource, namely knowledge (Gu and Ding, 2009). Allee (1997) proposed that competitive advantage can be identified by use of unique knowledge and operational capabilities in making efficient production

companies. Zollo and Winter (2002) take firm capabilities as the result of the co-evolution of accumulation of “tacit knowledge” (embodied in people) and explicit knowledge (explicit and codified information that can be proprietary). In particular, “tacit knowledge” is the type of characteristic that yields heterogeneity and differential positions in the market (Nonaka, 1994). In this regard, the enterprise can be regarded an organisation that creates conditions so that more individuals integrate their unique knowledge assets into a body of collective integrated knowledge (Grant, 1996). The knowledge perspective provides a relatively appropriate answer to question of how firms maintain their competitive level. At the same time explains this perspective sheds light on how firms grow in different ways with different organisational cultures rooted in recurrent practice and embedded into particular individuals (Conner and Prahalad, 1996).

In sum, the development of this research about the firm allows the original theory of Penrose to be completed and re-interpreted. Penrose (1959) conducted a detailed analysis that knowledge can be taken to articulate a specific relationship between resources, capabilities and knowledge. She believed that resources of firms are the basis of enterprising capabilities and she can be read to have proposed a resource-based business growth path: resources help generating productive service and this knowledge expansion (including managerial knowledge) is what promotes the growth of the firm itself.

However, there may be a darker side to the sources of competitive strength. Leonard-Barton (1992), for instance, considered capabilities from an alternative angle. With core capabilities complemented can become “core rigidities”. That is to say, strengths can become too dominant and hold the organisation too stiff if the environment changes and ends up favouring other capabilities. Psychological commitment and path dependence lock-in are cognitive and organisation traps since previous investments, decisions and routines resulted in recurring growth become out of sync with the selective environment (Schreyogg and Eberl, 2007). Fast changing contexts, where innovation and adaptiveness are paramount, can transform strengths in weaknesses given their inertia and immobility.

If “static” capabilities may not be suitable for dynamic environments then it is pertinent to review the new developments of the theory of firm literature. Hence, the “dynamic capability” comes forth, which can be seen as an extension of the RBV research. RBV originally did not explain how to make use of specific resources to achieve competition advantage in dynamic

environments but the dynamic capability was developed to solve this problem (Diao and Li, 2014).

Teece et al. (1997: 516) were the first to pose the definition of dynamic capabilities:

“A firm’s dynamic capabilities are the firm’s capability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments.”

As Bernstein and Barret (2001) emphasize other definitions broadly complement this one by employment related terms such as processes and routines. One instance is highlighted by Eisenhardt and Martin (2000: 1107) who define dynamic capabilities as the firm’s “processes to integrate, reconfigure, gain and release resources – to match and even create market change.” Another version is emphasized by Zollo and Winter (2002: 340) who moreover define them as “a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness.” Moreover, Zahra et al. (2006) defines dynamic capabilities as a firm’s constantly learned problem-solving practiced in an intermittently stable and explosive pattern of collective activity in connection with an evolving environment, through which the company creates and modifies its routines based on its internal or external resources. All in all, most of scholars propose that dynamic capabilities are abilities to use resources creatively to respond to changing circumstances (Helfat, 1997; Teece et al., 1997; Zahra and Gorge, 2002; Zahra et al., 2006; Winter, 2003; Li and Liu, 2014). To be short, dynamic capabilities are processes to create and adopt, modify and allocate knowledge and routines to address its challenging environment.

Except to discussion on definitions of dynamic capabilities, scholars deconstruct dynamic capabilities from different angles. Teece (2007) put forward three factors: positions, paths and processes, which will bring firms sustainable advantages. It should be noticed that these three are not dimensions of dynamic capability, rather they are influencing factors: “position” actually refers to internal resources and external relations with related parties; “process” refers to routines and the way things are done in the firm; “paths” refer to organisational learning trajectories. A system or process that can monitor the internal and external environment to provide information to support for execution of strategy is needed to “dynamise” capabilities of firms (Schreyögg and Eberl, 2007).

So, the sources and levels of dynamics are important. Collis (1994) is the first one to put forward a decomposition of dynamic capabilities in three levels: abilities to conduct functional activities, abilities to conduct operation activities, and abilities to design and execute strategy by recognition and development of its potential. Based on prior literature, Winter (2003), Cepeda and Vera (2007), and Wang and Ahmed (2007) respectively put forward their views on layered dynamic capability. Their view argues that basic level capability refers to resource management, higher level capability to conduct operations, and highest level capabilities to creating and modifying capabilities according to the changing environment. Scholars also began to working out different perspectives including process (Eisenhardt and Martin, 2000), intercultural competencies in orchestrating global networks (Griffith and Harvey, 2001), routines and capabilities (Zollo and Winter, 2002), the role of decision-makers and entrepreneurship (Zahra et al., 2006), the relationship between operational skills and strategic-level capabilities (Winter, 2003), the nature of capabilities (Helfat et al., 2007), implementation and decision making (Barreto, 2010), and the composition of capabilities (Collis, 1994; Eisenhardt and Martin, 2000; Winter, 2003; Wang and Ahmed, 2007; Helfat et al., 2007; Pandza and Thorpe, 2009).

2.4.3 Remaining gaps and difficulties

Developments in the theory of the firm partially solved the “black box” problems by which RBC was puzzled. Barney (1991), Collis (1994) and Priem and Butler (2001) argued that although RBV and its related theories of firms has an origin of evolutionary economics, a great deal of research has been static or equilibrium oriented. Moreover, because of rigidity or stiffness of core capabilities there is no evident causal relationship between core capabilities and competition advantage; to some degree, there may be negative connection (Leonard-Barton, 1992; D’Aveni, 1994). In other words, the relation between core capabilities and competitive advantages remains unsolved. So, from the perspective of theoretical framework, it may influence the development of the bottom level theory.

Dynamic capabilities were proposed to specify how firms can proactively adapt to the market. However, many scholars criticize “dynamic capabilities” for being tautological (Mosakowski and McKelvey, 1997; Eisenhardt and Martin, 2000; Li and Liu, 2014). The debate on the unclear definition of dynamic capabilities is an issue. In addition, there is controversy about which kind of environmental conditions help capabilities staying in flux. Some other

scholars are unable to recognize a strong relation between environmental conditions and dynamic capabilities (Karim, 2006; Danneels, 2008).

The types of firms for which dynamic capabilities are more crucial are also a matter of debate. Some hold that multinational enterprises in global markets (Teece, 2007) as well as bigger, multidivisional and more diversified firms (Zollo and Winter, 2002) may benefit. On the other hand, small, new and entrepreneurial firms are forgotten by most scholars (Salvato, 2003; Zahra et al., 2006; Kale and Singh, 2007; Doving and Gooderham, 2008).

Kuo (2012) argues that current research is still not enough and there are a lot of room left to exploit. First, degree of dynamic capabilities is an untouched area. Second, some scholars indicate that separating objects of analysis between new ventures and established corporations is necessary (Zahra et al., 2006; Barreto, 2010) Third, researchers emphasized too much on effectiveness of dynamic capabilities to firms and this is obviously linear thinking. Actually, the limits of dynamic capabilities reflect the further correction of methodology from equilibrium to evolution.

2.5 Business internationalisation

2.5.1 The original Uppsala model

Johanson and Vahlne (1977) put forward the Uppsala model (U-model) with a focus on internationalization process and location. Judging from their latter research (Vahlne et al., 2011; Vahlne and Johanson, 2013), although they amended their model to some degree, the main structure and basic characteristics remains the same. Based on the two main contents of the model (process and location), scholars conducted a lot of empirical research, whose conclusions include support and criticism of the original model. This keeps on being a preminent theoretical framework that is applied to multinational enterprises (MNE) and foreign direct investment (FDI).

Uppsala model was primarily based on research by Johanson and Weidersheim (1975) of the Sweden firms experience and identified four different steps of entering an overseas market, which is subject to company's market knowledge and its situation:

- i. No regular export activities (sporadic export);
- ii. Export via independent representative (export mode);

- iii. Establishment of a foreign sales subsidiary (light FDI);
- iv. Foreign production/manufacturing (deep FDI).

Johanson and Vahlne (1977: 27) analysed the characteristics of internationalization process and they found that “Market knowledge and market commitment are assumed to affect both commitment decisions and the way current activities are performed. These in turn change knowledge and commitment” This mechanism can be illustrated by the following figure.

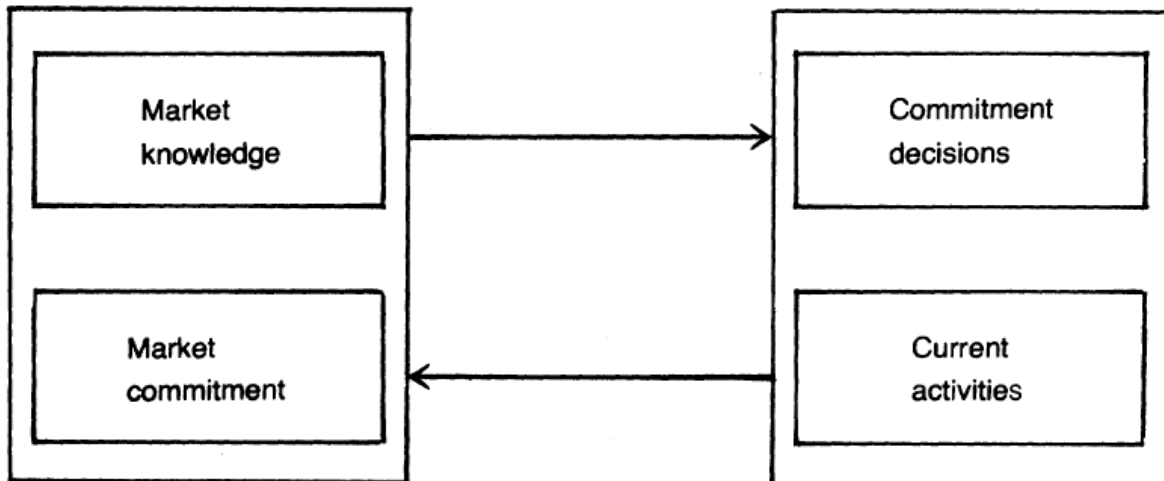


Figure 2-2 The Basic Mechanism of Internationalization

Source: Johanson and Vahlne (1977)

In this sense, the appropriate definition of U model may be interpreted in the following way:

“The internationalization of the firm is seen as a process in which the enterprise gradually increases its international involvement. This process evolves in an interplay between the development of knowledge about foreign markets and operations on one hand and an increasing commitment of resources to foreign markets on the other.”

(Johanson and Vahlne, 1990: 11)

There are some key issues to be clarified, for example, focus of the model (entry modes or process modes), and economics source (neoclassical economics or evolutionary economics). With respect to the first issue, it is believed that Johanson and Vahlne’s original research is entry modes oriented, but even the two founders argue that the U model focuses on the processes of internationalization, rather than entry modes or choices (Johanson and Vahlne 1992). As far as the economics perspective is concerned, U model is a heterodox contribution as it goes against the neoclassical traditions and refers to change in real historical time. Moreover, this has become

more so over time as Johanson and Vahlne tried to update the U model by “placing the model in a network context as opposed to a neoclassical type market having many anonymous suppliers and customers” (Vahlne et al., 2011: 3), and pointed out that: “(n)ow the business environment is viewed as a web of relationships, a network, rather than as a neoclassical market with many independent suppliers and customers.” (Vahlne and Johanson, 2013: 1411) Vahlne and Johanson (2013) argue that Uppsala paradigm is a tool by which we are out to explain how the individual MNE evolves over time. Vahlne and Johanson (2013) also proposed to update the U model by bringing in dynamic capabilities which are grounded in the resource-based view and is a key concept within evolutionary economics. All the above goes to show that U model has roots in the soil of evolutionary economics, rather than neoclassical economics.

As “the most important of the explanations we provided had to do with two interrelated sub-processes: experiential learning and commitment building.” (Vahlne et al., 2011), the importance of knowledge and psychic distance should be emphasized. It is the Uppsala model that brings the issue of knowledge to the forefront of the study of internationalization phenomenon. Ayal and Zif (1979) argue that there are two kinds of international market knowledge: experience knowledge and objective knowledge. The former, which is usually owned by persons, is difficult to copy and the latter is easy to be coded and copied. In terms of the nation-exclusivity of experience knowledge, Eriksson et al. (1997) also has the similar idea. But, according to other authors, there is no doubt that experience knowledge is the key of international market knowledge (e.g. Forsgren, 2002). According to Eriksson et al. (1997) and Hadley and Wilson (2003), experience knowledge can be divided into international commercial knowledge (international market knowledge), international institution knowledge (international political and culture knowledge) and international operational knowledge (tacit knowledge of internationalization practice). The former two can be acquired from the domestic network and the latter should be accumulated from the internationalization practice.

A key theoretical concept of the Uppsala model was supplied by Johanson and Wiedersheim (1975: 308), who put forward the concept of psychic distance and define it as “...factors preventing or disturbing the flow of information between firm and market”. Nordstrom and Vahlne (1992) also holds as an important variable a similar notion, but they further focus on impediments to learning by firms. These views hold that firms tend to expand in a physically nearby country. The reason is that they have related knowledge of the target market and possess

some necessary resources. Then, when they possess more resources and learn more knowledge and access to networks, they will go more distant country. This model is also called “process theory of internationalization” theory or PTI theory (see also Xiao and Chen, 2008; Fletcher and Harris, 2011). For instance, this model seems to explain well the early international export and investment pattern of Norwegian firms (Amdam, 2009).

Theoretical tradition is necessary to be reviewed again. As discussed in previous sections, Panrose’s theory is based on Marshall to some degree and provided nourishment to Nelson and Winter (1982) whose theory feeds into RBC/ Dynamic capabilities perspectives. The other theoretical development route is originated from Schumpeter whose theory influenced the Austrian school in terms of role of entrepreneurs, and Nelson and Winter in terms of evolutionary idea. According to Bengtsson (2004), idea on knowledge of U model is from the knowledge theory of Panrose (1959). So, as can be shown in the following Figure 2-2 which is summarized by the author based on the discussion of previous section, the latest development result of these two theoretical development routes (Marshall to Schumpeter to RBC/capabilities; Austrian theory) may provide reference to development of U model.

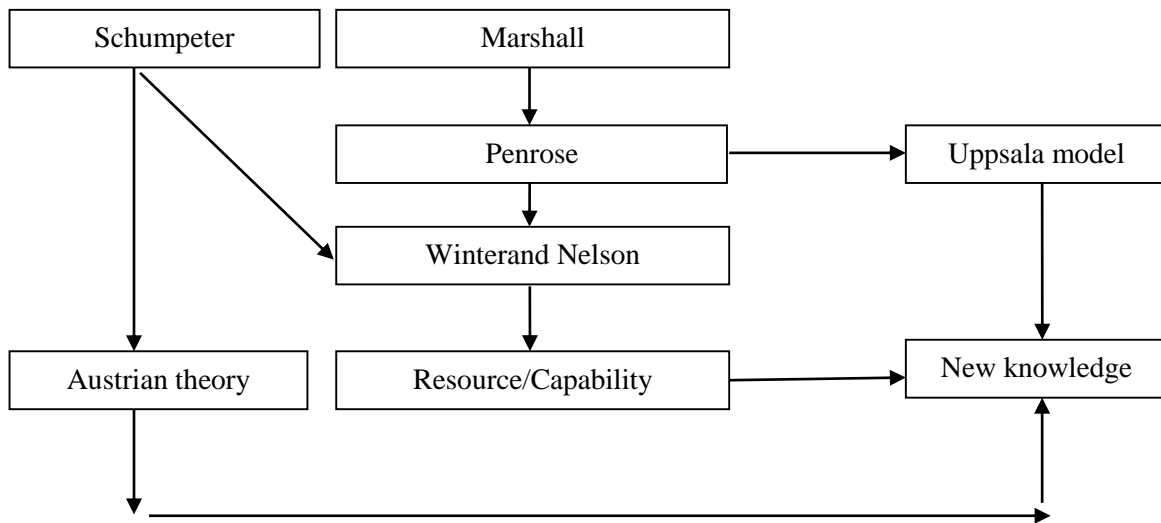


Figure 2 - 3: Development path of theory of the firm and Uppsala model

Source: based on discussion of the above sub-section 2.5.1

2.5.2 Amendments and revisions of the Uppsala model

Johanson and Vahlne (1990) extended their research on three issues: research targets, methods of acquisition of knowledge, application of experience. Their extension on their original

model did not change the core, stage and psychic distance and put forward three exceptions:

- A. Knowledge results in the pace of internationalization. Firms with more knowledge move faster;
- B. The way by which knowledge could be acquired is connected with the market. When the market is stable, knowledge could be acquired by the other way, rather than accumulation of experience;
- C. Experience of firms could be extended from one market to other similar markets.

Johanson and Vahlne (1990: 11) updated his original version of U model into the 1990 version and indicated that: “a distinction is made between state and change aspects of internationalization. The state aspects of internationalization are market commitment and market knowledge; the change aspects are current business activities and commitment decisions. Market knowledge and market commitment are assumed to affect decisions regarding commitment of resources to foreign markets and the way current activities are performed. Market knowledge and market commitment are, in turn, affected by current activities and commitment decisions.”

More recently, in the 21st century, Johanson and Vahlne (2009) did further research and put forward amendment of their model. These amendments reflect their research direction shifted from internationalization to globalization. But, according to another study (Johanson and Vahlne, 2011), they did not change anything in terms of the key concepts and structure of their original model.

Besides Johanson and Vahlne, there are many researchers who have conducted meaningful research on U model and related theories. Based on their research, the traditional Uppsala model has two main theoretical directions: process theory and psychic distance. According to these two directions, research may be divided into two types. Bilkey and Tesar (1977), Cavusgil (1980), Czinkota (1982), Root (1987), Meji and Umemoto (2010) focus on the former. Location research or psychic distance research most focus in the factors which constructs the psychic distance and the relation between psychic distance and development stage (Kogut and Singh, 1988; Barkema et al., 1996), and others focus on utility of psychic distance and interaction with other factors (Wong and Ellis, 2002; Autio, 2005; Ellis, 2008; Ojala and Tyraainen, 2009).

If we name the above research as research from internal perspective, research from other perspective such as network, innovation and strategy which are not included in the U model

originally or can be deemed as new variables, may be considered as research from external perspectives such as risk, innovation, strategy and network. These researches include Mintaberg (1984), Mintaberg and Mchugh (1985), Axinn (1988), Coviello and Munro (1995), Welch and Lawrence (1996), Uzzi (1997), Chetty and Holm (2000), McDougall and Oviatt (2000), Jensen (2003), Johanson and Vahlne (2003), Prashntham and Yang (2004). Based on their researches, the psychic distance and stage assumptions of the U model may be criticized.

2.5.3 Theoretical gaps in the Uppsala model

The U model has been criticized by researchers in different respects for years and many scholars including the founders of the model tried to update the model by adopting some new variables. But the author argue that theoretical gaps about traditional U model focus on lack of introspection on framework or paradigm, which can be reflected from perspectives of lack of consideration of entrepreneurship, intervening of neoclassical economics, limited geographical area and industries, validity to limited outside environment of research, etc.

Focus on consideration of bringing in more influencing factors, rather than introspection on framework or paradigm, is the most crucial issue for theoretical gaps of the U model. For example, Johanson and Vahlne (2009) found that there are other factors, except for experiential learning, and commitment which are involved in the issue of internationalization, and it is why they (Johanson and Vahlne, 2009) updated the U model by adopting network (Johanson and Vahlne, 2009) and dynamic capabilities (Vahlne and Johanson, 2013). The author argues that it is not an appropriate manner by which a practical tool in a theoretical system may be developed. The key issue is that the “normal” development of the traditional U model did not pay attention to the core concepts (such as entrepreneurship) of its source theories, and keep up with the latest theoretical result (such as dynamic capabilities) of its source theories, from the perspective of paradigm development. In other word, there is no synchronous development of internationalization process theory (U model) and its source theories such as evolutionary economics and RBC/dynamic capabilities.

Lack of consideration of entrepreneurship is commonly criticized. Axinn and Matthyssens (2002) argue that the model neglects the important role of management. Although Johanson and Vahlne (2009) argue that their model can easily incorporate managerial discretion and strategic intentions, they also indicate that managers will be biased by path dependence. It is not

meaningful to track if Johanson and Vahlne conducted empirical research to test the possibility of “being biased”, and if the other scholars who criticized the model, conducted further study to stand for their view, the question why entrepreneurship should be noticed remains unnoticed. In fact, entrepreneurship is a perspective which is provided naturally from Austrian School and can be traced to Schumpeter, as shown in Figure 2.2. For example, Witt (1999: 99) indicates that the “fate of a firm usually hinges upon who takes the entrepreneurial lead this school is originated from.” Schumpeter (1934) contributed to the construction of theory of entrepreneurial capabilities. So, entrepreneurship is a core concept of Schumpeter and Austrian school which are theoretical sources of U model, as discussed in the previous sections, and naturally cannot be deemed as a new variable. To discuss internationalization process of a firm, it is necessary to think about managers. In this sense, when the bottom level theory encounters theoretical obstacles, tracing the source or high level theories which are more general makes sense. It is absolutely right for scholars such as Axinn and Matthyssens (2002) to pay attention the lack of consideration of the role of managers, but the deeper level meaning is neglected.

Moreover, lack of introspection on paradigm also leads to malposition of the U model in the system or framework of international process research. Some scholars such as Anderson (1993) argue that the U model is general and should be applicable to all specific situations. Although Johanson and Vahlne (2009) refused to admit it seemingly by acknowledging the U model is not considered as an exact reflection of reality, they still insisted that the model can explain the most fundamental component of reality. In other word, Johanson and Vahlne (2009) argue that the U model should be considered as a general theory. As discussed in previous section, according to the theoretical structure of paradigm thinking in the Kuhnian sense, the U model is just a bottom theory and tool, and it is not necessary for the model to play a role of its higher-level theories such as evolutionary economics. Hence, the author argues that discussion on if the U model is general, is a false proposition.

Criticism on the determinism among the variables in the U model such as learning, stage and psychic distance is common too. In terms of learning and stage, Forsgren (2002) argues that learning by imitation, acquisition of other firms, and searching are all non-experiential and also speed up firms’ internationalization process. Andersen (1997) and Petersen et al. (2003) accused the model of being too deterministic and Johanson and Vahlne (2009) denied this accusation by updating their model by adopting the concept of network. The stage view of the U model is

criticized forcefully too. Some scholars such as Arenius (2002), Jensen (2003), Prashantham and Young (2004) conducted research from the perspective of network, Oviatt and McDougall (1994, 2000) from the perspective of INV, Rialp et al. (2005) from the perspective of born-international firms, revealed that in the context of their study the stage view does not work. The author argues that these criticisms do exist and it reflected to some degree that introduction of new context and perspective, for example, Jensen (2003) studied on industry of banks and Prashantham and Young (2004) researched on software industry. It means that traditional U model is context-oriented and not general. It is in line with the position of the model in the paradigm. Psychic distance is also criticized by scholars. Madsen and Servais (1997), Tykesson and Alserud (2011) tested it and revealed that it is not so applicable in some context. Even Johanson and Vahlne (2009: 1421) admitted that “We do believe that the correlation between the order in which a company enters foreign markets and psychic distance has weakened” and began to replace it by uncertainties. So, it is acceptable to say that the correlation between psychic distance and the order of entering is weak, but neglecting it is not right. This again indicates that the U model is a context-oriented tool, and it should be, as far as its position in the paradigm.

Intervening of neoclassical economics in research methods and updating trend is also a crucial concern. Andersen (1997) indicate that the U model is too static, in terms of research methods, although the theoretical source is evolutionary as discussed in previous sections, most of research adopted quantification methods of neoclassical economics to obviously pursue linear relation between variables. For example, with respect to the 1977 version of U model, risk is translated by a mathematical expression, $R_i = C_i * U_i$ (Figueira-de-Lemos et al., 2011). Here, R_i is the existing market risk situation and is the product function of C_i , the existing market commitment, and U_i , existing market uncertainty. The index i denotes a certain market. It is a typical method of neoclassical economics. It is not necessary to list all of the researchers who adopted methods of neoclassical economics to test the U model or put forward a new model. It is very difficult to find a researcher to use non-neoclassical economics. As far as the updating trend is concerned, Johanson and Vahlne (1990, 2009) proposed to merger the U model and the eclectic paradigm which is grounded in neoclassical economics and finally found that “the differences between the underlying assumptions of the two perspectives are too large for a merger” (Vahlne and Johanson, 2013: 191). The authors argue that it is definitely difficult to merge an

evolutionary model with a neoclassical model, as they have different source theories behind. They are belonging to different paradigm.

Focus on only one isolated period (overseas development period or period after the decision to go abroad) of firms is always neglected by researchers too. Although Tykesson and Alserud (2011) noticed this issue, their criticism perspective is aimed on U model's validity to decision making. That is to say, they did not notice that just focusing on one period of firms or examples is also a thinking of neoclassical economics. Meiri and Umemoto (2010) put forward the knowledge model of firms' internationalization, according to which, choice of market is subject to knowledge of the firm. Internationalization includes pre-internationalization stage without any experience, a preliminary stage with little knowledge and internationalization stage with long-term knowledge. In this sense, time span of research on examples is both an independent issue, but also an issue of choosing economics. Choosing an isolated development period of firms is inconsistent with the evolutionary idea of evolutionary economics.

Validity to limited geographical areas, applicable industries and lack of discussion on overseas business development methods is another issue. Johanson and Vahlne (1990) recognized that U model could be expected that the model's validity is limited to countries like Sweden that are rather small and highly industrialized. Although the research area extends originally from Sweden, to Finland (Forsman et al., 2002), US, Japan and Turkey (Bengtsson, 2004), and this of course means that the model does work in some geographical areas, a question hang over on if it is applicable to other countries, especially less developed countries. Of course, it does not follow that there no exist research on developing countries; on the contrary, it is easy to find some. But, it exactly means that there are theoretical blanks left to be tested. In terms of the types of research examples, like Johanson and Vahlne (1990: 14) argue that "in particular, the model receives strong support regarding export behavior", many other scholars also adopted importing and exporting firms as examples (Dichtl et al., 1984; Bello and Barksdale, 1986; Ford et al., 1987; Hook and Czinkota, 1988). Although some researchers tested the U model in non-exporting and importing firms and found support (Davidson, 1983; Denis and Depelteau, 1985), research with focus a non-importing and exporting industries is still necessary. For example, research on specific industries such as mining industry is a new topic. In this sense, characteristics of industries may be not noticed, at least not emphasized by researchers when they look for research examples. In addition, discussion about overseas business development methods is rare. For

example, acquisition is not included (Forsgren, 1990), although Johanson and Vahlne (1977) mentioned this term in this abstract section of the famous stone corner thesis.

Validity to limited outside environment of research is the last. Johanson and Vahlne (2009: 1411) indicate that “much has changed since our model of the internationalization process of the firm was published” and, indeed, “the economic and regulatory environments have changed dramatically. The research frontier has moved too. There are some concepts and insights that did not exist when our model was published.” and they began to update their model by consideration of new variables such as network. It seemingly means that the traditional U model is subject to environment or it cannot stand the test of time, but it just revealed that the U model is not general and context-oriented. It is not necessary for Johanson and Vahlne to explain why the model should be amended. The theoretical position of U model a bottom tool of paradigm due to its characteristics of being text-oriented.

So, the traditional Uppsala model is compatible with evolutionary economics and the resource/capabilities theory of the firm. It is clear that, Uppsala model has not effectively continue to draw implications from the more recent theoretical developments like the dynamic capability view from the perspective of theoretical framework. Development of U model did not keep up with the development of the theory of the firm. For example, Vahlne and Johanson (2013) has recently proposed to add to the 2009 version of the Uppsala model elements from the dynamic capabilities theory, theory of entrepreneurship and theory of management of uncertainty, but there is still no niche targeting empirical research. Their aim is to secure a paradigm shift in the Kuhnian sense. Based on detailed analysis of theoretical gaps of the model, the author argues that their view overestimates the maturity of the development stage of internalization process or the U model. As discussed in previous section, related research is still in the stage of pre paradigm, rather than paradigm shift, as there is no unified explanation of phenomenon until now. Criticism on determinism of variables in the model such as learning, stage, psychic distance, and validity to limited application scope, reveals the fact that the U model is context-oriented model and a bottom level theory. Moreover, although Johanson and Vahlne (2009) refused to admit it seemingly by acknowledging the U model is not considered as an exact reflection of reality, they still insisted that the model can explain the most fundamental component of reality. It means that Johanson and Vahlne tried to use the context-oriented U model to play the role of higher level theory whose function is to explain the most fundamental component of reality.

Based on the above analysis about the theoretical gaps of the traditional U model, the model is a bottom-level theory which is context oriented, and lack of draw implications from the more recent theoretical developments of its source theories. Moreover, the evolutionary research methods, rather than neoclassical method should be adopted. It indicates that specific home countries of the firms, specific industries where the firms are in, role of entrepreneurs, mechanism of dynamic capabilities, characteristics of the firms should be further discussed, by an evolutionary research method. But, it should be noticed that any try of test of the model in a new context and provision of amendment of the U model is just a process of revision of a bottom theory in a specific context and enrich a basic level element of internationalization process theory which is constructed by evolutionary economics, RBC/ dynamic capabilities and special model. And this is not a wrong or right issue.

2.6 Conclusion

This chapter aims to analyse the theoretical source, development status, theoretical gaps and development trend of the main theory which is in line with the research topic. Analysis of this chapter helps to make it clear about what the researchers have done and what they have missed. More specifically, based on the analysis of previous sections, an integrated theoretical framework is constructed for research of internationalization phenomena of firms, which include three levels of theories, evolutionary economics, the resource/capability-based theory of the firm and the Uppsala model. The discussion revealed that there is a close theoretical inheritance among the above theories, and the whole theoretical framework is still in the stage of pre paradigm, due to no unified explanation of phenomenon.

Evolutionary economics, which is deemed as the overarching theory of the framework, may be the backbone of internationalization process research (Moen and Servais, 2002; Manalova, 2003; Vahlne et al., 2011). It helps to understand that time and context matter, that learning by actors is a trial-and-error process, and that the ability to learn from evolving experience and adapt to specific context is crucial to organizations. In addition, as Dopfer (2004) indicates that, opinions vary on methodology and research interests of evolutionary economics, evolutionary economics is not an extremely tight theory and it directly leads to the weakness of the whole framework such as theoretical logic. As a middle level theory, theory of RBV/capabilities

provides key concepts on firms' choices of knowledge and adaptation to specific context and dynamics capabilities illustrate how firms gain advantages and adapt. Like evolutionary economics, RBV/Capabilities also has theoretical gaps such as the relation between environment and dynamic capabilities, types of firms (Teece et al., 2007; Doving and Gooderham, 2008), degree and effectiveness of capabilities and (Barreto, 2010; Kuo, 2012). Accordingly, future perfection of high and middle level theories may be influential to theoretical development of bottom level theory, from the perspective of coevolution of the whole theoretical framework. Moreover, as the bottom level theory, Uppsala model that provide the basic and mainstream theoretical tool for considering internationalization processes (Bengtsson, 2004; Zhang, 2008), experienced development over 40 years from both internal perspective and external perspectives. Theoretical gaps about traditional U model focus on lack of introspection on framework or paradigm.

Thus, evolutionary research methods may be appropriate to this research topic, internalization of firms, and specific context such as industries, characteristics of firms, etc., should be considered. A systematic and evolutionary view on the whole development history, rather than only focus on the overseas development history of firms in a new context should be adopted. All of these are motivation to the next chapters.

Chapter 3: Research methods

3.1 Introduction

Case study methodology is the overall approach of the dissertation. Zijin Mining group is analysed as the sample, a particular instance of the phenomena that concerns us. Its experience is taken as the key source of insights to illuminate internationalisation dynamics from the point of view of a resource-based/dynamic capability theory. This Chapter refers to our research design. It argues for the role of grounded theory in a case study setting, it then describes the sources used as empirical basis for analysis and finally then proceeds to document the encoding method adopted. In the case study, variables such as psychic distance and investment location, which are originally components of the U model, are identified and tested and then new variables such as influence of entrepreneurs and policy are identified and an amendment of the U model is put forward.

3.2 Case study

3.2.1 Case study as research method

According to Yin's (1994, 2001), and Pratt (2009), case study is an appropriate method to deal with "why" and "how" issues. As introduced in the previous chapter, our research over the overseas investment patterns of Zijin seeks to answer two questions. First, how has the company been conducting its overseas investment? Why have these strategies performed the way they have been? In this sense, case study is an apt choice. Moreover, when the phenomenon is special case in an important background, i.e. a large and rapidly developing such as China, a case study is useful for this (Pattern, 1990).

In addition, Pandian (2002) indicates that the original basic internationalization research such as work of Johanson and Weidersheim (1975) was based on case study research. This means that case study may be an appropriate method to this research topic.

3.2.2 The nature of case study research

Case study is a context-oriented method. Yin (1994) held the position that the case study as a mode of empirical inquiry is intended to capture a temporary phenomenon in the background of real life. He stressed the importance of context and he argued that the boundary between the phenomenon itself and its background is not obvious. Researchers should adopt a large number of entries into the body of evidence to conduct the research. The key objective of a case study is to answer “why” and “how” questions, rather than “what ought to be” challenges. Stake (1995) also believes that the case study is a period to understand behaviour in specific situations or particular conditions. Li (2007) argued that grounded theory is a good supplement for case study. So, it is necessary to discuss grounded theory.

Grounded theory is claim on methodology as a way to dig information from data (Glaser and Strauss, 1967). Data is coded in order to derive theoretical conclusions regarding an object of analysis, through this method. Both case study and grounded theory are qualitative research methods. This approach may be useful for generating substantive new theoretically-relevant findings while avoiding intervention of extant concepts or theories. Li (2007) cited Strauss’s view to define analysis of data as coding and it refers to the process of decomposing of documents, phenomena identification, conceptualizing of phenomenon, and then abstracting the concept, and finally putting forward basic categories and core categories.

Relation between case study and grounded theory should be discussed. Li (2007) argues that grounded theory is connected to case study due to reliance on data, especially for research on firms. It not only means that grounded theory and case study are different research methods, but also indicates that they are related closely. Li (2007) also argues that the main difference between case study and grounded theory is focused on the sequence of data collection and data analysis. He argued that, for case study, data is first collected and then analysed (Yin, 2004), but for grounded theory, data collection and analysis are conducted simultaneously. In this sense, grounded theory can be deemed as a special case study.

In addition, sequence of data analysis and literature review is also a difference between case study and grounded theory. According to Pan and Tan (2011), in the process of study, literature review is conducted before data collection and analysis. As far as grounded theory is concerned, Glaser (1998) argued that, hypotheses may be formed from literature review and then become

part of data to be compared with phenomenon continuously. It means that literature may be conducted before data analysis too. Pandit (1996) also thinks so. But, not all of scholars agree with it, for example Charmaz (1995) proposed that literature should be reviewed after data analysis.

In this dissertation, the author adopts the view of Pandit (1996), Glaser (1998), and Pan and Tan (2011), and literature is conducted before data analysis. Moreover, data collection and analysis are performed simultaneously. After all, some cases emerged during the research process, as Zijin continues investing in overseas markets.

3.2.3 Zijin as research target

Zijin Mining Co. Ltd is chosen as the unit of analysis due to its leading position in the domestic market, special shareholding structure, and longer history and more cases of overseas expansion compared with its domestic peers, with a background of China. This company is also famous for its extremely rapid development.

As Lin (2011) suggested that as a result of the extraordinary performance in the past 20 years, China's status in the global economy has dramatically changed. Moreover, Pandian (2002) indicates that in terms of the analysis of internationalization entry mode, PR China is unique in motivating firms to invest. In this sense, it is very meaningful to discuss an example with internationalization practice in this important context, i.e. China.

According to China gold association,¹ the flagship operation of Zijin, i.e. Zijin's Shan gold mine is the biggest gold operation mine in China. Also according to China gold association,² China gold, Shandong gold, Zijin mining and Zhaojin gold are the four biggest gold production companies in China. As shown in Tables 3-1 and 3-2, Zijin's annual profit in 2014 is 1.58 times of the total of the rest three companies and its gold production is much higher than the rest three too. In addition, its shareholding is very special, i.e. partially state-owned company. As shown in Figure 3-1, Minxi Xinghang Company which is the representative of the local company owns 29% of the total shares. It means that the government has not the controlling shares, but it is the biggest shareholder of Zijin. In this sense, Zijin is a semi-government owned and semi-private company. In contrast, according to introduction of their websites, the rest three biggest gold

¹<http://www.cngold.org.cn/newsinfo.aspx?ID=1171>

²<http://www.cngold.org.cn/newsinfo.aspx?ID=1171>

company, China gold, Shandong gold and Zhaojin gold are all one hundred percent state-owned company.

Table 3 - 1 Profit 2012-2014 of four biggest gold production companies in China

| Profit 2012-2014(million dollars) | | | |
|-----------------------------------|------|------|------|
| | 2014 | 2013 | 2012 |
| Zijin | 372 | 337 | 827 |
| Shandong | 142 | 178 | 344 |
| Zhaojin | 80.4 | 121 | 325 |
| China gold | 13.3 | 6.8 | 247 |

Source: Annual reports 2012-2014 of the four companies

Table 3 - 2 Gold productions 2012-2014 of four biggest gold production companies in China

| Gold Production 2012-2014 (tons) | | | |
|----------------------------------|-------|-------|-------|
| | 2014 | 2013 | 2012 |
| Zijin | 33.73 | 31.69 | 32.06 |
| Shandong | 26.9 | 26.82 | 26 |
| Zhaojin | 26.3 | 25.59 | 17.28 |
| China gold | 20.1 | 20.11 | 18.09 |

Source: Annual reports 2012-2014 of the four companies

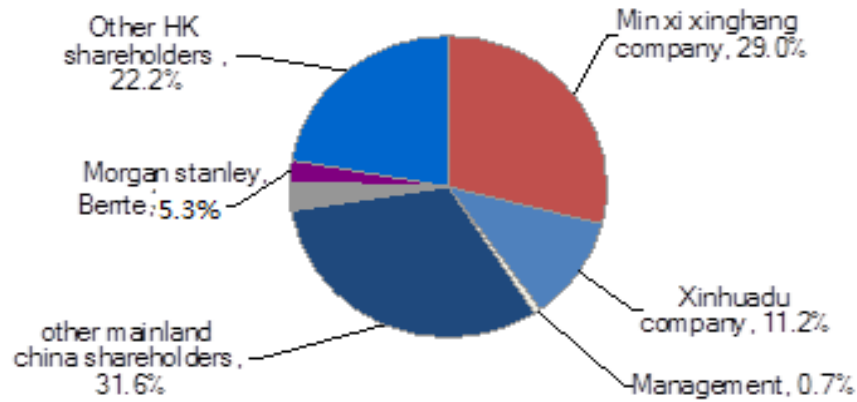


Figure 3 - 1 Shareholding structure of Zijin of 2013

Source: Roland Berger strategic evaluation report of Zijin (2013)

The company has a relatively long domestic growth history and overseas expansion history, compared with its domestic peers. For example, as showed in Figure 3-2, from 2004 to 2013, Shandong gold only has one case of overseas investment with the size of 233 million dollars. Shandong gold's annual report of 2014 indicates that it did not conduct any overseas investment in 2014. Most of its investment occurred in the domestic market. As showed in Figure 3-3, from 2004 to 2013 China gold did not conduct any overseas investment and all of the investment occurred in the domestic market. It is the case for 2014, according to its annual report 2014. In contrast, according to mining almanac of Zijin 1986-2008, Zijin's overseas acquisition begun in 2005 and according to the Table 3-3, till June, 2015, Zijin's overseas investment has reached 1304 million.

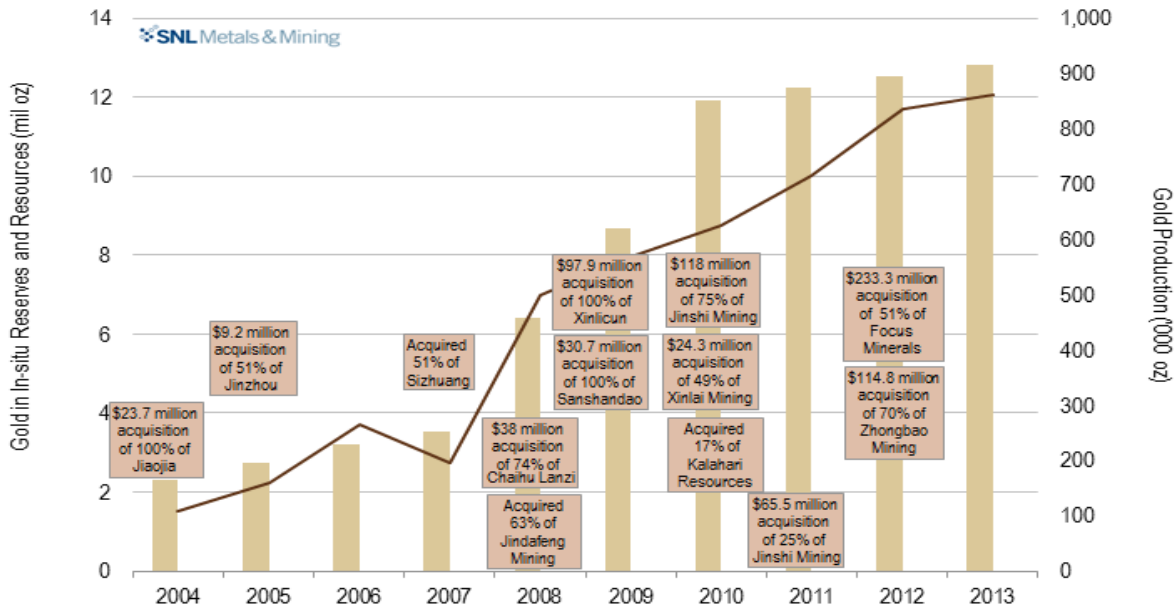


Figure 3 - 2 Investment of Shandong gold 2004-2013

Source: SNL Metals & Mining

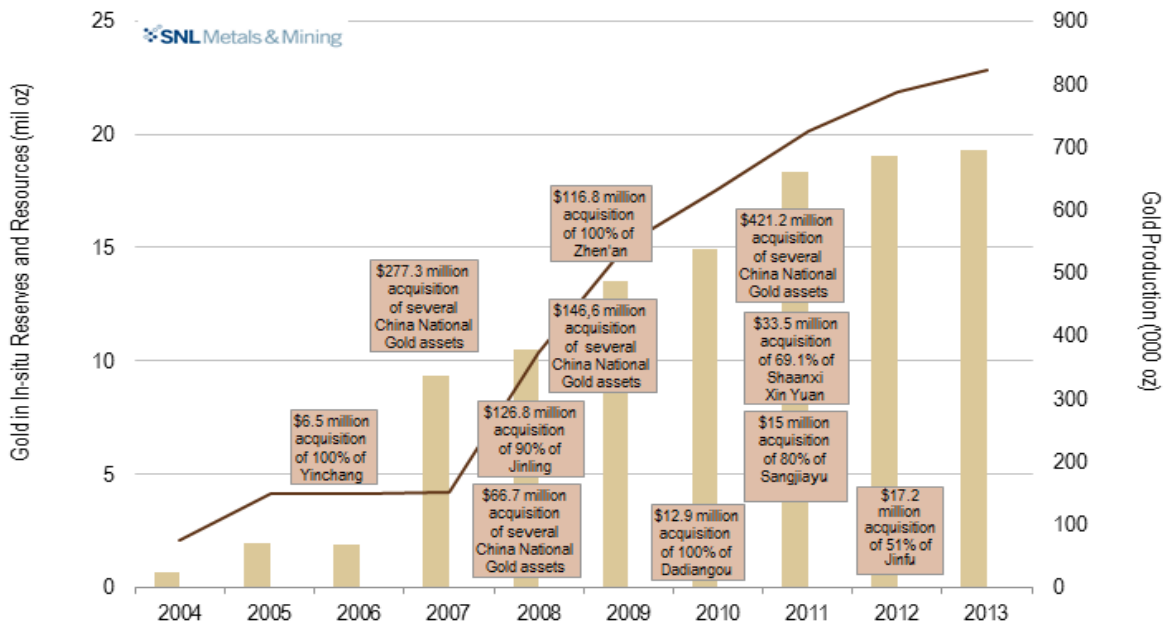


Figure 3 - 3 Investment of China gold 2004-2013

Source: SNL Metals & Mining

Table 3 - 3 Summary of Zijin's overseas investment

| | Time | Location | Project | Shareholding (%) | Offer (Million dollars) |
|----|------|------------------|------------------------------|------------------|-------------------------|
| 1 | 2005 | Canada | Silver coin | 21 | 1.82 |
| 2 | 2005 | Myanmar | Moweitang | 90 | 21.8 |
| 3 | 2006 | South Africa | Blue ridge and sheba's redge | 29.9 | 19.02 |
| 4 | 2006 | Mongouliar | Narentuoluogai | 70 | 8.35 |
| 5 | 2006 | Russia | Tytytyn | 50 | 10.69 |
| 6 | 2006 | Russia | Tuva kizil-tashtig | 70 | 43.8 |
| 7 | 2007 | Vietnam | Daban | 60 | 4.84 |
| 8 | 2007 | Peru | Rio blanco | 45 | 80.55 |
| 9 | 2007 | Tajikistan | Tarro | 75 | 55.1 |
| 10 | 2011 | Kyrgyzstan | Zuoan | 60 | 66 |
| 11 | 2011 | Australia | Pattington | 89.15 | 170.77 |
| 12 | 2013 | Australia | Bullabulling | 100 | 13.88 |
| 13 | 2014 | South africa | Garata, Tubatse | 26.35 | 19.9 |
| 14 | 2014 | Congo | Klowezi | 51 | 77.92 |
| 15 | 2015 | papua new guinea | Porgera | 50 | 298 |
| 16 | 2015 | Congo | Kamoa | 49.5 | 412 |

Source: Zijin mining almanacs 1986-2008 and annual reports 2009-2014. Note: Exchange rate: Rmb/US dollar: 6.17
Australia dollar/ US dollar: 0.934; Canadian dollar/US dollar: 0.93; UK pound/ US dollar: 1.69 (July, 2014)

According to mining almanac of Zijin 1986-2008, the company's predecessor was Shanghang Mineral Company, a state-owned entity established in 1986 to develop the Zijin shan gold mine. In August 1993, Shanghang Mineral Company reshuffled and became Shanghang Zijin Mining Company when it started to develop Zijinshan gold deposit in Shanghang County. In October 1994 it changed its name to Fujian Minxi Zijin Mining Group Co. Ltd. Initiated by Minxi Xinghang Industrial Co. Ltd. and other seven parties including Xinhudu Industrial Group Co. Ltd., Fujian Zijin Mining Co. Ltd. was incorporated in September 2000. It changed its name

into Fujian Zijin Mining Group Co. Ltd. And in April 2004 and then into Zijin Mining Group Co. Ltd. in June 2004.

According to mining almanac of Zijin 1986-2008, during the 1993-2000 period, Zijin focused on Zijin mountain gold mine development. Due to successful innovation of mining and processing technology such as its revolutionary application of heap leaching technology in rainy southern China, the cut-off grade was lowered and accordingly gold resources and reserves of the mine were increased robustly. This became the biggest gold mine operation in China, which was recognized by the China gold association and a certificate was awarded to Zijin in 2008 (before 2000, there is no such industrial ranking), although Zijin faced strong competition and lacked financing. In this period, Zijin completed its original capital accumulation and had a solid foundation for future growth. In 2000, Zijin also completed the shareholding restructure from 100% state-owned company to joint-stock company (29% owned by the government and the rest owned by private entities).

During the 2001-2010 period, Zijin started its strategic expansion to other provinces of China and in the later part of the period, Zijin attempted internationalization. Along the way Zijin conducted series of domestic properties acquisition; including Shuguang gold copper mine in Jilin province, Shuiyindong gold mine in Guizhou province, Ashele copper mine in Xinjiang province, etc. Some of acquisition is completed by very low cost. For example, according to mining almanac 1986-2008 of Zijin, Zijin acquired Ashele copper mine in Xinjiang in 2002 with the offer of 22.5 million dollars, while the annual profit of Ashele copper mine is 93.3 million dollars in 2014 according to annual report 2014 of Zijin. According to annual report 2005, on October 2005, Zijin invested in Summit mining company in Canada and it is the first step of Zijin's internationalization. Then, as shown in Table 3.3, Zijin continued to invest abroad and other places followed suit: Mongolia, Myanmar, Peru, Tajikistan, Russia, Kyrgyzstan, and Australia. Coincidentally, in this period, gold price and other nonferrous metal price were also seeing dramatic increases in world markets and Zijin accomplished its rapid growth in size and profit. Accordingly mining almanac 1986-2008 of Zijin, in 2003 and 2008 Zijin became listed in Hong Kong and Shanghai.

According to news released by the website of Zijin,³ so far, the company has achieved the strategic goals to be a leading company in domestic gold industry, and now is turning into its third strategic development stage. Zijin has the strength and conditions to rank among the advanced international mining industry.

3.2.4 The path of Zijin

Following Yin's (2001) characterisation of case study methodology, ours will be a longitudinal, single case, and embedded study. Let us now explain these choices. First, this is a longitudinal study and the following two periods in Zijin's history are focused upon:

Epoch I: domestic-growth oriented company (1993-1999);

Epoch II: overseas growth oriented company (2000-present).

Phasing Zijin's history is of importance, as the basis for longitudinal analysis. There is something in common in different stages, and there are differences too. It is meaningful to compare and identify same and different phenomenon at different stages. According to Zijin's internal stage definition (mining almanac of Zijin), as can be seen in Table 3-4, the development of Zijin can be divided into two stages: 1993-1999 (domestic development period) and 2000-present (overseas expansion period or overseas acquisition period). The latter is a more appropriate sub-period to address in our study and the former will not be analysed.

The period of 1993 to 1999 refers to the accumulation period or the provincial development phase for Zijin. Its predecessor was Shanghang Mineral Company, a state owned entity established in 1986. In August 1993, Shanghang Mineral Company reorganised into Shanghang Zijin Mining Company when it started to develop the Zijinshan gold deposit in Shanghang County. In October 1994, it changed its name to Fujian Minxi Zijin Mining Group Co. Ltd. This move shows that that Zijin (we use this name for simplicity and parcimony) expanded from Shanghang county to Fujian province.

Founded by Minxi Xinghang Industrial Co. Ltd. and other seven parties including Xinhua Industrial Group Co. Ltd., Fujian Zijin Mining Co. Ltd. was incorporated in September 2000. It changed its name into Fujian Zijin Mining Group Co. Ltd. in April 2004 and then into Zijin

³<http://www.zjky.cn/about/fa-zhan-zhan-lue.htm>

Mining Group Co. Ltd. in June 2004. This move denotes that the company began to establish subsidiary companies, and the structure of the company became more complex.

2000- Present period is the substantial growth period. Actually, it is an overlapping period between domestic development and overseas expansion. During this period, Zijin initiated its strategic expansion to other provinces of China and then, later on, tried to conduct international activities. Zijin conducted series of domestic mining property acquisitions, including Shuguang gold copper mine in Jilin province, Shuiyindong gold mine in Guizhou province and Ashele copper mine in Xinjiang province. Some acquisitions were completed at very low price, and the fundamentals of the company were strong. According to mining almanac 1986-2008, Zijin was listed in Hong Kong in 2003 and in Shanghai in 2008.

On October 2005, Zijin invested in Summit mining company, a Canadian company, and this was the first step of Zijin's internationalization process. Then, Zijin continued to invest in Mongolia, Myanmar, Peru, Tajikistan, Russia, Kyrgyzstan, Australia, etc, and Zijin accomplished a rapid growth in terms of size and profit. This provided Zijin with a good basis for further expansion.

Based on the above achievement of becoming a leading mining company in China, Zijin decided to seize the opportunities of the industrialization and urbanization in China to accelerate its development, with the strategic aim of being one of leading international mining company.

Table 3 - 4 Summary of Zijin's history

| | Provincial Development stage | Outside investment stage |
|----------------------|---|---|
| | 1993-1999 | 2000-present |
| Major trait | Growth based on Zijinshan property and accumulation of capital and technology | Becomes a group; Strategic transformation stage with the goal to be an extra-large international mining group with high efficiency and technology, and focus on both domestic and overseas markets. |
| Representative event | Zijinshan operation became the biggest and most profitable gold operation in China, in 1999 | Listed in Hong Kong in 2003 |
| | | Listed in Shanghai in 2008 |
| | | Began to conduct domestic acquisitions on 2001 |
| | | Initiates international acquisitions in 2005 |

Source: mining almanac of Zijin 1986-2008/2011-2013

Second, this is both a single case study and an embedded study. The main analysis unit is Zijin Mining Co. Ltd. and the research is carried in the light of concepts such as learning process and path dependence, etc. As discussed in previous section, Zijin is a leading gold mining company in domestic market and a promising world-class player in the worldwide market. It has longer overseas development history than its domestic peers and owns more overseas cases too. Its deeper exposure to the world market made it accumulate many useful information, most of which can be used as data. The research will review the internationalization process of Zijin and several acquisition situations will be analysed. Moreover, the domestic development will be analysed too and more acquisition cases will be studied. So, research on a single case is meaningful and there are many sub-cases behind the single case. In other words, it is an embedded study.

3.2.5 Procedures for implementing the case study

According to Yin (1994, 2001), the basic procedure of a case study includes seven steps. In the first step, getting started from definition of research question and *a priori* constructs are established. In the second step, cases are selected. In the third step, instruments and protocols are crafted by adopting triangulation of evidence. In the fourth step, data collection is conducted. In the fifth step, data is analyzed. In the sixth step, hypotheses are shaped. In the seventh step, closure is reached, i.e. based on the previous procedures from data collection to analysis, then interaction between the theoretical level thinking and findings, the case is consolidated into a coherent narrative.

Let us expand on the nature of the evidence considered. Document review and participatory observation, and pattern matching are used in this research. Documents include internal documents and archival records such as Zijin's annual reports, mining almanac, etc., and external documents such as industrial report by consulting companies or institutions (SNL or Fraser). Besides reviewing of documents and records, the author also observed Zijin's overseas development practice directly during a period of six years, while the whole overseas development history of Zijin is only then years till 2015. Last, pattern matching is also used and data of different periods are compared and key parameters identified.

3.3 Data collection

Multiple sources of evidence are used and case study database will be created. In terms of the database, Yin (1994)'s view is followed, i.e. the database is created from four perspectives: notes, documents, tabular materials and narratives. Information includes all the acquisition cases of Zijin. As shown in the following Table 3-5, annual reports from 2007 to 2014 which provide information regarding production, accounting, strategy, investment, etc. These reports are legally required documents by the securities and futures commission of Hong Kong, as Zijin is a public company in the stock market of Hongkong with the ticker symbol 2899; History and culture of Zijin is the handbook of public relations, and it may provide some supplement to the above information; legend and mining almanac of Zijin is internal history review (1986-2008; 2011-2013) and they can provide some internal experiential summary. Outsider researchers cannot have access to them and only employees like the author can read them. The report with the name of *responsible gold mining and value distribution* by the World Gold Council (2013), and the report with the name of *strategies for gold reserves replacement: the costs of finding and acquiring gold* by SNL Metals and Mining (2014) provide a general view of the worldwide industry. The file with the name of *survey of mining companies* by Wilson et al.(2014) which is an independent research and educational Canadian organization, provides evaluation of countries as mining investment targets.

Table 3 - 5 List of documents used to amass information about Zijin

| | Title | Pages | Words |
|---|---|--|---------|
| Internal documents of Zijin | <i>History of Zijin(internal file, 2012)</i> | 40 | 19398 |
| | <i>Culture of Zijin(Internal file,2012)</i> | 10 | 3947 |
| | <i>Legend of Zijin(Internal file,2012)</i> | 210 | 280000 |
| | <i>Annual report 2007-2014</i> | 1500 | 400000 |
| | <i>Mining almanac of Zijin (1986-2008)</i> | 431 | 160000 |
| | <i>Mining almanac of Zijin 2011</i> | 259 | 240000 |
| | <i>Mining almanac of Zijin 2012</i> | 285 | 25000 |
| | <i>Mining almanac of Zijin 2013</i> | 292 | 25000 |
| | Industrial information | <i>Responsible gold mining and value distribution 2013</i> | 76 |
| <i>survey of Mining companies 2012-2013</i> | | 135 | 650000 |
| <i>Strategies for gold reserves replacement: the costs of funding and acquiring gold 2014</i> | | 31 | 15000 |
| Total | 11 documents | 3269 | 1383345 |

Source: collected by the author

3.4 Data analysis

Grounded theory is adopted as the major stance from which to conduct the case study. As shown in Table 3-6, first, thirty four preliminary individual categories are identified in the period of open coding and then, eight core categories are identified from the above thirty four. Among the eight core categories, there are three which that represent known variables in Uppsala model (A1-A3) and five that are new categories (B1-B5). These new five core categories can explain accurately the limits of the standard Uppsala model in the case of Zijin and underpin the new model to which we will call the “Uppsala +” model (or “U+” model). This can be described in the following way:

A1 (investment pattern) refers to a series of investment arrangement including methods (acquisition or exploration), location (high-risk countries or low risk countries; top mining countries or non- top mining countries), size (investment offer).

A2 (psychic distance) refers to factors which prevent the flow of information between suppliers and customers. (Vahlne and Wiedersheim, 1973), and it includes economy, education, government incentive, and language difference of investment location (Yi, 2011).

A3 (market knowledge) refers to market knowledge outside Fujian province, including knowledge of the firm, knowledge of employees and knowledge of consultants.

B1 (industry's characteristics) refers to common characteristics of mining industry, more explicitly, the resource obtaining method, mineral resource distribution, business characteristics of mining firms.

B2 (influence of state policy related to shareholding of the firm) refers to a series of investment incentive policies issued by Chinese central government, including western development policy and going global policy. Its function has relation to shareholding structure of the firm, identity of entrepreneurs and investment procedures of the firm.

B3 (influence of entrepreneur based on enterprise culture and strategy) refers to personal influence of the key entrepreneur of the firm, including personality and human capital. It is linked with enterprise culture, strategy and implementation approaches of strategy.

B4 (dynamic capabilities) refers to dynamic capabilities of the firm, including internal and external observation capabilities, technology reconstruction capabilities, and organization reconstruction capabilities.

B5 (Capability paradox factors) refers to factors that hinder dynamic capabilities to work. path dependency and lock in refers to that, due to path dependence, firms tend to be locked in their forgoing success and lack of flexibility; structural inertia refers to lack of adaption due to inherent capability structure of behaviour pattern; cognitive trap refer to that commitment occurred from any decision result in recurring growth of investment (Schreyogg and Eberl, 2007).

Table 3 - 6 Coding rules

| Core category | Individual category | |
|-------------------------------|---------------------|--|
| A1 Investment pattern | A11 | Investment methods |
| | A12 | Investment location |
| | A13 | Investment size |
| A2 Psychic distance | A21 | Economy |
| | A22 | Education |
| | A23 | Government incentive |
| | A24 | Language differences |
| A3 Market knowledge | A31 | Knowledge of the firm |
| | A32 | Knowledge of management |
| | A33 | Knowledge of employees |
| | A34 | Knowledge of consultants |
| | A35 | Tacit knowledge |
| | A36 | Explicit knowledge |
| | A37 | Personal turnover rate |
| B1 Industry's characteristics | A38 | Transformation agent |
| | B11 | Resource obtaining method |
| | B12 | Uneven distribution and potential of mineral resources |
| B2 Influence of state policy | B13 | Business characteristics of mining firms |
| | B21 | Western development policy |
| | B22 | Going global policy |
| | B23 | Shareholding of the firm |
| | B24 | Identity of entrepreneurs |
| B3 Influence of entrepreneurs | B25 | Investment procedures |
| | B31 | Personality |
| | B32 | Human capital |
| | B33 | Enterprise culture |
| | B34 | Enterprise strategy |
| B4 Dynamic capabilities | B35 | Implementation approaches of strategy |
| | B41 | Technology reconstruction capabilities |
| | B42 | Internal and external observation capabilities |
| B5 Capability paradox factors | B43 | Organization reconstruction capabilities |
| | B51 | Structural inertia |
| | B52 | Cognitive trap |
| | B53 | Path dependence and lock-in |

Source: This dissertation

3.5 Quality of the research design

In this research, several methods are adopted to deal with the validity issue. Internal validity is first one which should be emphasized. According to Merriam (1988), Patton (1990), and Yin (1994, 2001), triangulation, peer examination, member checking, researcher prejudice avoidance and constant observation, should be considered as 5 main strategies to secure the internal validity. With respect to this dissertation, triangulation is the key. More explicitly speaking, different information collection methods will be used (method triangulation), different information resource will be examined (resource triangulation). The author conducted the research himself and analyst triangulation cannot be adopted. But, peer examination can make a compliment to some degree.

With respect to external validity, and according to Le Compte et al. (1993), the background of research should be examined and he mentions examples of issues such as society, culture and economics, value free, validity of information, characteristics of research examples. But, due to the nature of single case study, it is very difficult to improve external validity. Reliability is also important. According to Merriam (1988), triangulation and improvement of researcher's ability can be considered as the two useful tools. Moreover, instrument and protocol crafting, and database construction is also useful to secure the reliability.

3.6 Strengths and limitations of the research

This research has both strengths and limitations. In terms of strengths of the research, the first one is the full access to all necessary information. The author is a medium level employee of Zijin and has access to key information. Moreover, this research reviewed the whole history of Zijin and all of the overseas events are discussed. Last, case study match the topic of the dissertation in terms of nature, i.e. most of data collected is qualitative and lends themselves to exploring how and why questions.

With respect to limitation, the first issue is that findings of this research which is based on mining company's overseas cases may not directly provide meaningful experiences to firms which are not in the mining industry. After all, it is a context-oriented research and the theoretical result may be invalid in different environment or context. In addition, as discussed in the previous

section, the external validity cannot be secured effectively due to being a single case study.

3.7 Conclusion

This chapter aims to discuss the research methods adopted in this dissertation, from the perspective of appropriateness of adopting the method (case study), reasoning of choice of the example (Zijin), and design of the research, how the data is collected and analysed, quality discussion, strength and limitations of the research.

Case study with coding is adopted as the main research method with Zijin Mining group as the sample. Case study is to answer “why” and “how” questions (Yin, 1994; Stake, 2000), and accordingly this research method is useful to answer the two questions of the research, i.e. how has the company been conducting its overseas acquisitions? And why have these strategies performed the way they have been? In terms of examples used in the case study, Zijin is an appropriate one due to its strong industrial position, longer overseas development history, and more exposure to international market, plenty of overseas cases, compared with its domestic peers. Source of data include documents and records, personal observation of the author during a period of six years which accounts for half of the whole overseas development history of Zijin. Analysis methodology includes coding methods, and pattern matching. Basis of coding is the data tagging and codes include time coding of events, identification of events, participants involved in events, relation of investment (specific investment content), and description of events.

Moreover, Varieties of methods are used to secure validity and reliability in this research. According to views of Merriam (1988), Patton (1990), and Yin (1994, 2001) on methods to secure validity, Triangulation, peer examination, researcher prejudice avoidance and constant observation, are adopted as main strategy to secure the internal validity. It should also be noted that, although this research has strengths such as the author’s full access to information, it still has limitations that lay in the fact that the findings are constrained in gold mining industry.

Chapter 4: Case study

4.1 Introduction

Zijin Mining Co. Ltd is the research example of this case study, and its appropriateness as an example has been discussed in the previous Chapter, because of being a leader in the mining industry of China and relatively government controlled shareholding structure. In this chapter, its domestic expansion history and overseas expansion period is compared to identify the difference.

During the analysis process, thirty-four categories are identified and eight core categories are further filtered out. Among the eight categories, three are considered as the variables in U model, with the rest five as new. The first three categories are investment characteristics (A1), psychic distance (A2) and market knowledge (A3). Johanson and Vahlne (1977: 27) analysed the characteristics of internationalization process and the found that “Market knowledge and market commitment are assumed to affect both commitment decisions and the way current activities are performed. Commitment decisions and the way current activities are related to investment characteristics (A1), psychic distance (A2); market knowledge is (A3). The rest five are industry’s characteristics (B1), influence of state policy (B2) and entrepreneur (B3), dynamic capabilities (B4), and capability paradox factors (B5). All of the five can not be traced in the U model. A1 is phenomena factor and the other seven categories are influencing factors. Moreover, the five new variables which occur in a specific context can explain why the traditional U model can not be applied in Zijin’s case. In addition, the important role of specific context to internationalization research should be noted, and accordingly more amendments of U model can be construed according to different contexts.

4.2 Domestic expansion of Zijin

4.2.1 Overview of domestic acquisition by Zijin

According to Table 4-1, which is based on Zijin mining almanacs 1986-2008 and annual

reports 2009-2014, Zijin acquired thirty three domestic properties. Most of cases are acquisitions and total investment is 457.4 million dollars. Only Yulong in Tibet and Huaxi in Yunnan are exceptions. Many target projects are located in western China.

Specifically speaking, Zijin invested in 15 provinces, among which Yunnan, one of the western provinces is the province with most projects, i.e. four projects. But, it should be noted that since 2010, Zijin has not invested in any western provinces. From 2001 to 2003, Zijin invested in provinces where are not nearby Fujian province. In addition, acquisition is the main method and in terms of the investment size, it is a wavy process.

Table 4 - 1 Summary of domestic investment

| Date | Province | Project | Metal | Acquisition offer (million dollars) | Shareholding |
|------|-------------------|---------------------|--------|--|--------------|
| 2001 | Guizhou | Shuiyindong | Gold | 0.8 | 51% |
| 2001 | Anhui | Paodaoling | Gold | 1 | 75% |
| 2002 | Xinjiang | Ashele | Copper | 22.5 | 51% |
| 2002 | Jilin | Hunchun | Gold | 30.5 | 100% |
| 2003 | Qinghai | Deerni | Copper | 11.6 | 100% |
| 2003 | Anhui | Jiaochong | Gold | 4.1 | 51% |
| 2003 | Sichuan | Jiuzhaigou caodi | Gold | 3.9 | 60% |
| 2003 | Tibet | Jindi | Gold | 2.5 | 51% |
| 2004 | Yunnan | Huaxi | Gold | 3.4 | 42% |
| 2004 | Xinjiang | Qitai | Gold | 11 | 68% |
| 2004 | Guangdong | Dongkeng | Gold | 16.5 | 51% |
| 2005 | Liaoning | Qingchengzi andigou | Gold | 12.1 | 75% |
| 2005 | Tibet | Yulong | Copper | 39.3 | 39% |
| 2005 | Hebei | Chongli | Gold | 5.5 | 60% |
| 2005 | Shanxi | Yixingzhai | Gold | 13.1 | 51% |
| 2005 | Shandong | Yulinshan hujiakou | Gold | 4 | 70% |
| 2006 | Yunnan | Longxing | Gold | 4.1 | 51% |
| 2006 | Heilongjiang | Duobaoshan | Copper | 15 | 51% |
| 2006 | Shandong | Longkou | Gold | 16.5 | 51% |
| 2006 | Shandong | Guoda | Gold | 11.3 | 70% |
| 2006 | Hunan | Liaojiaping | Gold | 4.8 | 60% |
| 2006 | Shandong | Dingjiazhen | Gold | 5.6 | 93% |
| 2006 | Yunnan | Yuanyang | Gold | 14.5 | 100% |
| 2007 | Fujian | Wuping | Gold | 22.7 | 100% |
| 2007 | Yunnan | Langladu lannitang | Copper | 6.3 | 97% |
| 2007 | Fujian | Luoboling | Copper | 5.6 | 70% |
| 2007 | Yunnan | Zhenglong | Gold | 10.7 | 100% |
| 2008 | - | - | - | - | - |
| 2009 | - | - | - | - | - |
| 2010 | Inter Mongolia | Aobo | Gold | 29.3 | 55% |
| 2011 | Shanxi | Liushuping | Gold | 11.1 | 100% |
| 2011 | Shanxi | Heilongdong | Gold | 5.1 | 70% |
| 2012 | - | - | - | - | - |
| 2013 | - | - | - | - | - |
| 2014 | Fujian | Liancheng jiuxin | Gold | 5.65 | 100% |
| 2014 | Henan | Kunyu | Copper | 113 | 70% |
| 2014 | Shanxi | Yilian | Gold | 14.31 | 98.60% |

Source: Zijin mining almanacs 1986-2008 and annual reports 2009-2014

4.2.2 Investment characteristics (core category A1)

Investment methods (category A11)

Since 2001, Zijin has invested 33 projects in China and among the 33, there are 7 cases whose method is total acquisition; 26 are via joint venture. It should be noted, however, that Zijin has the controlling shares of all of the 26 joint ventures and so they are all considered as one type of acquisition. By reviewing the almanacs and annual reports it surfaces that there is no evidence that Zijin established branches or representatives before acquisition. So, domestic investment of Zijin is basically by simple acquisition and there is no staged investment method adopted.

Investment Location (category A12)

As can be seen in Figure 4-1, from 2001 to 2003, Zijin invested in eight projects and they are located in Guizhou province, Anhui province, Xinjiang province, Jilin province, Qinghai province, and Tibet and Sichuan provinces. All of the provinces are not nearby Fujian province. That means that the company started to operate away from its familiar field.

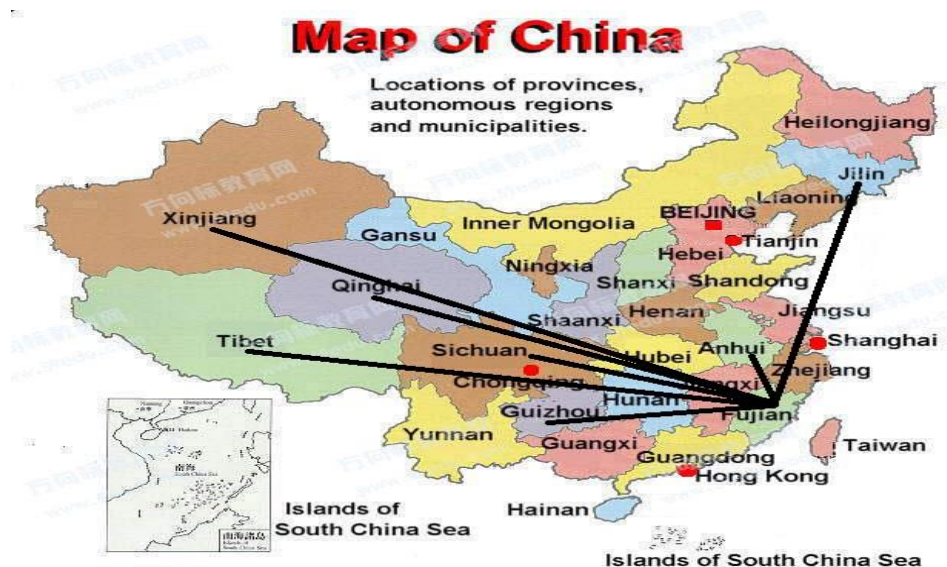


Figure 4 - 1 Geological location of investment

Source: based on Table 4.1

Investment size (category A13)

Figure 4-2 can illustrate if investments were not conducted gradually, financially speaking. In 2001, the first investment was small, but investment in 2002 reached 55 million dollars and

then decreased in 2003. In 2005, there was a reverse increase and during the following several years, the up and down trend occurred. Moreover, according to annual report and almanac, during the onset of the global financial crisis of 2008-2009, there was no engagement in domestic investment projects. So, it is more a wavy process than a gradual process.

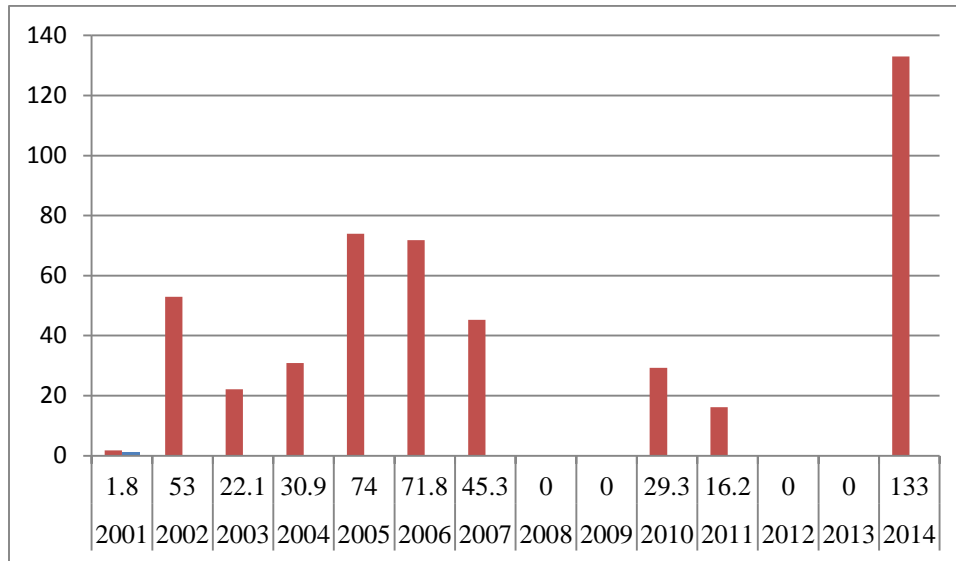


Figure 4 - 2 Investment dynamics (size in million dollars)

Source: drafted by the author according to Table 4.1.

In terms of location choice, investment size and investment methods, Zijin's pattern is totally different from the Uppsala model. Explicitly speaking, Zijin's investment size did not evolve from low risk subsidiary to high-risk acquisition. Acquisition, rather than a gradual try of methods, is the main method. In terms of location of investment targets, Zijin did not choose projects in nearby provinces.

4.2.3 Psychic distance (core category A2)

Nordstrom and Vahlne (1992) cited the concept by Vahlne and Wiedersheim (1973: 308) as "factors preventing or disturbing the flow of information between potential or actual suppliers and customers". Based on research result of Yi (2011) and actual situation of China, related factors which are used to measure psychic distance are chosen as government incentive, language, economy development level and education level.

Economy (category A21)

According to Chen (2003), in terms of GDP Provinces of China may be classified into the following five groups. The first group includes Shandong, Jiangsu and Guangdong. The second group includes Anhui, Heilongjiang, Hunan, Fujian, Hubei, Liaoning, Henan, Sichuan, Zhejiang and Shanghai. The third group includes Gansu, Guizhou, Xinjiang, Inner Mongolia, Tianjin, Shanxi, Shanxi, Jilin, Yunnan, Jiangxi, Guangxi, and Beijing. The fourth group includes Tibet, Qinghai, Ningxia and Hainan, Anhui, Heilongjiang, Hunan, Fujian, Hubei, Shanghai, Liaoning, Henan, Sichuan, Zhejiang. During the period of 2001-2003, Zijin invested in 8 projects in seven provinces such as Guizhou, Anhui, Xinjiang, Jilin, Qinghai, Tibet, and Sichuan. Among the provinces, only Anhui province is in the same economy level as Fujian. In other words, Zijin choose to invest in provinces which are different from Fujian where Zijin is located, in terms of economy level.

Education (category A22)

According to Chen et al. (2004), provinces which are similar to Fujian in terms of education level are Zhejiang, Anhui, Jiangxi and Shandong. From 2001 to 2003, Zijin invested in eight projects; these are located in Guizhou, Anhui, Xinjiang, Jilin, Qinghai, Tibet and Sichuan provinces. Among the seven provinces, only Anhui is similar to Fujian. So, we can say that Zijin did not choose to invest in provinces whose education level is similar to Fujian where Zijin's headquarter is located in (Chen et al., 2004).

Government incentive (category A 23)

In terms of government incentive, according to Tung and Cho (2001), Fujian province where Zijin is located in, is grouped as same as Guangdong, Zhejiang, Jiangsu, Shandong, Tianjin, Hebei, Shanghai, Liaoning and Guangxi. From 2001 to 2003, Zijin invested in eight projects and they are located in Guizhou, Anhui, Xinjiang, Jilin, Qinghai, Tibet and Sichuan provinces. So, Zijin did not choose to invest in provinces which are similar to Fujian in terms of Government incentives which refer to indicators by which provincial governments encourage outside firms to investment.

Language differences (category A24)

Zheng (1994) conducted research on communication environment or similarity of dialects of different provinces of China. According to his findings distance among provinces results from differences in dialects. Fujian dialect is similar to Guangdong and Zhejiang which are nearby Fujian and is very much different from dialect in Northern provinces. Seven provinces where Zijin invested in from 2001-2003 are all far away from Fujian province and so language similarity is low.

All in all, in terms of investment location, Zijin did not choose to invest in nearby provinces. This has to do with the fact that nearby provinces are not rich in mineral resources. Economy, language, and government stimulation are obviously not the decision factors. So, psychic distance (A2) which consists in the above mentioned factors is not the driving force of the company's investment characteristics (A1)

4.2.4 Market knowledge (core category A3)

As far as Zijin is concerned, market knowledge which means market knowledge outside Fujian province can be divided into enterprise level knowledge, employee knowledge and consultant knowledge. Here we take "market knowledge" to refer to knowledge accumulated from domestic and overseas investment by Zijin; "staff knowledge" refers to domestic and overseas knowledge accumulated by workers of Zijin and it includes both knowledge accumulated before these individuals joined Zijin and after; agent knowledge refers to domestic and overseas knowledge provided by mining agents such as legal agents, accounting experts, financial advisers, technology providers, consultants, etc.

Knowledge of the firm (category A31)

According to almanac of Zijin, during 1993-2003, Zijin did not conduct any investment outside Fujian province. So, from the angle of the firm, Zijin has no market knowledge of domestic market (i.e. the Chinese-wide market) at beginning of domestic investment.

Knowledge of management (category A32)

In terms of management of Zijin, Mr L, vice chairman of Zijin, is in charge of both domestic and overseas investment. According to internal Human resource information, he has no any

acquisition experience or experience in mining industry in domestic market before leading the team to conduct investment.

Knowledge of employees (category A33)

With respect to market knowledge of staffs of Zijin, the Table 4-2 illustrates the analysis of employees of domestic investment department before 2014. Obviously, no one had outside-provincial market knowledge, if we define market knowledge of staff as knowledge that accumulated as a leader of a mining project investment team.

Table 4 - 2 Brief of employees of domestic investment department

| Name | Title |
|------|----------------------|
| TSF | General manager |
| WGX | General Manager |
| SFX | Vice general manager |
| LCL | Senior economist |
| GZF | senior engineer |
| ZJM | lawyer |
| CJM | Senior geologist |
| WJ | senior metallurgist |

Source: based on Zijin's internal HR records provided by employee in charge of records filing.

Knowledge of consultants (category A34)

As Zijin has internal rules to file all the contracts, it is easy to find the list of any contract with outside contractor or other service provider. According to brief of contract list, Zijin never hired any consultants for conducting mining investment outside Fujian province, because of its completely specialized staff. For example, the domestic investment department owns experts of mining, processing, geology, law and accounting and it is not necessary to hire any consultants. So, we can say that consultants did not provide any market knowledge in terms of domestic acquisition.

Carrier of knowledge and transformation medium (category A35-38)

This aspect relates to tacit knowledge (A35), explicit knowledge (A36), and personal turnover rate (A37) and transformation agents (A38).

Conversion between explicit knowledge and tacit knowledge is a core issue. Nonaka and Takeuchi (1995) argue that conversion from tacit knowledge into explicit knowledge is called externalization, i.e. within an organizational knowledge management atmosphere, knowledge is converted into explicit knowledge and it is actually the result of integrated organization of the firm. In this process, obtaining and encoding of tacit knowledge is particularly important. On the other hand, conversion from tacit knowledge into explicit knowledge is called internalization, i.e. based on individual initiative, employees interpreted procedures and practice of the firms into their own individual knowledge and make use of it to practice. All in all, conversion cannot occur without organization of firms.

In terms of Zijin's case, tacit knowledge (A35) of employees is accumulated, and due to low personal turnover rate (A37). For example, according to internal HR record, there is only one vice-general manager of domestic investment department who left and the whole management of the department remains almost same during the past 10 years; tacit knowledge of employees and management are being maintained for long time. But, there is no summarized systematic information in terms of company level. For example, there is no integrated database to store the files of contracts of cases and there are no internal rules to review the case files either. In this sense, there is no effect organization of firms on conversion from tacit knowledge to explicit knowledge. Moreover, it is easy to find that training system of Zijin is behind the times and tacit knowledge cannot be transformed effectively into explicit knowledge (A36) through training. For example, Zijin's training before 2015 regarding investment knowledge accumulation and teaching is zero. What they have done is just to provide the staff training opportunity on basic knowledge of geology, processing and geology, which are isolated professional knowledge and has nothing to do with knowledge of investment. The knowledge transformation agent (A38) does not exist.

To sum up, from the perspective of both enterprise and staff, Zijin has no market knowledge (A3) on areas outside Fujian province before they began to invest outside Fujian. Moreover, Zijin conducted domestic investment without accumulating systematic explicit market knowledge,

although Zijin's employees maintained and improved their own tacit knowledge by themselves to some degree. More explicitly, Zijin did accumulate market knowledge with development of its domestic expansion, but there are no any systematic enterprise data filings on market knowledge. Accumulation of knowledge went on more on the employee level. In this sense, as far as the firm (Zijin) is concerned, category A35 (Tacit knowledge) cannot be converted into A36 (explicit knowledge) due to lack of transformation agent (A38) of the firm. So, it is safe to say that category A3 (knowledge) is irrelevant to A11 (investment methods) and A13 (investment strength), as Zijin did not own or accumulate any systematic market knowledge.

4.2.5 Industry's characteristics (core category B1)

Method of obtaining resources (category B11)

“The mining industry is a resource oriented business and occupation of resources is always placed first.” Chairman of Zijin, Mr Chen Jinghe said (Huang and Zhou, 2012: 26). Normally speaking, there are two ways to obtain mineral resources, acquisition and exploration. After all, metal is non-renewable resource and so mining companies have to buy/acquire it or explore it. There is no third method. Which method is the main resource obtaining mode? According to information provided by SNL metals & mining , as shown in Table 4-3 and Figure 4-3, during the period 2004-2013, the world experienced 114 gold project acquisitions, with an amount of up to 96252 million dollars, and quantity of resources by acquisition is 1487 million ounces. The amount of resources by exploration from 1999 to 2013 is less than 7 million ounces. Or the latter is less than half of the former. No doubt, the acquisition is the main resource obtaining method. We can say that investment method (A11) is related to method of obtaining resources (B11) in the industry.

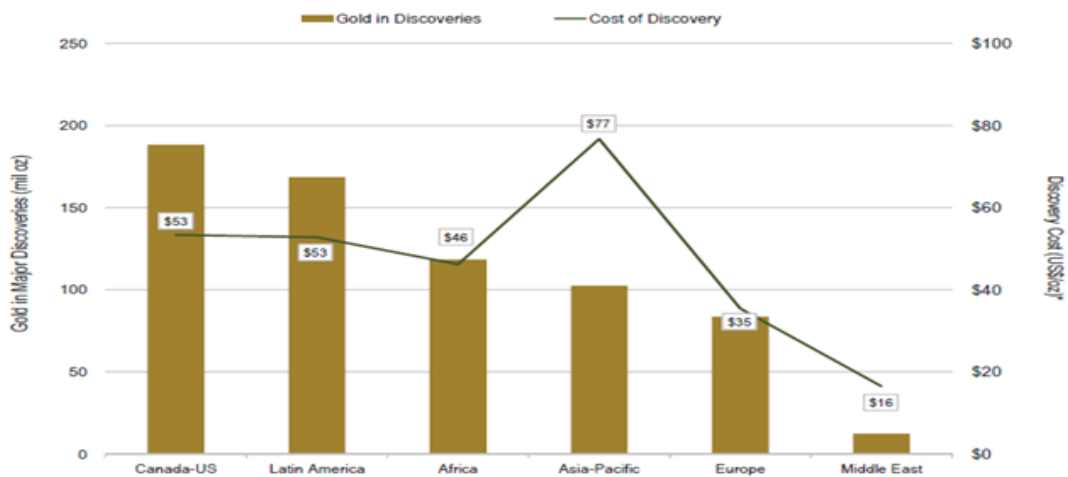
Table 4 - 3 Acquisitions of gold reserves and resources by year 2004-2013

| Year | Average Gold Price (US\$/oz) | Number of Acquisitions | Price Paid (US\$ mil) | In-situ Value of All Metals in Acquired Reserves & Resources (US\$ mil) | Gold Eqv in Acquired Reserves & Resources (oz) |
|-----------------|------------------------------|------------------------|-----------------------|---|--|
| 2004 | \$409 | 6 | \$1,679.4 | \$22,047.7 | 60,435,098 |
| 2005 | \$445 | 14 | \$17,224.6 | \$90,270.1 | 240,720,253 |
| 2006 | \$604 | 11 | \$17,692.4 | \$120,974.7 | 295,060,363 |
| 2007 | \$697 | 16 | \$7,198.5 | \$56,697.2 | 115,708,623 |
| 2008 | \$872 | 11 | \$6,478.9 | \$50,813.6 | 92,388,467 |
| 2009 | \$973 | 14 | \$5,086.1 | \$51,271.6 | 85,452,645 |
| 2010 | \$1,225 | 11 | \$22,018.7 | \$135,393.0 | 150,436,627 |
| 2011 | \$1,569 | 11 | \$7,287.9 | \$115,650.0 | 110,142,719 |
| 2012 | \$1,669 | 9 | \$5,316.3 | \$119,780.5 | 95,824,366 |
| 2013 | \$1,411 | 11 | \$6,269.6 | \$337,543.0 | 241,101,795 |
| Totals/Averages | \$987 | 114 | \$96,252.4 | \$1,100,441.4 | 1,487,270,995 |

Note: Slight variances in table are due to rounding.

Data source: SNL Metals & Mining.

Source: Ferguson et al.(2014)



*Includes 100% of grassroots and 75% of late-stage gold exploration budgets in each region.

Data sources: SNL Metals & Mining, Company reports.

Figure 4 - 3 Discovery of gold reserves by exploration 1999-2013

Source: Source: Ferguson et al .(2014)

Uneven distribution and potential (category B12)

Mineral resources are unevenly distributed in China. Western China is rich in mineral resources and has the biggest potential. For example, Western provinces own 41.6% of copper

resources of China, and 31.2% of gold (Zhang, 2003). Although Eastern China also owns a lot of mineral resources, its potential is not as big as the west. This view is also in line with the suggestion of mineral section of commerce guidebook (version 2006) by China Council for the Promotion of International Trade, CCPIT, which belong to ministry of commerce and has the responsibility to help domestic firms to conduct overseas investment and trade. This characteristic of mineral resource distribution helps to understand why Zijin went to western provinces to invest to some degree.

To sum up, investment method (A11) is related to mode of obtaining resources (B11) in the industry and Uneven distribution and potential (category B12).

4.2.6 Influence of state policy (core category B2)

“Western development policy” (category B21)

Due to being a state-owned enterprise, Zijin has an obligation to comply with Chinese government’s policy. Accordingly, domestic investment of Zijin, is influenced dramatically by the western development policy of Chinese central government, which advocates firms to invest in western poor provinces of China.

According to official website of the Chinese central government, 12 Provinces grouped as western provinces in the western development policy include Sichuan, Shanxi, Gansu, Qinghai, Yunnan, Guizhou, Guangxi Zhuang autonomous Region, Inner Mongolia Autonomous Region, Ningxia Hui Autonomous Region, Xinjiang Uygur Autonomous Region, Tibet Autonomous Region, Enshi Tujia and Miao Autonomous Prefecture of Xiangxi, Tujia and Miao Autonomous Prefecture, Chongqing. The area of western provinces is 6.85 million square kilometre, accounting for 71.45% of China, and the population is 367 million, accounting for 25% of China’s population.

Due to natural, historical, social and other reasons, the economic development of the western region is relatively backward, per capita GDP is only about two-thirds of the national average, less than the average level of 40% in the eastern region. According to related information released from the official website of Chinese central government,⁴ Western Development is a policy of the Chinese central government, aimed at “the remaining capacity of

⁴<http://www.chinawest.gov.cn/web/NewsInfo.asp?NewsId=55943>

the eastern coastal areas of economic development, to improve the level of economic and social development of the western region.” On January 2000, the State Council Leading Group was set up in the western region. Former Premier Zhu Rongji served as team leader, and former Vice-Premier Wen Jiabao served as deputy head. Proved by the National People’s Congress, the Western Development Office of the State Council officially began operations in March 2000. According to information released by the website of the company,⁵ Zijin made it clear that “We will continue to seize the golden opportunity to implement the National Western Development”. In several internal meetings including the business summary meeting in 2010, whose key contents were written in Zijin’s almanac, management of Zijin also agreed with one another that it was the policy of western development that provided Zijin golden opportunities to acquire good projects. And so, in the foreword of Zijin mining almanac, it is indicated that Zijin adheres to the policy of western development and going global.

Due to the relevant national support policies, enterprises which invest in western region can benefit from tax relief policy. For example, according to IRS data Hunchun, Hunchun Zijin, one of subsidiary company of Zijin group, as the beneficiaries of the western development policy, from establishment of the company to the end of 2012, enjoyed tax relief with a total of up to 374,552,200 yuan (about 60 million dollars).

Recalling the history of domestic acquisitions Zijin, we found that first acquisition occurred in Guizhou, which is a typical western province. During the period of 2001-2004 Zijin had conducted acquisition in 10 provinces, among which there are seven in the western provinces. In other words, the national policy of western development (B21) affected Zijin’s investment in terms of investment location (A12).⁶

Shareholding structure of the firm (category B23)

Zijin is relatively state controlled company, but different from the 100% state-owned enterprises. At the same time, it is also completely different from private enterprises. Its entrepreneurs are civil servants. The government has a strong voice in firm’s investment, while the management also has considerable control right.

⁵http://www.zjky.cn/Portals/0/C_Info/job/xbgs.html

⁶Category B22 will be discussed in 4.3.6.

Zijin's shareholding structure is illustrated in Figure 4.4. State representatives, i.e. western Fujian Xinghang Assets Investment Management Co., Ltd. is the largest shareholder and a private enterprise, i.e. Xinhua Company, a private company, is the second largest shareholder.

Identity of entrepreneurs (category B24)

Key members of top management of Zijin such as Chairman and Vice-chairman are both civil servants and entrepreneurs. More explicitly, they are red capitalists who have double identities and their special identities make that Zijin's overseas investment is subject to government's policy.

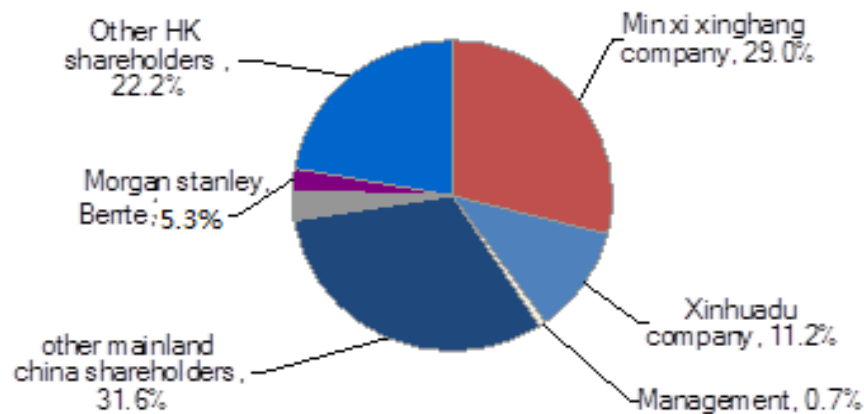


Figure 4 - 4 Shareholding structure of Zijin of 2013

Source: Roland Berger strategic evaluation report of Zijin (2013)

Investment procedures (category B 25)

Due to the nature of being the relatively state-owned holding company, Zijin's all major domestic and foreign investments are subject to the approval of western Fujian Xinghang owned Assets Investment Management Limited, which is the representative of the local government.

To sum up, relatively state owned holding (B23) and key members of top management who have double identities of civil servant and entrepreneur (B24), and the investment procedures (B25) make that Zijin's overseas investment is influenced by government's policy (B2).

4.2.7 Influence of entrepreneur based on enterprise culture and strategy (core category B3)

In terms of influencing factors of internationalization behaviour, entrepreneur factor cannot be forgotten (Ruzzier et al., 2006; Hynes, 2010). Some scholars even believe that the core driving factor is the entrepreneur (Wang, 2013) or the entrepreneur's behaviour is just the behaviour of

corporate internationalization (Lu and Beamish, 2001). Gartner (1988) argue that, to answer “who” question of entrepreneurs, there are 5 dimensions: demographics, human capital, personality, type, and network impact. In this study, two integrated dimensions (personality and human capital) are adopted to conduct related analysis.

Personality (category B31)

Wang (2013) indicates that entrepreneurs are good at grasping the opportunity and facing risks. And this, the personality of entrepreneurs, can affect internationalization of enterprises.

So, does Chen Jinghe, the Chairman of Zijin have this personality trait? According to Zhou (2010), Chen is from the Hakka ethnical group. Hakka people are a special group of Chinese. They used to live in northern China and settled in their present locations in south China after a long and tough journey. Then they also often migrated overseas to various countries throughout the world. Hakka tend to be audacious, they have no sense of belonging, and accordingly they are stimulated by a kind of spirit of adventure. Chen Jinghe is typical of the Hakka people. Chen insisted his original plan and never forgot his dream of leading Zijin to. With his endeavour, Zijin, a small mining enterprise in an underdeveloped region went outside the closed route south China, and then to the world.

Human capital /type/network (category B32)

Although there is no consensus view on what is human capital, it is all recognized that knowledge is an important indicator (Wang, 2013). Anderson (2004) further divided entrepreneurs into two types: technical expert type and marketing expert type, by analysing their resume. So, resume review with focus on knowledge may be appropriate.

According to Zijin’s HR information, Chairman Chen major in geology and is a professor - level senior engineer with the State Council special allowance. He made breakthrough on innovative processing method (heap leaching) in rainy area which surprised the mining industry. In this sense, he is a technical expert type person, but never a conservative expert.

Moreover, Chairman Chen is a civil servant too and he has his own political network in politics world. This helps him to deal with a lot of political hindrance and answer why he is so brave to challenge some technical problems. After all, he is supported by the government.

To sum up, from the angle of personality (31) and human capital/type and network (B32), Chairman Chen is a decision-maker who is supported by the government and has his political

network. This made that Zijin tends to take risks, rather than try gradually. In this sense, personality (B31) and human capital/ type and network (B32) may influence Zijin international investment pattern (core category A1).

Enterprise culture (category B33)

According to official information of Zijin issued by its website, Zijin's corporate cultures focus on serving the country and benefit the people. For example, according to the official information issued by the website of Zijin, Zijin's ashele copper mine helped the local people to escape from poverty and the average income of local people doubled from 2001 to 2005. On the other hand, Zijin's investment in ashele copper mine is the direct result of Zijin's response to the call of central government from the perspective of western development policy. This clearly explains why government policies can affect its business investment and Zijin's investment is in line with its enterprise culture.

Enterprise strategy (category B34)

According to official information of Zijin issued by its website, Zijin Mining's business development strategy is to be the large high-tech and efficiencies international mining group. To fulfil the target, given situation of limited domestic resources, it has to go out and conduct acquisitions which are a major resource method.

Implementation approaches of strategy (category B35)

Zijin's strategy of development is focused on copper and gold properties and it means its investment should focus on those areas which is rich in gold and copper resources. In addition, Zijin clung to the share market early on and has financial advantages compared with other private company. It is very easy for it to raise adequate money from the share market and make use of it to acquire overseas projects. It can also explain why Zijin did not develop from setting branches then to high-level business units in overseas market. On the contrary, because of its strong financial background, it went on to acquire big projects at the very beginning. Moreover, implementation methods of its strategy is focusing on big projects and neglecting small projects. It is because of this implementation method that made Zijin not take a gradual way and jump to acquisition directly.

In summary, Zijin's corporate strategy is to be the high-tech leading international mining group, and strategy implementation measures are focused on large-scale projects, and the specific investment method is acquisition. Therefore, the investment is not gradual, but focused on large-scale projects, the main investment method is acquisitions. So, it is safe to say that enterprise value (B32), enterprise strategy (B33) and implementation approaches of enterprise strategy (B34) may influence the investment pattern (A1) to some degree.

4.2.8 Dynamic capabilities (core category B4)

According to the definition and dimension identification of chapter 2, the following chapter will prove that Zijin has complete dynamic capabilities which are appropriate to domestic environment, from three perspective, observation capabilities, technology capabilities and organization capabilities.

Internal and external observation capabilities (category B41)

As mentioned above, the Chinese government began to develop the western region in 2001, and accordingly, Zijin which always follows government's policy, completed its first investment breakthrough in the western provinces in 2001 too. During the period of 2001-2004, among ten provinces where Zijin conducted acquisition, there are seven in the western provinces. Therefore, it proved that Zijin has a keen ability to grasp the domestic market policy changes. Zijin is a partially government owned company and the government plays an important role in its business. It is very easy for Zijin to observe the opportunities that the government creates. In other words, observation capabilities of Zijin (category B41) is connected with state policy (core category B2), due to the help of entrepreneur factor (core category B3)

Technology reconstruction capabilities (category B42)

According to the introduction of website of Zijin, Zijin is the company that has the most complete R&D department in the domestic gold industry. The company now has a national level laboratory, a leading R&D centre, academician's research centre, postdoctoral research centre, Zijin College of mines and a series of high-level scientific research platforms. Zijin applied their own technology in their own mines, and is benefited by its own significant intellectual property.

Zijin emphasizes technology innovation. By the end of 2013, the company has completed more than 500 projects of various types, among which some are state level high-tech projects.

Zijin owns more than 100 independent intellectual property, and won more than 44 the provincial science and technology awards (including 16 first prizes); and 184 national patents. Moreover, Zijin also drafted 11 the national/industry standards, and participated in drafting of more than 20 national / Industry standards. All of the above information can be found in Zijin's website and double check by reviewing Zijin's annual report, and the credit can be secured due to Zijin's identify as a public company.

Historically, Zijin emphasized technological innovation. According to Zijin Mining almanac, the flagship project of Zijin, Zijinshan gold and copper resources in the 1980s was a small mine with less than 10 tons of gold reserves. However, a technology innovation team led by Mr Chen conquered a processing difficulty and put forward an innovative heap leaching method in rainy southern China area. And so, the small mine become a world class gold mine. After that, in a series of acquisitions of domestic projects, technological innovation has played a crucial role. For example, according to mining almanac 1986-2008, Zijin acquired Shuiyindong project because of successfully conquering the problem of "Carlin-type" refractory gold ore which is a worldwide technological problem by adopting a peroxidation processing method, which was regarded as a milestone technological breakthrough by Mr Tu Guangzhi, the academician of Chinese Academy of Sciences, on October, 17, 2003.

Because of its strong technology capabilities, Zijin tends to look for projects which have some technological problems and the peers cannot deal with. For example, according to Zijin's website release, in terms of Hunchun project in Heilongjiang province which is in situation of loss, the requirement of processing technology is very high that several domestic leading mining companies dare not to invest after detailed due diligence, But, Zijin was confident about its technology ability and chose to be the first mover. It is because of Zijin's technology ability that the company conquered the challenges and fulfilled profit in the same year. In this sense, Zijin's Technology reconstruction capabilities (B42) influence its choice of investment location (A12).

Organization reconstruction capabilities (category B43)

During the period of 1993 to 2006, with the gradual expansion in domestic market, Zijin constantly adjusted its organization according to changing environment. Its original company structure is Zijinshan gold mine oriented or project oriented and then, shifted to group company, and finally to a three layer structure: group-area company-project company. It also set up

varieties of non-production departments such as investment department, security department and international department.

To sum up, as far as the domestic industrial environment and the situation of Zijin is concerned, Zijin has robust dynamic capabilities (B4) which results in the fact that Zijin can expand countrywide. Part of its dynamic capability, i.e. technology capabilities (B43) and observation capabilities (B42) influence its overseas investment methods (A1)

4.2.9 Capability paradox factors (core category B5)

Due to its short life span, Zijin is not loaded by many historic burdens and maintains flexibility in organization structure. In terms of its domestic expansion period, as discussed in Sub-section 4.2.8, its structural adjustment capabilities are very strong and its organization structure is also very flexible. So, there is little evidence structural inertia and Zijin's decision making system is efficient. Due to complete dynamic capabilities, Zijin has the courage to expand countrywide from its headquarters and there were no signs of path dependence lock-in issue or cognitive traps while expanding inside China. For example, Zijin has no any experience of investing in outside provinces and developing projects there. Accordingly, there is no example for Zijin to learn from and Zijin construed its own investment pattern as discussed in Sub-section 4.2.2 Zijin did not continue investing in failed project due to aiming to make up for sinking cost either. The above analysis can be illustrated in Figure 4-5 All in all, with respect to domestic expansion, Zijin showed dynamic capabilities (B4) and broke through the three factors of capability paradox (B5).

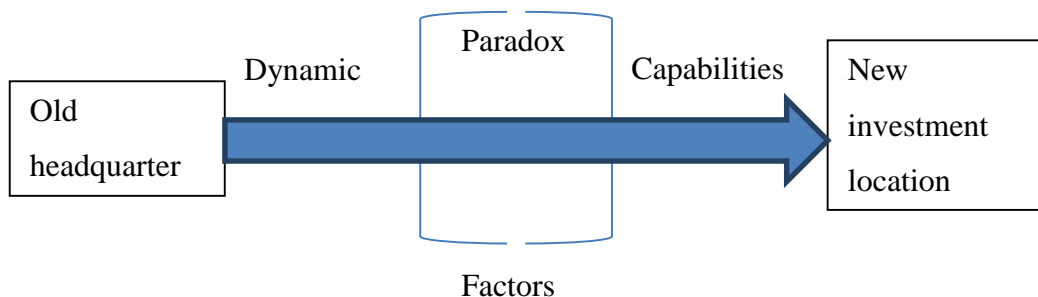


Figure 4 - 5 Relation between dynamic capacities and paradox factors in domestic market

Source: this dissertation

4.3 International expansion of Zijin

4.3.1 Overview of overseas investment by Zijin

Zijin's overseas investment began in 2005 and the first case is acquisition of Summit minerals, a Canadian company and the offer is 1.82 million dollars. According to the Table 4-4, till June 2015, Zijin's overseas investment has reached 1304 million dollars which refers to amount of acquisition offers and does not include subsequent construction investment which will be financed by debt from banks.

Table 4 - 4 Summary of Zijin's overseas investment

| Time | Location | Project | Shareholding (%) | Offer (Million dollars) |
|------|------------------|------------------------------|------------------|-------------------------|
| 2005 | Canada | Silver coin | 21 | 1.82 |
| 2005 | Myanmar | Moweitang | 90 | 21.8 |
| 2006 | South Africa | Blue ridge and sheba's redge | 29.9 | 19.02 |
| 2006 | Mongouliar | Narentuoluogai | 70 | 8.35 |
| 2006 | Russia | Tytytyn | 50 | 10.69 |
| 2006 | Russia | Tuva kizil-tashtig | 70 | 43.8 |
| 2007 | Vietnam | Daban | 60 | 4.84 |
| 2007 | Peru | Rio Blanco | 45 | 80.55 |
| 2007 | Tajikistan | Tarro | 75 | 55.1 |
| 2011 | Kyrgyzstan | Zuoan | 60 | 66 |
| 2011 | Australia | Pattington | 89.15 | 170.77 |
| 2013 | Australia | Bullabulling | 100 | 13.88 |
| 2014 | South africa | Garata, Tubatse | 26.35 | 19.9 |
| 2014 | Congo | Klowezi | 51 | 77.92 |
| 2015 | Papua New Guinea | Porgera | 50 | 298 |
| 2015 | Congo | Kamoa | 49.5 | 412 |

Source: Zijin mining almanacs 1986-2008 and annual reports 2009-2014. Note: Exchange rate: Rmb/US dollar: 6.2 Australian dollar/ US dollar: 0.934; Canadian dollar/US dollar: 0.93; UK pound/ US dollar: 1.69 (July, 2014).

4.3.2 Investment characteristics (core category A1)

Investment methods (category A11)

Since 2005, overseas investment of Zijin has been mainly based on acquisition, which can be illustrated from the Table 4-5. Some equity participation deals are actually part of following acquisition. And this arrangement, i.e. first equity participation and then acquisition, is called as two step arrangement in Zijin.

On October 2005 Zijin conducted two investments simultaneously, one in Canada and the other in Myanmar. It is hard to say that Zijin first conducted an equity participation deal and then switched to acquisition. Moreover, Silver Coin project acquisition occurred in 2006 is equity participation deal, but, it should be noted that Zijin planned to conduct takeover bid next. Just because of strong opposition of other major shareholders, Zijin cancelled the next step acquisition plan. As far as its original intention or plan, it is a failed acquisition, rather than an equity investment. It is the same for Porgera case, Garatau case and Blue Ridge and Sheba's ridge case too. In terms of Kamoanga case, Zijin has an option right of 1% share purchase, according to the contract, and it means that Zijin has the controlling right of the project and this is an acquisition. With respect to Tytyyn and Rio Blanco case, Zijin is the largest single shareholder and has the actual controlling right of management of the project company, and so they are both acquisition.

Table 4 - 5 Summary of investment methods of overseas acquisition

| Time | Location | Project | Shareholding (%) | Offer (Million dollars) | Investment methods |
|------|------------------|------------------------------|------------------|-------------------------|----------------------|
| 2005 | Canada | Silver coin | 21 | 1.82 | Equity participation |
| 2005 | Myanmar | Moweitang | 90 | 21.8 | Acquisition |
| 2006 | South Africa | Blue ridge and Sheba's ridge | 29.9 | 19.02 | Equity participation |
| 2006 | Mongolia | Narentuoluogai | 70 | 8.35 | Acquisition |
| 2006 | Russia | Tytytyn | 50 | 10.69 | Acquisition |
| 2006 | Russia | Tuva kizil-tashtig | 70 | 43.8 | Acquisition |
| 2007 | Vietnam | Daban | 60 | 4.84 | Acquisition |
| 2007 | Peru | Rio blanco | 45 | 80.55 | Acquisition |
| 2007 | Tajikistan | Tarro | 75 | 55.1 | Acquisition |
| 2011 | Kyrgyzstan | Zuoan | 60 | 66 | Acquisition |
| 2011 | Australia | Pattington | 89.15 | 170.77 | Acquisition |
| 2013 | Australia | Bullabulling | 100 | 13.88 | Acquisition |
| 2014 | South Africa | Garatau, Tubatse | 26.35 | 19.9 | Acquisition |
| 2014 | Congo | Klowezi | 51 | 77.92 | Acquisition |
| 2015 | Papua new guinea | Porgera | 50 | 298 | Joint venture |
| 2015 | Congo | Kamoa | 49.5 | 412 | Acquisition |

Source: Zijin mining almanacs 1986-2008 and annual reports 2009-2014.

Geological location (category A12)

We name a country as top mining country if this country is listed as one of the top 20 countries in terms of copper or gold resources/production, or owns one world-class copper or gold project; if not, it is non-top mining countries. According to U.S. Geological Survey, Mineral Commodity Summaries, February 2014, Canada, South Africa, Russia, Peru, Australia, and Papua New Guinea are all listed as top 15 countries in terms of gold resources. According to World Gold Council⁷, Mongolia, Kyrgyzstan and Democracy of Congo are all listed as main countries in terms of gold production. So, as shown in Table 4-6, In terms of number of

⁷ <https://www.gold.org/research/responsible-gold-mining-and-value-distribution-2013-report>

investment cases, Zijin invested 9 projects in top mining countries and the other 3 in non-top mining companies. Moreover, the investment in non-top mining countries only accounts for 10% of the investment in top mining countries. So, in terms of choice of geological location of investment, Zijin has appetite to invest in top mining countries.

Table 4 - 6 Geological location of overseas acquisition

| Non top mining countries | Investment (million dollars) | Top mining countries | Investment (million dollars) |
|--------------------------|------------------------------|----------------------|------------------------------|
| Vietnam | 4.84 | Canada | 1.82 |
| Myanmar | 21.8 | South Africa | 38.92 |
| Tajikstan | 55.1 | Russia | 54.49 |
| | | Peru | 80.6 |
| | | Australia | 184.61 |
| | | Democracy of Congo | 489.92 |
| | | Mongolia | 8.35 |
| | | papua new guinea | 298 |
| | | Kyrgyzstan | 66 |
| Total | 81.7 | Total | 1222.71 |

Source: The grouping scheme originates from U.S. Geological Survey, Mineral Commodity Summaries, February 2014 and a global assessment of the economic value created and distributed by members of the World Gold Council (2013).

According to Fraser mining report 2013 which is a famous professional report used by many mining companies, in terms of mining a total of 112 countries are analysed, if it is divided into three categories, according to classification standard of risk, the first 38 countries can be named as high, 38 countries middle, and last 36 countries low. So we can see from the Table 4-7 which is drafted according to Fraser report, there are two indicators, i.e., number of cases and investment size. For example, the number of investment cases in high-risk countries is (seven times) higher than the number in low-risk countries (two times). Moreover, the total investment in high-risk countries (993.66 million) is much higher than in low-risk countries (172.58 million), in this sense, Zijin's overseas investment has not a characteristic to focus on low-risk countries. In other words, Zijin tends to invest in high risk countries.

Table 4 - 7 Risk of countries where Zijin has invested

| High risk countries | Investment (million dollars) | Medium risk | Investment (million dollars) | Low risk countries | Investment (million dollars) |
|----------------------------------|------------------------------|--------------|------------------------------|--------------------|------------------------------|
| Mongolia | 8.35 | Peru | 80.6 | Australia | 170.77 |
| Russia | 54.49 | Vietnam | 4.8 | Canada | 1.81 |
| Myanmar | 21.8 | South Africa | 37.72 | | |
| Tajikistan | 55.1 | | | | |
| Kyrgyzstan | 66 | | | | |
| Papua New Guinea | 298 | | | | |
| Democratic Republic of the Congo | 489.92 | | | | |
| Total | 993.66 | Total | 123.12 | Total | 172.58 |

Source: Fraser mining survey 2013

Investment size (category A13)

In terms of overall trends, it can be seen from the Table 4-8 and Figure 4-6, Zijin's overseas investment is not characteristic of being in a gradual increase with respect to investment size as Uppsala model indicates and it is actually similar with the same domestic investment, i.e. a wavy process which includes trough and crest.

Table 4 - 8 Summary of overseas investment size

| Time | Country | Investment (million dollars) | Time | Country | Investment (million dollars) |
|------|--------------|------------------------------|------|--------------------|------------------------------|
| 2006 | Canada | 1.81 | 2007 | Tajikistan | 55.1 |
| 2006 | Myanmar | 21.8 | 2011 | Kyrgyzstan | 66 |
| 2006 | South Africa | 19.02 | 2011 | Australia | 25.73 |
| 2006 | Mongolia | 8.35 | 2012 | Australia | 145 |
| 2006 | Russia | 10.69 | 2013 | Australia | 13.88 |
| 2006 | Russia | 43.8 | 2014 | South Africa | 18.7 |
| 2007 | Vietnam | 4.8 | 2014 | Democracy of Congo | 77.92 |
| 2007 | Peru | 80.6 | 2015 | papua new guinea | 298 |
| | | | 2015 | Democracy of Congo | 412 |

Source: amendment of Table 4.5

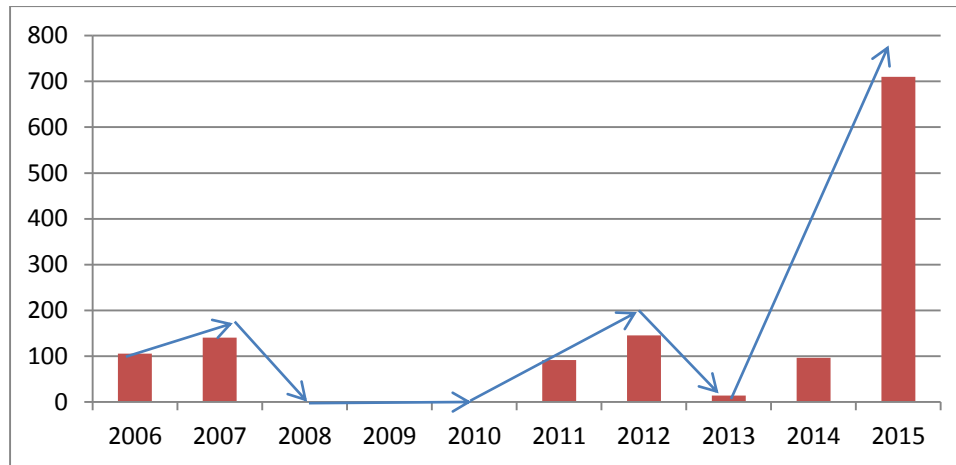


Figure 4 - 6 Trend-line of overseas investment size

Source: amendment of Table 4.5

Note: according annual report 2011 and 2012, Pattington case is a two-step arrangement, 25.73 million in 2011 and 140.5 million in 2012.

More explicitly speaking, as can be seen from the chart, the annual total investment, 2006-2007 is on the rise, and then there is no case in the period of 2008-2010. And it can be regarded as the bottom. 2011-2012 is on the rise, and 2013 began to decline. 2014-2015 is on the rise again. This is a wavy process, rather than a gradual increase process.

In summary, in terms of location choice, investment size and investment methods, Zijin's pattern is totally different from the Uppsala model. Specifically speaking, Zijin's investment size did not evolve from low risk subsidiary to high risk acquisition. Acquisition is the main method or we can say that investment methods did not vary as Uppsala model indicates (branch to joint venture to wholly owned company). In terms of location of investment targets, Zijin tends to invest in high risk countries which are top mining countries.

4.3.3 Psychic distance (core category A2)

According to Table 4-9 and Figure 4-7, on Oct 2005, Zijin invested in both Myanmar and Canada simultaneously. According to Blomkvist and Drogendijk (2013), psychic distance of Myanmar and Canada to China is respectively 34.1 and 92.72. The latter is almost the farthest country to China. So, Zijin's first overseas investment is not conducted according to psychic distance.

With respect to the whole overseas investment history of Zijin, during 11 years since 2005, Zijin did not choose to invest in nearest country first, and then moved to farer country. There is no data of psychic distance on Mongolia, Kyrgyzstan and Tajikistan, so the research is flawed. But, whatever the data is, there no exists a trend from near too far. And so, psychic distance (A2) has nothing to do with Zijin’s investment methods (A1).

Table 4 - 9 Psychic distance of investment target countries

| Location | Psychic distance | Location | Psychic distance |
|--------------|------------------|--------------------|------------------|
| Canada | 92.7 | Tajikistan | NA |
| Myanmar | 34.1 | Kyrgyzstan | NA |
| South Africa | 51.26 | Australia | 66.83 |
| Mongolia | NA | Australia | 66.83 |
| Russia | 58.55 | Australia | 66.83 |
| Russia | 58.55 | South Africa | 51.26 |
| Vietnam | 24.58 | Democracy of Congo | 40.3 |
| Peru | 52.04 | Papua New Guinea | 52.61 |

Source: Blomkvist and Drogendijk (2013)

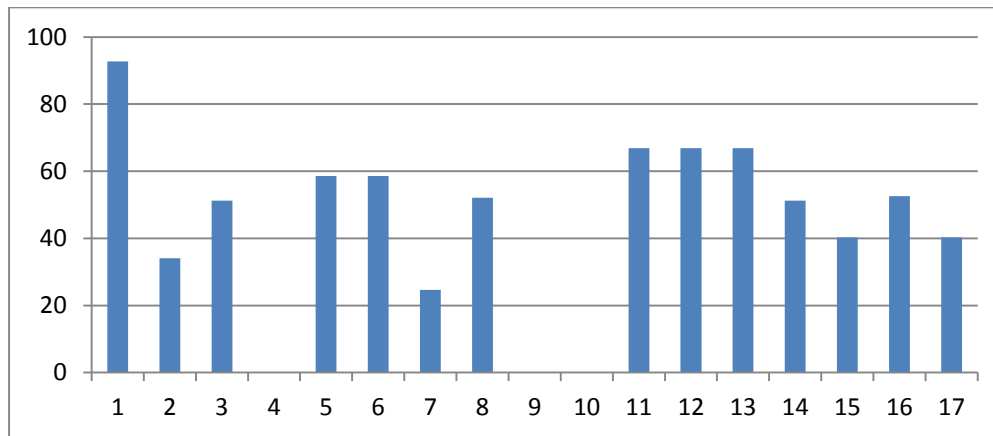


Figure 4 - 7 Psychic distance of invest target countries

Source: Blomkvist and Drogendijk (2013)

Note: Pattington case is a two-step arrangement, 25.73 million in 2011 and 140.5 million in 2012.

4.3.4 Market knowledge (core category A3)

Market knowledge of enterprise, management, and employees (category A31-33)

As discussed in Sub-section 4.3.4, Zijin has no market knowledge of investing in provinces outside Fujian, and abroad, from perspective of enterprise and management. So, it is necessary for repetition. But, in terms of employees, Zijin established an overseas division to operate overseas investment. Appendix 1 illustrates the analysis of employees of overseas investment division. Obviously, among 68 employees who are working or used to work for Zijin, there are only two people who had overseas market knowledge; but these are not key persons who could influence overseas investment (if we refer to overseas market knowledge as knowledge of employees as a team leader to in charge of overseas investment. Moreover, Zijin established its internal investment database in 2014 and this means that before 2014, there is no systematically stored investment information.

Market knowledge of consultant (category A 34)

According to Zijin's internal procedure of project searching and decision making, Zijin does not rely on consultant view or market knowledge. The procedure is as follows: general department and technology department of overseas division are responsible for searching investment targets and conduct preliminary due diligence. And the general manager submits related reports to the vice chairman for further discussion. And finally the board meeting will decide to move on or stop. During the whole procedure, there is no involvement of consultants. Consultant such as investment bankers, law firms and accounting firms, has no direct influence on Zijin's overseas investment. They just participated in the investment case of Zijin after Zijin identified the opportunity and decided to launch the investment. It should be noted that none of the 16 investment cases finished by Zijin is introduced by consultants. In this sense, market knowledge of consultant (A34) has nothing to do with investment methods (A1).

Carrier of knowledge and transformation medium (category A35-38)

This aspect relates to tacit knowledge (A35), explicit knowledge (A36), and personal turnover rate (A37), and transformation agents (A38).

As analysed in Sub-section 4.2.4, due to lack of efficient transformation agents (A38) which include efficient training system and systemized database\ filing, tacit knowledge of employees

and management cannot be interpreted as explicit knowledge (A36). It is the same for overseas investment division of Zijin. Moreover, coincidentally, due to low personal turnover rate (A37) in domestic investment division, tacit knowledge of employees and management can be maintained and accordingly work during the process of investment. It is not the case for overseas investment division. For example, according to internal HR information of Zijin, annual personal turnover rate in overseas investment division is over 50%. In this sense, tacit knowledge cannot be maintained efficiently, not mention that it may influence in the investment methods (A1).

To sum up, in terms of overseas investment division, based on the above analysis, Zijin conducted its overseas investment without any market knowledge, from the perspective of enterprise, management, employees and consultants. And Zijin could not efficiently maintain tacit knowledge (A35) due to high personal turnover rate (A37). Zijin could not transfer tacit knowledge to explicit knowledge (A36) due to lack of efficient transfer agent (A38) which should include efficient training system and systemized database.

In the other hand, Zijin has an almost fixed style in terms of investment methods (A1). For example, Zijin prefers to invest in high risk countries and top mining countries. Uppsala model indicates that when investors possess more resources and learn more knowledge, they will go more distance country (Xiao and Chen, 2008; Fletcher and Harris, 2011). It is not the case for Zijin. The fact is that Zijin revealed its appetite at the very beginning of overseas investment when they had no market knowledge. And the appetite has not changed either during these years. More explicitly, Zijin's investment methods (A1) are nearly fixed and it is impossible to relate it to Zijin's knowledge (A3).

4.3.5 Industry's characteristics (core category B 1)

Method of resource obtaining (category B11)

As discussed in Sub-section 4.2.5, resource obtaining method of Zijin is fixed, i.e. acquisition, rather than exploration or expansion. It is also proved by Zijin's case. In terms of investment methods (A1), most of cases are acquisition, which can be illustrated in Table 4.6. In this sense, investment methods (A1) are related to resource obtaining methods (B11) to some degree.

Uneven distribution and potential (category B12)

According to mineral section of commerce guidebook (version 2006) by China Council for the Promotion of International Trade, CCPIT, which belong to ministry of commerce and has the responsibility to help domestic firms to conduct overseas investment and trade. Mineral resources are unevenly distributed in the world. According to U.S. Geological Survey, Mineral Commodity Summaries 2014, as shown in Table 4-10, the top 14 countries own over 80% of gold reserves in the world. According to Zhou et al. (2012), the top 11 countries own around 86% of copper resources in the world too. This helps to understand why Zijin focuses on top mining and high-risk countries.

Table 4 - 10 Gold reserve ranking (tons)

| | | | |
|--------------|-------|------------------|--------|
| Australia | 9,900 | China | 1,900 |
| South Africa | 6,000 | Peru | 1,900 |
| Russia | 5,000 | Uzbekistan | 1,700 |
| Chile | 3,900 | Mexico | 1,400 |
| US | 3,000 | Papua New Guinea | 1,200 |
| Indonesia | 3,000 | Canada | 920 |
| Brazil | 2,400 | Others | 10,000 |
| Ghana | 2,000 | Total | 54,000 |

Source: U.S. Geological Survey, 2014

Business characteristics of mining firms (B13)

Business characteristics of mining firms include being influenced by World economy fluctuation, accidents, and state policies. According to Figure 4-8, investment remained zero over the period of 2008 to 2010. It is an integrated result of world economy fluctuation and accidents. According to a memo of a meeting of the overseas investment division dated Jun 25, 2011, the vice chairman L recalled that due to concern of the world economy crisis, Zijin stopped overseas investment in 2008 and 2009. Moreover, according to Zijin Mining annual report 2010, in July and September 2010, two large-scale pollution accidents occurred to Zijin, and it suffered a severe punishment by China government. Overseas investment was forced to temporarily stop. Another example is the dramatic increase from 2014 to 2015, it is related issuing of one belt and

one road strategy in March 2005, by Chinese central government, which advocates firms to go abroad to invest. This will be discussed in the following chapter. But, it is safe to say that investment size (A13) is related to business characteristics of mining firms (B13) to some degree.

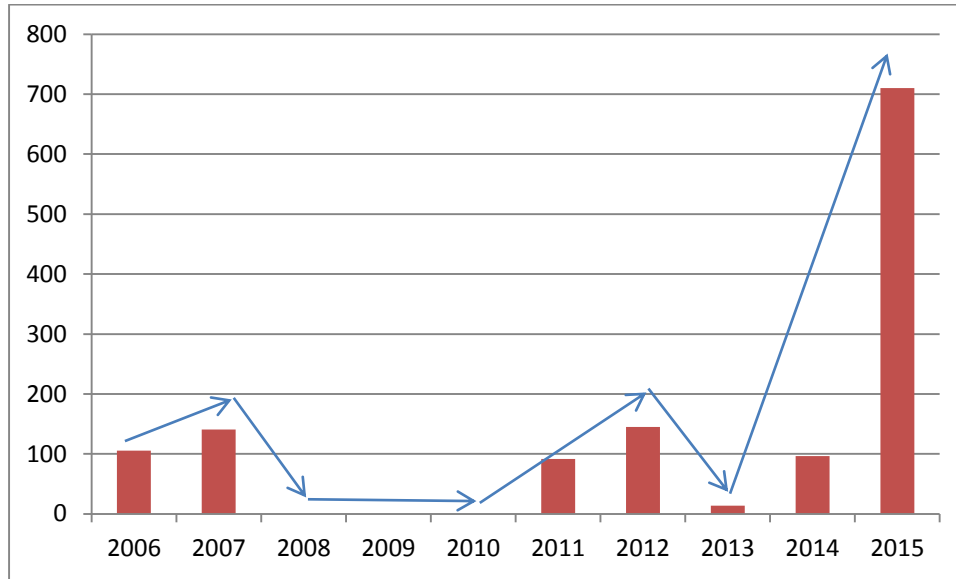


Figure 4 - 8 Trend line of overseas investment size

Source: amendment of Table 4.5

Note: Pattington case is a two-step arrangement, 25.73 million in 2011 and 140.5 million in 2012.

4.3.6 Influence of state policy related to shareholding of the firm (core category B2)

Going global policy (category B22)

Going global policy issued by central government of China is one of key reasons why Zijin begun to invest in overseas market. Strategy of going global was at the exploratory stage before 1994, and was in the embryonic stage during the period of 1995-1999, and put forward officially, in the third Session of the Ninth National People's Congress in 2000. According to news release of people daily dated Mar 8, 2000, the official newspaper of Chinese central government, Chairman Jiang Zemin said "As China's economy continues to develop; we should actively participate in international economic competition and strive to seize the initiative. Chinese enterprises must seize the opportunity to implement the "going global" strategy, integrate "bringing in" and "going out", and make good use of resources from both domestic market and overseas market." The policy lists five main types of foreign investment, including overseas trade, resource development and foreign contracted projects, etc. Mining industry focuses on resource

development and accordingly it can benefit from the policy. In order to promote investment in natural resource projects, Chinese Ministry of Commerce, and Ministry of Commerce and ministry of finance jointly issued a policy with the name “incentive related to investment in overseas resource and foreign economic cooperation projects”, in October 2004. National Development and Reform Commission and the Exim Bank also jointly established overseas investment credit support mechanism. They promised to provide loans for overseas investment.⁸

It should be noted that the policy of ‘One Belt and One Road project’, is the new name of going global policy. According to China daily dated November 17, 2014, “We should prepare timetables and road maps for the coming years for the ‘One Belt and One Road’ project,” President of China, Xi, Jinping said when presiding over the eighth meeting of the Central Leading Group on Financial and Economic Affairs. “One Belt and One Road” refers to the Silk Road Economic Belt and the 21st Century Maritime Silk Road. According to official newspaper of Chinese government, people’s daily, dated May 27, 2015, the one belt and one road strategy was launched officially by Chinese government on March 28, 2015.

Shareholding structure of the firm (category B23)

It has been discussed in Sub-section 4.2.6 and briefly speaking, Zijin is a relatively state controlled company and government’s influence is significant. If the going global strategy merely pushed Zijin going overseas, and it is not as important as western development policy that could influenced the investment pattern of Zijin, overseas investment management methods which is in line with the going global policy did exert significant influence on Zijin’s overseas investment.

China Ministry of Commerce has veto power for the large investment. For example, according to the related rules issued in 2009 with the name of management methods of going global strategy, commerce department of central government and provincial commerce department are authorized to grant permit to companies which want to conduct overseas investment. For example, in 2009, Zijin wanted to acquire indophile copper project, but failed due to disagreement of comer department. In other words, investment location is subject to final recognition of government’s policy.

⁸http://www.ccpit.org/Contents/Channel_1276/2007/0327/30814/content_30814.htm

It is a negative example. But the beneficence of going global policy is obvious and positive. For example, after the launch of one belt and one road strategy which is the latest development result of going global policy, Zijin quickly accelerated its overseas investment speed. The investment size rocketed to over 700 million dollars in 2015, which is greater than the total from 2006 to 2010. Zijin's official document reveals the relation between the related policy and Zijin's overseas investment. According to the background part of feasibility study report on private placement dated March 26, 2015, "Zijin is a first mover of going global policy. Now one belt and one road strategy will bring opportunities to the mining industry, and Zijin will benefit from the preferential policies and the future is promising." To sum up, state policy (B2) influences the investment methods (A3).

4.3.7 Influence of entrepreneur based on enterprise culture and strategy (core category B3)

As discussed in Sub-section 4.2.7, some scholars such as Hynes (2010), argue that entrepreneurs matter to internalization behaviour, and some scholars such as Gartner (1988) further identified dimensions of entrepreneurs, which can be grouped as two dimensions: personality and human capital. Due to being one of the Khkka people, chairman Chen Jinghe of Zijin, is stimulated by a kind of spirit of adventure and always holds the feeling of shouldering the responsibility of pushing Zijin to the international market. It is a brave personality (category B31).

Human capital or personal network is also important; Chen has a background of both geologist and entrepreneur. Moreover, he is a civil servant too. Accordingly, he has wide relationship with politicians and mining experts.

Zijin's corporate cultures (B33) focus on serving the country and benefit the people. And it is true in both China and other bounties where Zijin invested in. For example, according to internal document of RBC (Rio Blanco copper), one of the affiliate company of Zijin, dated May 11, 2015, RBC's donation benefited over 1000 students in the areas of Piura, although RBC is still in the stage of concession maintenance, and there is no any revenue. Zijin's strategy (B34) is to be the large high-tech and efficient international mining group, the domestic market is too limited for it. As discussed the previous sections, benefited from the stock market, Zijin can raise adequate money and invest in overseas market. It means that it is not necessary for Zijin to develop from low commitment level. In addition, the specific implementation methods of its

strategy (B35) are to acquire big projects. It also makes Zijin not take a gradual way and jump to acquisition directly. Based on the above discussion, enterprise value (B32), enterprise strategy (B33) and implementation approaches of enterprise strategy (B34) may influence the investment pattern (A1) to some degree.

4.3.8 Dynamic capabilities (core category B4)

Internal and external observing capabilities (category B41)

As noted above, under Chen's leadership, Zijin successfully expanded from a remote province to set sights on the whole country, especially the western China. This is a strategic step. And when Zijin had fulfilled its domestic operation target and obviously the domestic market had not satisfied its need, Zijin had begun to plan going abroad. Coincidentally, the central government put forward the innovative policy of going global. According to news release of 21st century business herald dated August 31, 2005, as a response to government's going globe policy, Chen indicated that: Mineral resources are unevenly distributed in the world, and some countries are rich in some types of mineral resources. And it means that we should study the mineral resources from a global perspective and make the right decisions." This is a typical case of how Zijin responded quickly to government's policy and then sized the opportunity.

It should be noted that Zijin's observation capability is external capability and it lacks internal observation capability. According to internal documentation, till 2013, Zijin never conducted any internal strategic analysis. Even in 2013, Zijin finally conducted the analysis, but nothing was improved after external consultants submitting the report. So, we can say that Zijin owns partial observation capability.

Technical reconstruction capabilities (category B42)

As mentioned in Sub-section 4.2.8, Zijin adopted innovative heap leaching, and executed this difficult process method in a raining area. This is a technological innovation and typical dynamic capability. Chairman Chen played an important role in internal technical innovation of Zijin. In comparison with its domestic peers, Zijin's emphasis on technological innovation is significant. For example, according to comparison based on information released by annual report, Zijin owns more patents than its peers. Another example, according to information dated November 14, 2014, of website of ministry of land and resources of People's Republic China,

Zijin was ranked as No1 in gold mining industry in 2013, in terms of annual profit (2.9 billion yuan) and technology innovation was regarded as a main driving factor.

According to Zijin's website release, Zijin is the company that has the most complete R&D department in the domestic gold industry. The company now has a National level Laboratory, the National level Enterprise Technology Centre, academicians and experts workstations, postdoctoral workstation, own technology institution and a series of high-level scientific research platforms. Zijin applied their own technology in their own mines, and is benefited by its own significant intellectual property. In comparison with its domestic peers, Zijin is the first to establish nation class laboratory to deal with low-grade refractory gold resources.

In terms of acquisition cases, Zijin acquired Shuiyindong project because of successfully conquering the problem of "Carlin-type" refractory gold ore mining which is worldwide technological problem. It is also Zijin's technology and mechanism innovation that transferred the nearly bankrupted Hunchun gold project acquired by Zijin into profitable. The company established the technological innovation system to achieve a leading position in the hydrometallurgical aspect. It is also because Zijin reconfiguration capability with this technology, that in the process of overseas acquisitions of Zijin, it often has an appetite to find high cost or technology challenging project. Zijin thinks that through its own technical research, it can overcome the technical difficulties that other companies cannot resolve. For example, as illustrated by the Table 4-11, among the 16 projects acquired by Zijin, there are 11 projects with technical difficulties. It must be noted that projects with technical difficulties are not necessarily in the countries that are near China in terms of the psychological distance, and it also explains why Zijin's acquisition is not related to psychological distance.

Table 4 - 11 Problem analysis of acquired projects by Zijin

| Time | Project | Problems | Time | Project | Problems |
|------|------------------------------|--------------|-----------|-------------------|---------------|
| 2005 | Silver coin gold mine | NA | 2007 | Tarro | High arsenic |
| 2005 | Moweitang nickel mine | Low grade | 2011 | Zuanan gold mine | High arsenic |
| 2006 | Blue ridge and Sheba's redge | NA | 2011 | Patington | High cost |
| 2006 | Narentuoluogai gold mine | NA | 2011/2012 | Patington | High cost |
| 2006 | Tytytyn gold mine | High arsenic | 2013 | Bullant gold mine | High cost |
| 2006 | Tuva kizil-tashtig gold mine | High arsenic | 2014 | Garatau, Tubatse | High cost |
| 2007 | Taban lead and zinc mine | NA | 2014 | Klowezi | License issue |
| 2007 | Rio blanco | Social issue | 2015 | Porgera | NA |

Source: Zijin mining almanacs 1986-2008, annual reports 2009-2014, internal information of assessment report of projects.

Organization reconstruction capabilities (category B43)

Since 2006, Zijin has not changed its internal organization structure, i.e., group-area company-project Company. From the perspective of Zijin mining group, the overseas operation management department of overseas division only has 3 employees, but this department is responsible for management of 11 overseas projects. At the same time, in terms of area companies, they also have authorization to manage overseas projects. So, overseas projects have two bosses and function overlapped. This problem has existed for years, but there is no solution yet. The reason is that it lacks of internal observation and cannot identify weakness of its own organization structure, although it can capture external opportunities well. It results in the difficulty of Zijin's organization reconstruction which may solve some problems occurred in internationalization of the firm.

In summary, as analysed above, Zijin still has strong external observation capability, but lack internal observation capability. In other words, Zijin only has semi observation capability (B41) which results in the fact that Zijin lacks full organization reconstruction capability (B43). Zijin still has strong technical reconstruction capability (B43) which is one of reason why Zijin's profit is still much better than its peers. This strong technical reconstruction capability (B43) also made Zijin still confident in searching challenging projects which is related to Zijin's investment methods (A1). So, it is safe to say that Zijin only has semi dynamic capability (B4) after

becoming a leading gold mining company and part of the semi dynamic capability (technical reconstruction capability, B43) may be linked to its overseas investment methods (A1).

4.3.9 Capability paradox factors (core category B5)

As discussed in Sub-section 4.2.9, due to its short life span, Zijin is not loaded by many historic burdens. But, in terms of internationalization stage, it is not the case. In 2006, Zijin had become a leading gold company in China and also famous worldwide. It has not updated its organization structure for 9 years and never set up any new non production departments. Its decision making is slower and slower. It is safe to say that organization inertia happens. Due to lack of complete dynamic capabilities, Zijin copied its domestic pattern basically, and it is also a result of path dependence lock in. It is easy to find that overseas investment characteristics of Zijin are similar to its domestic pattern, in terms of methods, location, and investment size. In terms of cognitive trap, Zijin did not escape from its sinking cost of failed investment. In the early stage of internationalization, Zijin acquired several wrong projects and the early trench of investment is huge. These huge sinking costs are like burden to Zijin and push Zijin to continue investing in the same project to make it survive. It is a standard cognitive trap. For example, Zijin acquired Rio blanco project in 2007 and the total investment till 2014 amounted to 300 million. Until now the project is still in the period of preparation and in trouble due to community issues. But management of Zijin refuses to abandon the huge sunk costs and decided to continue investing. This shows that Zijin has not complete dynamic capabilities in the period of internationalization and cognitive trap made Zijin committed a double blunder.

So, all in all, after becoming a giant company, Zijin's original dynamic capabilities which are appropriate in domestic market, are not appropriate to more challenging overseas market. In other words, its complete dynamic capabilities in domestic market become incomplete in overseas market. And so, it cannot breakthrough the capability paradox and the coping of domestic pattern is a natural progression.

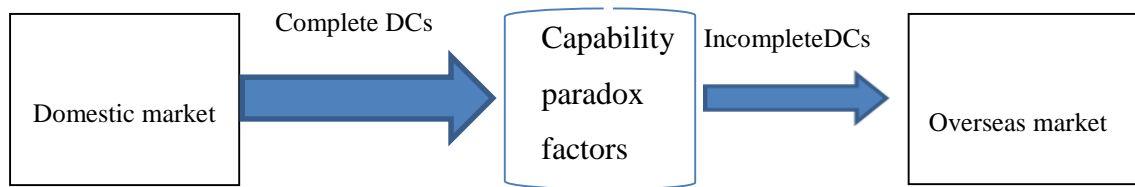


Figure 4 - 9 Relation between dynamic capabilities and paradox factors in overseas market

Source: based on previous discussion

4.4 Uppsala model as frame of analysis

4.4.1 Comparison between domestic and international expansion of Zijin

Domestic expansion

Zijin's domestic investment characteristics (A1) include three points, methods (A11), location (A12) and size (A13).

In terms of investment methods, Zijin focuses on one fixed method, i.e., acquisition, rather than staged arrangement from branches to wholly owned company. Since 2001, Zijin has invested 32 projects in China. If we call investment with controlling share purchase as acquisition, method of all the 32 cases is total acquisition. By reviewing the almanacs and annual reports it surfaces that there is no evidence that Zijin established branches or representatives before acquisition. So, domestic investment of Zijin is basically by simple acquisition and there is no staged investment method adopted.

In terms of investment Location, from 2001 to 2003, Zijin invested in 8 projects and they are located in Guizhou province, Anhui province, Xinjiang province, Jilin province, Qinghai province, Tibet and Sichuan provinces. All of the provinces are not nearby Fujian province. That means that the company started to operate away from its familiar field.

In terms of investment size, Zijin's investments were not conducted gradually, financially speaking. In 2001, the first investment was small, but, investment in 2002 reached 55 million dollars and then decreased in 2003. In 2005, there was a reverse increase and during the following several years, the up and down trend occurred. Moreover, according to annual report

and almanac, during the onset of the global financial crisis of 2008-2009, there was no engagement in domestic investment projects. So, it is more a wavy process than a gradual process.

International expansion

Zijin's overseas investment characteristics (A1) also include three points, methods (A11), location (A12) and size (A13) too as its domestic pattern.

In terms of investment methods, since 2005, overseas investment of Zijin has been mainly based on acquisition, which can be illustrated from the Table 4.6. It is similar to Zijin's domestic investment method choice. Some equity participation deals are actually part of following acquisition. And this arrangement, i.e. first equity participation and then acquisition, is called as two step arrangement in Zijin.

In terms of geological location, as discussed in Sub-section 4.3.2, Zijin invested in nine projects in top mining countries and the other three in non-top mining companies. Moreover, the investment in non-top mining countries only accounts for 10% of the investment in top mining countries. So, in terms of choice of geological location of investment, Zijin has appetite to invest in top mining countries. Moreover, Zijin's overseas investment has not an appetite to focus on low-risk countries. In other words, Zijin tends to invest in high risk countries. Zijin invested in high-risk countries more frequently and the investment size is higher. It is similar to Zijin's domestic location choice.

In terms of investment size, it can be seen from the Table 4.8 and Figure 4.6, Zijin's overseas investment is not characteristic of being in a gradual increase with respect to investment size as Uppsala model indicates and it is actually similar with the same domestic investment, i.e. a wavy process which includes trough and crest.

Comparison between domestic and overseas investment

As shown Table 4-12, Zijin's internationalization is similar to its domestic period. In terms of the pattern, from the three dimensions: market knowledge, investment size, investment methods and psychic distance, Zijin's overseas investment has the same characteristics as its domestic investment, i.e. in terms of investment size, exists periodicity (rather than gradually increase); in terms of investment methods, acquisition is the main method; in terms of investment location, both are risk taking.

Table 4 - 12 Comparison between domestic and internationalization period of Zijin

| Investment characteristics | Domestic period | Internationalisation period |
|----------------------------|------------------------------------|------------------------------------|
| Investment method | Acquisition oriented | Acquisition oriented |
| Investment location | Risk-taking | Risk-taking |
| Investment size | Wavy, rather than gradual increase | Wavy, rather than gradual increase |

Source: based on previous analysis

4.4.2 Inapplicability of U model in Zijin's case

Inapplicability of U model in Zijin's case is reflected in the relation between investment characteristics and U model's two influencing factors (psychic distance and market knowledge). Nordstrom and Vahlne (1992) cited the concept by Vahlne and Wiedersheim (1973) as factors which prevent the flow of information between suppliers and customers. Based on research result of Yi (2011) literatures and actual situation of China, related factors which are used to measure psychic distance are chosen as government incentive, language, economy development level and education level. As discussed in Sub-section 4.2.3 and Sub-section 4.3.3, in both domestic and overseas cases analysis, Zijin did not choose to invest from near or too far, in terms of psychic distance.

Moreover, as discussed in Sub-section 4.2.4 and Sub-section 4.3.4, Zijin began to invest in areas outside Fujian province and overseas without market knowledge. During Zijin's domestic and overseas investment period, Zijin did not accumulate market knowledge successfully due to poor training system. So, in this sense, there could not exist a correlation between market knowledge and investment characteristics. To sum up, from perspective of both psychic distance and market knowledge, U model may not be applied in Zijin's case.

4.4.3 U+ model originated from Zijin's case

The internationalization pattern of emerging Chinese gold mining companies reflected in the case of Zijin can be summarized as follows: internationalization process of emerging Chinese gold mining companies is similar to its domestic pattern due to path dependence and features fixed preference of method, fixed preference of location, and non-gradual increase of investment size, which is the interact result between capability paradox factors and dynamic capabilities based on entrepreneur factors, under the context of state policy and industry influence. The pattern is named as Uppsala + model or U+ model.

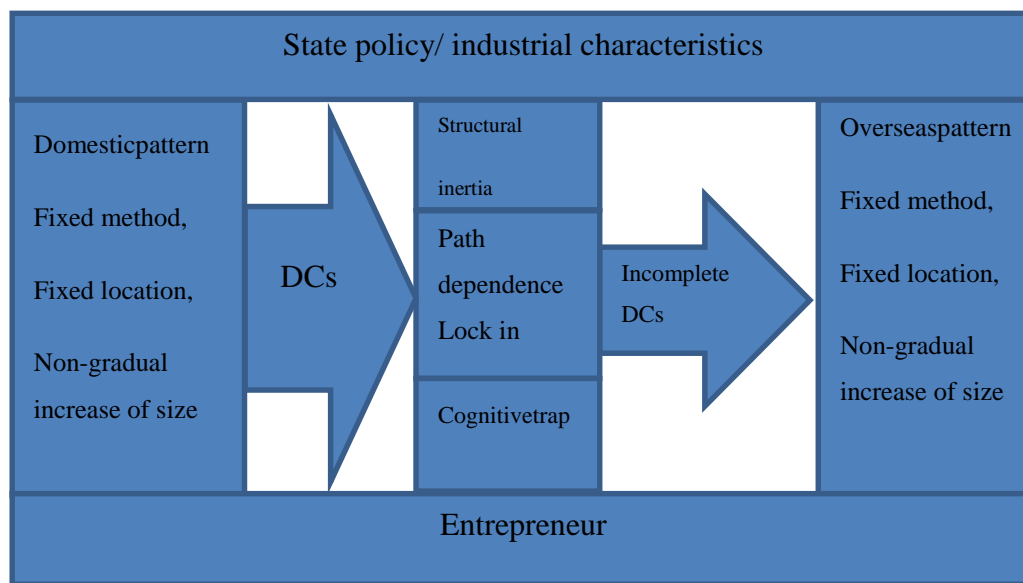


Figure 4 - 10 Summary of U+ model

Source: this Dissertation, based on analysis in previous sections

First, similarity of overseas pattern and domestic pattern is interact result between capability paradox factors (B4) and dynamic capabilities (B5). Zijin does not have complete dynamic capabilities which are appropriate to the international business environment due to partial observation capability and lack of organization reconstruction capability, although it has full technical reconstruction capability. Cepeda and Vera (2007) argue that capabilities of firms can be divided into operational capacity and dynamic capabilities. From this perspective, Zijin's ability in internationalization period is a kind of ability between operation capabilities and dynamic capabilities, or we can say that it is a preliminary dynamic capabilities or incomplete dynamic capabilities. As discussed in Sub-section 4.3.9, because of incompleteness of the

dynamic capabilities, it cannot break through the capability paradox, namely, path dependence lock in, organizational inertia, and cognitive traps (Schreyogg and Eberl, 2007). So, Zijin had to or automatically copy its domestic pattern after going abroad.

Second, the pattern features fixed preference of method, fixed preference of location, and non-gradual increase of investment size. Zijin prefers investing in high risk and top mining countries by a fixed method, i.e., acquisition. Its investment size has no characteristics of gradual increase with accumulation of market knowledge which is illustrated by U model. As discussed in Sub-section 4.2.5, due to unique resource obtaining method, Zijin choose acquisition as the main investment method; due to unevenly distributed mineral resources, Zijin had to choose top mining as the investment location. It means investment method (A11) and location (A12) are both related to industry's characteristics (B1). As discussed in sub-section 4.3.7, as the entrepreneur of Zijin has an appetite of risk taking, Zijin tends to go to high risk countries. This means that investment location (A12) is also linked with influence of entrepreneur (B3).

Third, it is an integrated result of work from both internal factor (entrepreneur) and external factor (state policy and industry influence). Zijin's entrepreneur is a technology expert with a trend of risk taking, which results in the fact that Zijin continually emphasizes technology and has a appetite to invest in high risk countries. Moreover, due to Zijin's relatively controlling shareholding by the government, and the double identify of entrepreneurs (civil servants and entrepreneur), Zijin's investment is influenced dramatically by state policy, for both domestic investment and overseas investment. Industry's characteristics also have influence on this pattern, in terms of investment method. So, it is safe to say that the pattern is the integrated result of internal and external factors.

4.4.4 Possible managerial implication of U + model

U+ model is meaningful in managerial implication, in terms of adopting integrated view of internationalization, relation between life span and path dependence, importance of dynamic process analysis, prescription of internationalization behaviour, and importance of theoretical framework.

U model tends to focus more on internal factors such as market knowledge, although it also considers psychic distance which relates the investor and the investment target. An integrated view is lacked. U+ model provides a more applicable and integrated view including internal and

external factors. It is more in line with evolutionary economics which is the economics resources of U model and has an integrated view: hierarchy view and population thinking. This integrated view indicates that research targets should be put in an interrelated dynamic system or group of individuals to conduct analysis.

U+ model indicates that path dependence does not only have relation with life span of firms. Zijin only has a history of 30 years, but path dependence occurred. To some degree, lack of complete dynamic capabilities and dramatically increased firm size results in path dependence. It is useful for future research.

U+ model also indicates that dynamic process analysis is appropriate in research of an evolution-related topic. U model only considers the overseas period and the domestic period of research examples are forgotten. It separates the history of firms and a whole picture of a research issue cannot be depicted. In this sense, analysis about history of internationalization of firms is only seemingly dynamic, or dynamic to some degree. A real dynamic research of firms should consider the whole life span of firms.

With respect to the role of context, U+ model indicates that specific context is crucial. In different specific context, internationalization of firms is influenced by different factors, and relation between different variables or factors vary. So, it is impossible to imagine application of a universal model in different context and pursue a good effect.

In terms of evolution of dynamic capacities, U+ model are also helpful to understand that dynamic capabilities are also context-oriented. Complete capacities may become incomplete when situations or contexts are changed. So, dynamic capabilities cannot be discussed without pre-analysis of its context. In this sense, the stress that U+ model made to the classic or traditional U model is that it not only introduced dynamic capabilities, but also indicates the importance of context to dynamic capabilities of firms in the internationalization process. It is a meaningful attempt to put the internationalization process theory back to the track of evolutionary economics.

Methods of just focusing on one isolated period of firms may not be appropriate to be used in Chronological research for internationalization of firms. Only examination of the overseas expansion period of firms may provide misleading theoretical result and the crucial domestic

development period of example firms are forgotten. It is a typical thinking of neo-classical economics and it should be noted in related research.

The U+ model also provides a new perspective to decision making of internationalization behaviour. Firms which have an overseas plan may analyse their domestic history and find out what are their own dynamic capabilities, then compare the overseas context with their domestic one, finally draft their internationalization strategy.

Last, but not least, construction of U+ model is helpful to understand how important the theoretical framework is. Without input of the concept of dynamic capabilities, related research only remains in the stage of U model. For the perspective of theoretical framework, one of the theoretical resources, i.e. the theory of the firm has evolved into research of dynamic capabilities. But U model does not consider this factor and still remains in the RBC stage. In this sense, construction of U+ model makes the internationalization research keep up with the development pace of its theoretical resource. Development of a managerial theory should be in line with its theoretical resources.

4.5 Conclusion

4.5.1 Coding explanation

In this research, there are 34 preliminary individual categories which are grouped in 8 core categories. In terms of these 8 core categories, 3 including investment characteristics, psychic distance and market knowledge (A1-A3), belong to known variables of U model and 5 belong to new variables (B1-B5, i.e. industry's characteristics, influence of state policy and entrepreneur, dynamic capabilities, and capability paradox factors) of U+ model. The latter 5 categories both constitute U+ model and explain why U model does not work in Zijin's cases. In the other hand, the investment characteristics (A1) are phenomena factor and the other 7 are influencing factors. Among the 7 influencing factors, 4 factors including market knowledge (A3), influence of entrepreneur (B3), dynamic capabilities (B4), and capability paradox factors (B5) are internal factors. The rest 3 including industry's characteristic (B1), influence of state policy (B2), and psychic distance (A3), are external factors.

4.5.2 Summary of cases

In terms of domestic investment, Zijin's pattern has the following investment characteristics (A1): fixed style on method (A11), i.e. acquisition, rather than staged arrangement from branches to wholly owned company; fixed style on location (A12), i.e., operate away from its familiar field of operation. Investment method (A11) and investment size (A13) are not linked to market knowledge (A3), but connected with industry's characteristics (B1). Choice of investment location (A12) has nothing to do with psychic distance (A2), but is linked with influence of state policy (B2) and entrepreneur (B3). Due to its complete dynamic capabilities (B4) in domestic market which can deal with capability paradox factors (B5), Zijin constructs its own domestic investment pattern.

With respect to overseas pattern, it has the similar characteristics as its domestic pattern. Zijin's overseas investment characteristics (A1) include three points, methods (A11), location (A12) and size (A13). The first characteristic (A1) is fixed style on method (A11), i.e. Zijin's main overseas expansion method is acquisition, rather than staged arrangement as illustrated by U model; the second characteristic is fixed style on location (A12), i.e., Zijin operates away from its familiar field and with focus on high risk non-top mining countries; the third is non-gradual increase in size (A13). The expansion process of Zijin is a wavy process.

Moreover, function of knowledge accumulated in overseas expansion period (A3) is not that important as U model indicates. Investment method (A11) and investment size (A13) are not linked to market knowledge (A3) either, but connected with industry's characteristics (B1). It is also the case for psychic distance (A2). Choice of investment location (A12) has nothing to do with psychic distance (A2) either, but is linked with influence of state policy (B2) and entrepreneur (B3). Due to its incomplete dynamic capabilities in overseas market (B4) which cannot deal with capability paradox factors (B5), Zijin had to and automatically copied its domestic pattern in overseas investment.

4.5.3 U+ model

Due to disconnection between investment characteristics (phenomenon) and the psychic distance and market knowledge (influencing factors), U model is proved not applicable in Zijin's case. Through dig internal information and identify external influencing forces, new variables or

influencing factors such as industry's characteristics, state policy, and entrepreneur are found, and these variables explain why Zijin has the investment characteristics. Moreover, with analysis of dynamic capabilities and capability paradox factors in different period of Zijin, the similarity of Zijin's domestic and overseas investment pattern is explained to some degree. All of the new variables construe a modified U model or U +model, which may be summarized as follows: Internationalization process of emerging Chinese gold mining companies is similar to its domestic pattern due to path dependence and features fixed style of method, fixed style of location, and non-gradual increase of investment size, which is the interact result between capability paradox factors and dynamic capabilities based on entrepreneur factors, under the context of state policy and industry influence.

Chapter 5: Conclusions

5.1 Summary

Along with the overall economic growth performance of the country, the Chinese mining industry has been developing rapidly. For example, according to Chen et al. (2015), from 2003 to 2011, output of Chinese mining industry has increased from 88.9 billion dollars to 930 billion dollars. In terms of the gold mining industry, according to Figure A2 of the appendix, the supply of gold increased from less than 200 tons in 1994 to about 600 tons in 2013 and the development speed is also remarkable. Along this process the Chinese economy and its industrial players changed status in the international scene. Chinese gold mining companies began to invest in overseas market and they have become a force in the global mining FDI business. Hence, it is important to better understand this phenomenon and the processes behind it. To explore these robust theoretical tools and appropriate empirical evidence are needed. Since, this topic is relatively under-explored any new original data that is uncovered will have the potential to yield new lessons in term of theory and strategic practice. We have tried to submit such new evidence packaged in the form of a case study.

Available theories have been mostly built from the perspective of non-mining firms in limited geological areas. It was the purpose of the present research project to depart from this existing experience and extend it in two ways: *a)* by adding the dimension of a major emerging developing country that lately has been a source of outgoing FDI rather than being on the receiving side; *b)* by supplementing the existing range of available evidence with a leading example extracted from the gold mining field. We have done this by focusing on a Chinese company Zijin, a paramount gold mining concern that has expanded globally in recent years, for which we have collected a unique data sample.

The theoretical underpinnings of our research are located in the broad area of evolutionary economics, which points to knowledge as the key asset of a company that deploys its set of strategies in real historical time. In particular, within this broader theoretical understanding, we follow the conjectures and propositions of the resource-based view of the firm. Since Zijin has

shown itself to be innovative we further adopt the dynamic capabilities perspective of the firm. When applied to the challenge of internationalisation, major analytical device used in this study was the Uppsala model, a well-known general framework for describing the internationalization process of firms. This theoretical construct postulates gradual stretch and intensification of a firm's international operations from more well-known markets and traditional businesses to more unfamiliar settings and complex activities. This approach was originally based on the experience of western multinationals in the manufacturing and international trading sector. We found that Zijin departs from the predictions of the received theory and thus try to accommodate this "anomalous observations" by slightly revising the model, to which we call the "Uppsala+" model or "U+" model.

For this research we have conducted extensive and thorough development of original primary data regarding Zijin for over 20 years. This new material was collected and systematised from variety of different sources: it extracted mostly from public, but underutilised, company reports (for all years available), internal reserved archival documentation (mostly meetings' minutes and strategy papers), etc. Along with this historical and contemporary qualitative evidence there was also a retrieval of first-hand quantitative information, namely financial and technological performance. We were thus able to bring together a diverse array of data from multi-source origins for a single case study, hence supporting a claim for conducting "grounded theory", i.e. using rich high-quality evidence both to understand, question and advance received theoretical wisdom.

5.2 Findings

5.2.1 Research questions and general findings

The research into overseas practice of Zijin was oriented by two guiding questions: First, how have Chinese gold companies been conducting overseas investment? Second, why have these strategies performed the way they have been?

We took, with respect to extant research, the Uppsala model, also called IPT theory (Xiao and Chen, 2008; Fletcher and Harris, 2011), as the basic and mainstream theoretical tool for considering business internationalization processes (Pandian, 2002; Bengtsson, 2004; Zhang,

2008). Although Vahlne and Johanson (2013: 191) claimed to “secure paradigm shift in the Kuhnian sense”, the Uppsala model approach, which is the bottom level theory, has not been updated with novel theoretical sources such as high level source or evolutionary economics (Madsen and Servais, 1997; Moen and Servais, 2002; Vahlne et al. 2011), and the middle level source or resource-based/dynamic capabilities theory of the firm which are theoretical development result of theory of Panrose (Bengtsson, 2004). On the contrary, scholars such as Johanson and Vahlne (2009) still focus on some factors except for experiential learning, and commitment which are involved in the issue of internationalization, rather than truly think from the perspective of framework or paradigm. These scholars include Bilkey and Tesar (1977), Cavusgil (1980), Czinkota (1982), Mintaberg (1984), Mintaberg and McHugh (1985), Root (1987), Axinn (1988), Oviatt and McDougall (1994, 2000), Coviello and Munro (1995), Welch and Lawrence (1996), Uzzi (1997), Chetty and Holm (2000), Pandian (2002), Jensen (2003), Johanson and Vahlne (2003), Prashntham (2004), Mejri and Umemotol (2010), etc. It should be noted that their research provided meaningful support or different view about the effect of the U model and put forward more new variables such as network and absorptive capacities, the research perspective is still kept on testing and modification, rather than rethinking from paradigm development.

We argue that due to its position in the theoretical paradigm, the U model may only work in some context and be invalid in other context, although Johanson and Vahlne (2009) insisted that the model may be a general tool to reflect the reality. Johanson and Vahlne (2009)’s opinion is to put the U model which is just a bottom level theory in the position of top level theory, i.e. the evolutionary economics, and attach extravagant hopes to the model to be effective in different contexts by bring in more variables. In this sense, scholars that support the U model (Cavusgil, 1980; Davidson, 1983; Barkema et al., 1996; Delios and Beamish, 2001), due to their successful testing work of the model in their chosen areas or contexts. But others (such as Axinn and Matthyssens, 2002, Forsgre 2002, Jensen 2003, Rialp et al., 2005, Tykesson and Alserud, 2011) have criticized the model due to finding variation of the model in some contexts. Both camps are focusing on detailed variables searching which provide support or variation for the model, rather than provide to contribution to framework development or at least think from the perspective of framework.

In terms of our case study, the Uppsala model was used to probe into the experience of Zijin mining Co. Ltd, which is appropriate to be the research example because of its industrial position and special shareholding structure, as it moved along within China and then beyond its borders. Dissimilarities in terms of its predictions and actual Zijin patterns provide relevant observations. By comparison of its domestic expansion history and overseas expansion period and adoption of coding methods, thirty four categories are identified and eight core categories are further filtered out. These core categories include investment pattern, psychic distance, market knowledge, industry's characteristics, influence of state policy related to shareholding of the firm, influence of entrepreneur based on enterprise culture and strategy, dynamic capabilities, capability paradox factors. The former three are considered as the variables in U model, with the latter five as new. It is the five new variables that revealed some new rules which occur in a specific context. These new rules construed U+ model. This model indicates that, government policy, industrial characteristics and entrepreneurs play an important role in the internationalization process of firms, and it results in the fact that stage development and psychic distance don't work. In addition, when dynamic capabilities of firms become incomplete as they encounter and cannot deal with paradox factors, firms may copy their domestic pattern in overseas context.

5.2.2 Domestic and overseas path of Zijin

In terms of domestic experience, Zijin's pattern has the following investment characteristics: fixed style on method, i.e. acquisition, rather than staged arrangement from branches to wholly owned company; fixed style on location, i.e. operate away from its familiar field and into other provinces; non-gradual incremental steps in investment size, i.e. it is a wavy process. Zijin's strategic deliberations are not linked to market knowledge and psychic distance, but are linked with influence of state policy, entrepreneurship and dynamic capabilities. It means that this case is at variance in the process regularities postulated by the Uppsala model. Due to its complex set of dynamic capabilities developed in domestic market which made learn how to go around "capability paradox" factors, Zijin was able to construct its own domestic investment path. Its dynamic capabilities include technology reconstruction capacities, observation capabilities, and organization reconstruction capabilities.

With respect to overseas experiences, there are similar characteristics to its domestic pattern, i.e. fixed style on method of acquisition, i.e. Zijin's main overseas expansion method is

acquisition, rather than staged arrangement as illustrated by U model; fixed style on location, i.e. Zijin operates away from its familiar territories of operation and with focus on high-risk top mining countries; non-gradual increase in size, i.e. the expansion process of Zijin is a “wavy” process.

State policy and company entrepreneurial action are driving factors; incremental growth through market knowledge or psychic distance is not to be seen in the process. The above behaviour is contrary to Uppsala model. However, due to its dynamic capabilities that revealed themselves to be incomplete in the context of overseas markets and socio-economic landscapes, the company hit turbulence. Zijin seems to have automatically copied its domestic pattern into its overseas investment procedures: this proved less than satisfactory in terms of overall performance.

5.2.3 Uppsala+ model

Based on comparison research of characteristics of domestic and overseas path of Zijin, a new model can be summarized as the following figure illustrates. We name it as Uppsala+ model (Figure 5-1).

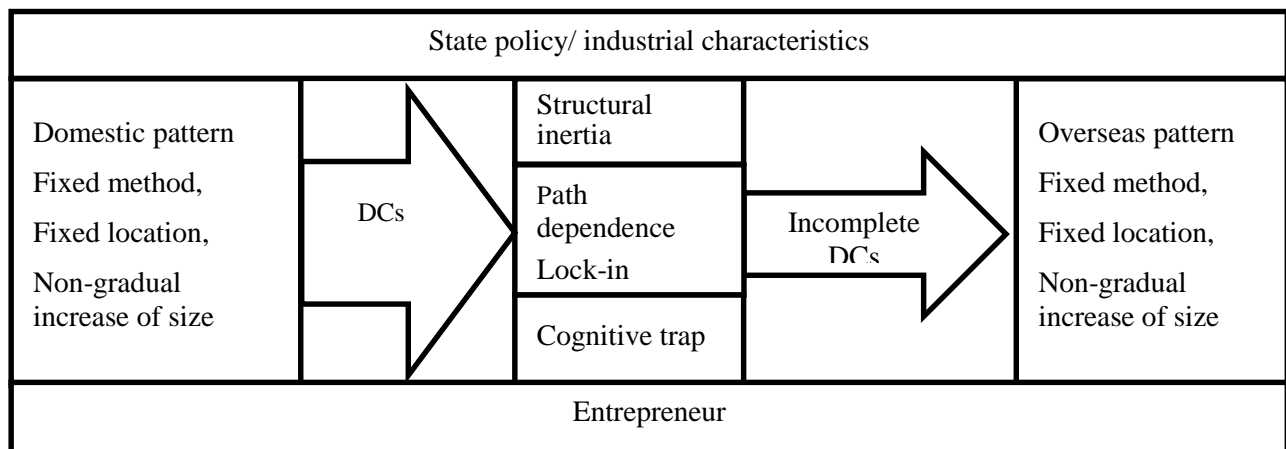


Figure 5 - 1 Summary of Uppsala + model

Source: This Dissertation

Due to disconnection between investment patterns (behavioural phenomenon) and the psychic distance and market knowledge (influencing factors), Uppsala model is shown not to be of straightforward application to the Zijin’s case. Through the uncovering of internal information

and the identification of external influencing forces, new variables or driving factors such as industry's characteristics, state policy, and entrepreneurial management are found to be at play. These variables account for why Zijin has the investment characteristics. Moreover, in terms of the domestic expansion, Zijin owns full dynamic capabilities, while in terms of overseas expansion; Zijin just owns incomplete dynamic capabilities. Accordingly, Zijin cannot deal with paradox parameters. This results in the different result of expansion. All of the new variables yield a modified Uppsala model or "Uppsala+" model, which may be summarized as follows: Internationalization process of emerging Chinese gold mining companies is similar to its domestic pattern due to path dependence. They have fixed expansion style, i.e. same method, same risk tolerance for location, no gradual increase of size. The style is connected to the interplay between dynamic capabilities and capability paradox factors, and it is also context sensitive to government policy, industrial characteristics and influence of entrepreneurs.

The "Uppsala+" model is the amendment of Uppsala model by introduction of latest development result of its source theories such as evolutionary economics, and dynamic capabilities in the context of China, and mining industry. It reveals that development of source theories is useful to bottom level theories. It also indicates that context is crucial to evolutionary economics and the theories which are under instruction of general ideas of evolutionary economics. In addition, from the perspective of Kuhnian sense, it is also a co evolution of theory system or a theory framework.

5.3 Contributions

5.3.1 Adding more research context

Although the Uppsala model had been the pioneering work on internationalization process and had withstood the test of time, some scholars have a suspicion on limited application scope of Uppsala model (Bengtsson, 2004; Zhu and Dong, 2011). Many scholars focused on internationalisation research concur that, with respect to exporting behaviour, the model is well proved (Bilkey and Tesar, 1977; Cavusgil, 1980; Czinkota, 1982; Root, 1987; Mejri and Umemoto, 2010). Scholars, including the above mentioned, only conducted research on overseas development path of research example and neglected their domestic path. China, being so large allows one to test the theory in the context of outward expansion within the borders of the some

country. This research makes a difference in comparison with traditional research of Uppsala model in the above mentioned issues and contributes to extant theories of the firm by operationalising some their insights.

In terms of research context and research sample, this research provides complimentary result to extant theories. The research context is chosen as China, and Zijin is analysed as the sample. China is a rapidly developing country and Zijin is a relatively state-owned enterprise which is different from either private company or completely state-owned company. Moreover, Zijin is a mining company and the mining industry where Zijin is located in is different from regular exporting industry. So, in terms of research start point, the “Uppsala+” model extends the starting point to the domestic development stage of enterprises and unearths a theoretical assumption, i.e. path dependence, from just focusing on overseas stage, in Chinese mining industry. This is an underexploited area that the Uppsala model and other models have not entirely dealt with.

5.3.2 Development of the U model related framework

As discussed in previous chapter, U model has several layers of theoretical resources and, in our view; there may be a more integrated theoretical framework to account for it which includes evolutionary economics, theory of the firm and U model. The problem of traditional models is that, although the concept of evolutionary economics is recognised, the traditional research only considers the overseas trajectory, and domestic path analysis is under-discussed. To consider the full process of transition from domestic to foreign markets makes the U model a more dynamic method. In this research, a real dynamic method is adopted and it makes the internal coordination of the whole theoretical framework.

Moreover, in this research, dynamic capabilities, the latest theoretical development result of theory of the firm is considered and appraised. This makes that research of internalisation keeps up with the development pace of one of its theoretical inputs. In comparison, Uppsala model still remains in the stage of classic resource-based theory. The “Uppsala+” model is embedded in a multi-level theoretical system and its contents not only are in line with high level theory of the system as well as they absorb the latest development result of the system. A synthetic development of different parts in an integrated theoretical framework is crucial, and this we tried to modestly achieve in the context of our study.

5.3.3 Introduction of a new idea

This research introduced a new idea in the field of internationalization process. By comparison domestic and overseas paths of Zijin, complete dynamic capabilities which Zijin has in and is appropriate in domestic environment, is changed into incomplete dynamic capabilities in overseas context. It indicates that dynamic capabilities of firms are subject to specific context of the vehicles. Or we can say that dynamic capabilities of firms evolve according to specific context to continue being efficient or become inefficient. In this sense, U+ model contributed to the development of the classic or traditional U model by not only introducing dynamic capabilities, but also indicating the importance of context to dynamic capabilities of firms in the internationalization process. It is a meaningful attempt to put the internationalization process theory back to the track of evolutionary economics.

5.3.4 Provision of predictive tools

This research provides predictive tools, rather than just a descriptive tool, for internationalization issue. Uppsala+ model can be used to provide predictable idea to EGCMGs which plan to go abroad. By the model, they can analyse their domestic growth and dynamic capabilities and then make a decision if and how to conduct an internationalisation initiative. In comparison, U model is merely a description model. U+ is more applicable than U model to some degree. For example, the internationalization of firms may be doomed to be a failure, if its overseas pattern is similar to its domestic pattern. After all, the domestic context is totally different from the overseas context. So, change is the key. No change, no success.

More explicitly, it makes these firms realize that there is no general recognized rule or model by which they can rely on. What they can learn from U+ model is that acting according to internal and external environment, from the evolutionary perspective, is a good advice. It also indicates that it is meaningful to dig what are the dynamic capabilities of firms, in addition, it is more important to notice that the capabilities worked and continue working in their domestic market may not be valid in different context, for example, overseas market. What these firms should do is to foster complete dynamic capabilities in overseas market and only in this way; firms may succeed in their internationalization process. Although the research is about the mining industry and context does vary, firms in other industries may learn from the general rules of the

U+ model. It is also very important to decision makers of Chinese old companies which may have longer history than firms like Zijin, that since path dependence happened in firms with short history like Zijin, more attention should be paid to firms with longer history. It is also the case from the perspective that emerging market companies plan to surf globalizations. In addition, policy makers in China or similar countries may also benefit from the U+ model by realizing the guiding effect of their overseas policy. They may have to combine the political interest and the economic interest.

5.4 Limitations of the research

There exist some shortcomings in this paper which are also inevitable. First of all, the case study is a single case study and cases from other domestic peers of Zijin are lacked. According to statistics report of China gold association, China gold, Shandong gold, and Zijin mining are the top three gold mining companies in China. Among the three, both China gold and Shandong gold have not consecutive overseas consecutive records, according to their annual report from 2005 till now. It is impossible to conduct a real dynamic research based on them. But, the author has tried to compensate by really going in depth and getting to all kinds of data possible.

Second, it is still questionable if the U+ model could be applied to non-gold mining enterprises. As the model is context-oriented or sensitive to place, different environment may result in the fact that a good model applicable in one kind of environment may be useless in other kind of environment. Just in this sense, this model may be appropriate to be used in similar context, i.e., it may be meaningful to firms in similar sectors such as oil industry and other resource industry.

Third, this research is focused on the internationalization process of Zijin, rather its performance of internationalization. Although Zijin developed successfully from a small 100% state owned company to a leading world class player because of its successful domestic expansion, its internationalization is not so fruitful. For example, according to its annual report 2014, its overseas gold production accounts for around 20% of its total production, but only yielded about 10% of the total profit. So, what is the relation between the manner that is copied from its domestic expansion, and the performance? It has not been discussed in this research.

5.5 New directions for future research

Consolidated theoretical framework or paradigm should be the focus of future research. Researchers should pay more attention to the development of different levels of theories in the same framework. Evolutionary economics may provide general instructions and dynamic capabilities may provide more specific ones. In this sense, real evolutionary research methods such as case study, rather than methods of neo-classical economy, should be adopted to deal with evolutionary phenomenon.

As the idea that context matters has been analysed, more cases in different contexts should be analysed to seek more U + models which may indicate new rules of different contexts. It is the case for time too. Life span of firms is integrated and cannot be cut into several parts. Researchers cannot just focus on one part of firms' history and try to find generally recognized rules. In addition, wholly state owned firms which have been involved in internationalization are also interesting examples and future research may focus on these types of examples. New knowledge may occur.

Therefore, multiple case studies with focus on non-gold mining companies and performance over a continuous period of long time is of importance and meaningful to further digging the subject and further testing of the appropriateness of the finding. But, it is safe to say that, as far as the internationalization process of ECGMCs is concerned, U+ model may provide a solid foundation for future research.

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Appendix 1: Summary of HR information of overseas division

| Position | Name | Title | Major | Nationality | Overseas work experience | Overseas working experience in mining industry |
|-----------------|------|----------------------|---------------------|-------------|--------------------------|--|
| Management | LLZ | general manager | geology | China | no | no |
| Management | LLZ | general manager | accounting | Canada | yes | no |
| Management | LZL | general manager | geology | China | yes | no |
| Management | ST | chief geologist | geology | Canada | yes | yes |
| Management | SJP | vice general manager | geology | China | no | no |
| Management | TSF | vice general manager | metallurgy | China | no | no |
| Management | ZZZ | vice general manager | geology | China | no | no |
| Management | DJ | vice general manager | international trade | China | yes | no |
| Management | FZY | vice general manager | management | Canada | yes | no |
| Management | GH | vice general manager | geology | China | yes | no |
| Management | LGB | vice general manager | geology | Canada | yes | no |
| Management | LJY | vice general manager | english | China | yes | no |
| Management | WCZ | vice general manager | spanish | China | no | no |
| Management | YJC | vice general manager | geology | China | no | no |
| Management | YS | vice general manager | processing | China | no | no |
| Management | YYF | vice general manager | computer | Canada | yes | no |
| Management | YZC | vice general manager | geology | Canada | yes | no |
| Management | SSY | general manager | accounting | Canada | yes | no |
| Management | GXS | vice general manager | geology | Canada | yes | no |
| Management | DSH | chief metallurgist | processing | Canada | yes | no |
| Technical staff | FRB | senior engineer | computer | China | yes | no |
| Technical staff | LGC | senior metallurgist | processing | China | no | no |

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| Position | Name | Title | Major | Nationality | Overseas work experience | Overseas working experience in mining industry |
|-----------------|------|------------------------|---------------------|-------------|--------------------------|--|
| Technical staff | SZD | senior mining engineer | mining | China | yes | no |
| Technical staff | JJM | senior metallurgist | processing | China | no | no |
| Technical staff | TT | senior geologist | geology | China | no | no |
| Technical staff | ZY | senior economist | management | China | yes | yes |
| Technical staff | GXX | senior geologist | geology | China | yes | no |
| Technical staff | XHY | senior geologist | geology | Canada | yes | no |
| Technical staff | LHS | senior engineer | agriculture | China | no | no |
| Technical staff | WQJ | senior geologist | geology | China | yes | no |
| Clerk | GWX | Clerk | english | China | no | no |
| Clerk | GQ | Clerk | english | China | no | no |
| Clerk | HJ | Clerk | russian | China | no | no |
| Clerk | HWC | Clerk | english | China | no | no |
| Clerk | HJ | Clerk | english | China | no | no |
| Clerk | HL | Clerk | international trade | China | no | no |
| Clerk | HQS | Clerk | english | China | no | no |
| Clerk | HZL | Clerk | english | China | no | no |
| Clerk | JFR | Clerk | english | China | no | no |
| Clerk | LS | Clerk | accounting | China | no | no |
| Clerk | FXP | Clerk | processing | China | no | no |
| Clerk | LZW | Clerk | english | China | no | no |
| Clerk | LDX | Clerk | english | China | no | no |
| Clerk | LDW | Clerk | english | China | no | no |
| Clerk | LHT | Clerk | english | China | no | no |
| Clerk | LYH | Clerk | english | China | no | no |
| Clerk | LZP | Clerk | english | China | no | no |
| Clerk | LJ | Clerk | english | China | no | no |
| Clerk | LDW | Clerk | english | China | no | no |
| Clerk | LW | Clerk | english | China | no | no |
| Clerk | MSR | Clerk | english | China | no | no |
| Clerk | WC | Clerk | law | China | no | no |
| Clerk | WQ | Clerk | french | China | yes | no |

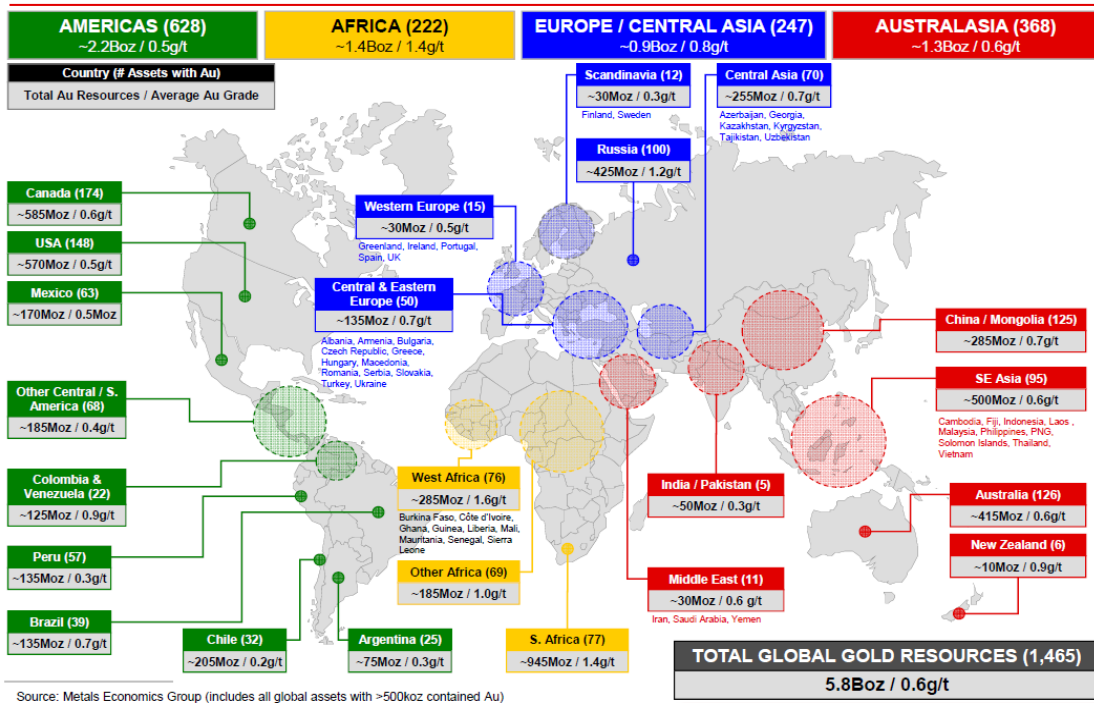
Case study of the strategic practices of emerging Chinese gold mining companies

| Position | Name | Title | Major | Nationality | Overseas work experience | Overseas working experience in mining industry |
|----------|------|-------|------------|-------------|--------------------------|--|
| Clerk | WYC | Clerk | english | China | yes | no |
| Clerk | XSX | Clerk | english | China | yes | no |
| Clerk | XZM | Clerk | english | China | yes | no |
| Clerk | YWL | Clerk | english | China | no | no |
| Clerk | ZH | Clerk | english | China | no | no |
| Clerk | ZLJ | Clerk | russian | China | no | no |
| Clerk | ZXF | Clerk | english | China | no | no |
| Clerk | ZXY | Clerk | english | China | no | no |
| Clerk | ZSH | Clerk | english | China | no | no |
| Clerk | ZLS | Clerk | english | China | no | no |
| Clerk | ZLG | Clerk | english | China | no | no |
| Clerk | WHMD | Clerk | processing | Mali | yes | no |
| Clerk | WY | Clerk | accounting | China | no | no |
| Clerk | DJJ | Clerk | arabic | China | no | no |
| Clerk | LD | Clerk | english | China | no | no |
| Clerk | WMJ | Clerk | english | China | no | no |
| Clerk | YHZ | Clerk | mining | China | yes | no |
| Clerk | LQL | Clerk | english | China | no | no |
| Clerk | FJ | Clerk | english | China | no | no |

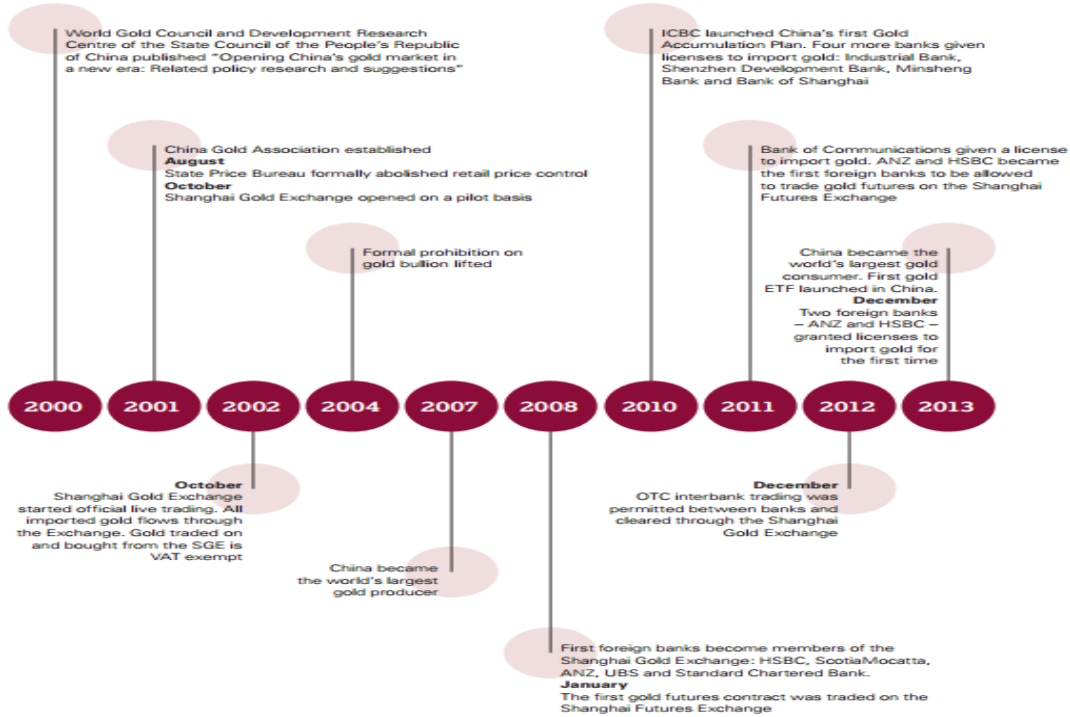
Source: Internal HR records of Zijin

Appendix 2: Major Global Gold Districts

Major Global Gold Districts



Appendix 3: Gold-related policy of China



Source: World Gold Council (2013), *China's Gold Market: Progress and Prospects*. <http://www.gold.org/supply-and-demand/chinas-gold-market-progress-prospects>