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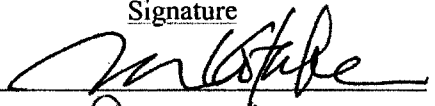
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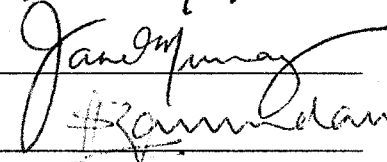
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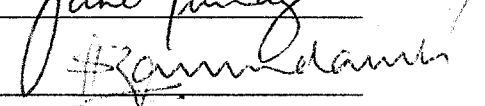
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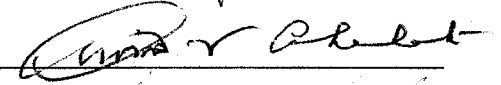
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**EXPLORING RESOURCES ACQUISITION, CAPABILITY
DEVELOPMENT AND PERFORMANCE IMPLICATIONS
OF MULTINATIONAL COMPANIES FROM
EMERGING ECONOMIES**

A Dissertation
Submitted to
The Temple University Graduate Board

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of the Requirements for the Degree
DOCTOR OF PHILOSOPHY

by
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ABSTRACT

Title: Exploring Resources Acquisition, Capability Development and Performance Implications of Multinational Companies from Emerging Economies

Candidate's Name: Xiangwen Jiang

Degree: Doctor of Philosophy

Temple University, May 2008

Doctoral Advisory Committee Co-Chairs: Dr. Masaaki Kotabe and Dr. Janet Y. Murray

This study examines how multinational companies from emerging economies (EMNCs) acquire resources from their external networks of social relations and develop dynamic capabilities as the bases of internationalization. By investigating the interlinkages among knowledge strategy, resources acquisition, dynamic capability development, and performance implications, this study advances current knowledge of EMNCs.

First, this study investigates factors that affect the innovation performance of Chinese multinational companies in terms of knowledge strategy, internal competency and external networking competencies in a dynamic technological and competitive landscape. Empirical results support that knowledge strategies affect innovation performance. However, research on firms' external networking competencies have yielded mixed results. Although strong business ties with foreign multinational companies (MNCs) support innovation performance, EMNCs suffer when they excessively develop political ties with domestic governments. This study also implies that while firms can mitigate their competitive disadvantages through political ties when they suffer weak absorptive capacity, only when combined with strong absorptive capacity can they attain the benefits of foreign advanced technology. Finally, it suggests that the co-alignment of strategic options with the market environment benefits firm innovation

performance.

Second, this study assesses how different types of trust affect the level of assistance EMNCs receive on technological resources acquisition from their foreign partners and ultimately their performance outcomes. Empirical results support that high cognition-based trust with Overseas Chinese MNCs reinforces the positive relationship between affect-based trust and the level of assistance on technological resources acquisition by Chinese firms. As for how trust with foreign MNCs affects the level of assistance Chinese firms receives on technological resources acquisition, empirical results indicate that high affect-based trust with foreign MNCs enhances Chinese firms' technological resources acquisition. The effect of cognition-based trust with foreign MNCs on Chinese firms' technological resources acquisition is beneficial for non-state-owned-enterprises but not for state-owned-enterprises. Further, resources that are valuable, rare, imitable, non-substitutable and generate abnormal returns fail to enhance firms' technological performance.

Third, this study examines whether the institutional relatedness of EMNCs helps them acquire critical resources in the form of social and market capital and whether these resources affect performance outcomes. The research shows that Chinese firms' institutional relatedness with government and regulatory agencies confers resources; however, it fails to sustain firms' competitive advantage. It confirms the importance for firms to improve their internal capabilities to create and sustain competitive advantage.

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CHAPTER 1

INTRODUCTION

Extant studies have explored how multinational companies (MNCs) based in the United States, Europe, and Japan have invested overseas. A decade ago, one could hardly imagine that firms from developing countries would generate competitive advantages sufficient enough to generate international competition. However, the globalization of production and marketing is reshaping the international economic landscape. Accordingly, the conventional wisdom of firms from developed countries as providers of capital and technology and those from developing countries as recipients is gradually giving way to a more complex set of relationships. The geography of the flow of international investment is changing. Gradually, as more companies from emerging economies become internationalized, how they are able to acquire resources and develop capabilities to support their internationalization efforts has become an important research topic in international business.

According to Arnold and Quelch (1998), emerging economies are countries that experience a rapid pace of economic development. In addition, their governmental policies are in favor of economic liberalization and the adoption of a free market system. Although a new breed of multinational companies has emerged from emerging economies, it is still unclear as to the factors promoting the internationalization of multinational companies in emerging economies, their knowledge strategy, internal competency, and/or external networking competencies in light of the dynamic technological and competitive landscape.

Based on the resource-based view, firms' differences are caused primarily by resources or capabilities that are located or produced within the firm (Barney, 1991). The foreign expansion of firms from emerging economies depends on their existing bundle of resources needed in their new market (Wernerfelt, 1984). Further, foreign direct investment (FDI) is made to preserve, strengthen and enhance the value of important network relationships. Organizations are found to be dependent on their surroundings to secure necessary resources for their survival (Salancik and Pfeffer, 1978). In order to survive the intensified competition and to enhance the chances of success, recent studies suggest that EMNCs can be distinguished from traditional MNCs by following an accelerated pattern of globalization via strategic alliances which create new advantages at the network-level rather than at the firm-level (Li, 2007; Mathews, 2006). Networks form the basis of inward internationalization, especially with traditional MNCs from developed countries, which has been argued to be a potential growth determinant in developing countries.

The resource dependence theory has been found to be applicable to relations between firms and government institutions (Frynas, Mellahi and Pigman, 2006), their ethnic networks (Tong, 2005), and their strategic partners (Carroll, 1993). Particularly, in emerging economies, firms rely on network-based relationships to acquire critical resources, due to the institutional voids and cultural heritages (Ahlstrom, Bruton, and Lui, 2000; Khanna and Palepu, 2000; Peng, 2003; Peng and Luo, 2000). Since heterogeneous firm-specific resources are influenced by firms' embeddedness in the external networks of social relations (Granovetter, 2005; Hung, 2002), it is imperative to examine whether the establishment of business ties with foreign MNC partners and political ties with

government support firms in obtaining invaluable resource, committing to and exploring new ideas, and promoting their institutional changes.

In addition, unlike relations that are conducted at arms' length in other industrial economies, in emerging economies, such as in China, business transactions can be influenced by trust and longstanding personal connections. Trust is needed to create the willingness for people/organization to transfer and receive resources, and different levels of trust affect firms' network effectiveness in resource acquisition and value creation (de Wever, Martens and Vandembemt, 2005). As such, it is essential to elaborate on how different types of trust relationships can be carried out in the emerging context and whether interorganizational trust depends on and is influenced by the social and institutional environment in which the relationship is embedded (Bachmann, 2001; Lane and Bachmann, 1996; Zucker, 1986).

Furthermore, a firm's possession of resources cannot guarantee that it can make effective use of them (Mahoney and Pandain, 1992). Resources can be conceived as inputs into the production process whereas capabilities refer to the capacity of a firm to perform certain tasks or business activities (Chan, 2005; Grant, 1991; Newbert, 2007). In order to exploit the latent value of resources, it is necessary for a firm to deploy resources by harnessing internal technological, marketing, organizational and managerial processes that create value. We consider it critical to make a distinction between a firm's resources and capabilities and examine whether it is a firm's resources and/or the dynamic capability of deploying critical resources that contributes to its foreign expansion and improved performance.

The present study aims to investigate some under-researched factors that support the internationalization of EMNCs by incorporating the theories of corporate strategy perspective, resource-based view, knowledge-based view, dynamic capability perspective, real options analysis, social network and trust. It consists of one essay on factors relating to the innovation performance of Chinese multinational companies; another essay on how different types of trust affect firms' critical resource acquisition from their foreign partners, and the last one on the institutional relatedness of firms with government officials and regulatory agencies and such effects on their resource acquisition and performance implications. In the next chapter, key concepts and current literature on internationalization of MNCs are reviewed and then this study is overviewed. In Chapters 3, 4 and 5, conceptual models of three different aspects on factors that affect the performance of EMNCs with an evidence of Chinese multinational companies are proposed. Based on these models, research hypotheses are developed and empirically tested with the data from field interviews and a survey conducted with sampled Chinese multinational companies. Finally, conclusions and managerial implications and directions for future research are presented in Chapter 6.

CHAPTER 2

CURRENT RESEARERCH ON THE INTERNATIONALIZATION OF FIRMS AND AN OVERVIEW OF THIS STUDY

Theories on the internationalization of firms are largely based on Western MNCs. Starting from Vernon's product life cycle model (Vernon, 1966, 1974) through the Uppsala model (Johanson and Vahlne, 1977) to Dunning's eclectic paradigm (Dunning, 1988, 1995), prior studies carefully examined FDI of Western MNCs. Later, researchers began to pay attention to Third World multinationals (Dunning, Hoesel and Narula, 1998; Lall, 1986; Tolentino, 1993; Wells, 1983; Zutshi and Gibbons, 1998) and suggest that care must be taken in future research when examining MNCs from countries at different stages of development (Lall, 1996).

Product life cycle model (Vernon, 1966, 1974) describes the relationship between trade and investment over the product life cycle. In the first stage, MNC manufacturers sell in their home market and also export to certain foreign markets to take advantage of economies of scale and scope. As the product matures, low-cost production becomes important and foreign competition becomes a threat, then MNCs establish production overseas. This production is directed primarily toward the host country, but as quality improves, it may also be introduced into the home country. Finally, once the host country advances to a stage where its costs are uncompetitive, production is shifted to a lower-cost host country.

The Uppsala model argues that firms' internationalization is a gradual learning process in which the rate, sequence, and direction of firms' foreign expansion are a function of their experience, capability, and evolution. Key factors for firms to

internationalize include gradual acquisition, integration, and using knowledge gained about foreign markets and operations. In order to gain experiential knowledge, firms will typically take a gradual approach to entering foreign markets, indicating an increasing resource commitment and a growing experience accumulation (Johanson and Vahlne, 1977).

Popularized during the last two decades, Dunning's OLI (ownership, location and internalization) framework (1988, 1995) states that the extent and pattern of international production is determined by the configuration of the following advantages: ownership advantages, such as proprietary technology, production, expertise and skills; the internalization of these advantages across national boundaries used to overcome market imperfections or failures, reduce transaction costs and maximize economic returns (Buckley and Casson, 1981); and location advantages of host and home countries.

Today, numerous firms based in emerging economies are investing not only in less-developed but also in developed countries, regardless of geographical proximity. They are targeting the much larger markets of rich countries rather than the small ones of other developing countries – a characteristic very different from the expansion trajectory of previous firms described by researchers in the early 1980s (e.g., Lall, 1983; Wells, 1983; Kumar and McLeod, 1981) and the recent emergent global players from emerging economies (Deng, 2004, 2007; Sinha, 2005). For instance, by 2006 foreign direct investment (including mergers and acquisitions) originated from developing countries has mounted to \$174 billion, accounting for 14% of the world's FDI. In particular, EMNCs have become the market leader and amassed businesses around the world, in industries

from cement, consumer electronics, and automobile to aircraft manufacture (see Appendix A).

It has been considered that the competitive advantage of firms from developing countries is established by having products adapted to local conditions and that these firms normally employ low prices to attract foreign customers away from alternative suppliers (Wells, 1978). Further, in some emerging economies, such as India and China, their vibrant overseas communities play a critical role in their firms' internationalization. Their multi-million overseas emigrants foster strong overseas Diaspora with the potential to assist the country's development, such as capital and technological know-how, education, and business experience (Kapur and Ramamurti, 2001).

In addition, as active recipients of foreign investment from other developed countries, emerging economies also benefit from the technology transfer from foreign MNCs (e.g., Buckley et al., 2002, 2004, 2007; Ciruelos and Wang, 2005; Wang, Yu, and Zhong, 2005; Wei and Liu, 2006). Foreign MNCs play a crucial role in upgrading emerging country's infrastructure and technology bases, from which local firms benefit as cooperating partners.

Moreover, government and state legislators of emerging economies are found to play a direct and important role in promoting the internationalization of their national firms (Erramilli and Srivastava, 1999; Sim and Pandian, 2003). It is suggested that governments could use financial support such as subsidies, tax abatement, training supports, infrastructure support, government loans and loan guarantees (Mudambi and Mudambi, 2005) to support firms' foreign expansion. Governments could also provide accommodating regulatory policies and conditions to attract foreign research and

development (R&D) operations to foster the rapid development of local firms. Hence, the financial and institutional support from the governments of emerging economies assist firms in their internationalization activities, which is unlikely to happen in a Western context where the roles of the government are indirect and mild (Sim and Pandian, 2003).

Therefore, although firms from emerging economies were found to increase their competitive advantages through the accumulation of technology and skills and such accumulation of knowledge and competence can be the key to their internationalization (Lall, 1983; Pananond and Zeithaml, 1998), current studies indicate the importance of understanding firms' internal and external networks as sources of competitive advantages with the consideration of their institutional and cultural embeddedness (Sim and Pandian, 2003). What distinguishes firms of emerging economies from traditional MNCs is that their advantages from emerging countries are cultivated from social and cultural assets, which have been nurtured over decades and are strongly embedded in specific locations (Chen and Chen, 1998; Yeung, 1994). In addition to examining economic perspectives that were used to explain Western MNCs' internationalization, we cannot ignore the existence and function of contextual embeddedness, such as institutional and cultural embeddedness, of firms from emerging economies in understanding their internationalization (Sim and Pandian, 2003).

In general, firms' internationalization is essentially a dynamic process, which requires the adaptation of their strategy, resources, structure, and organization to new international environments (Maitland, Rose and Nicholas, 2005). In order to meet competitive challenges, firms need to acquire multiple bundles of resources and transform them into capabilities to create firm specific advantages.

2.1 Current Literature on Factors Pertaining to Firm Performance

Resources-based view of the firm. Resource-based view (RBV) is one of the important explanations of persistent firm performance differences in the field of strategic management (Barney and Arikan, 2001). As early as 1950s, Penrose (1959) argued that a firm is more than an administrative unit, but is also a collection of productive resources. Resources include physical and intangible human and organizational resources. Resources that are heterogeneous among firms allow firms to sustain their competitive advantage when the resources are valuable, rare, imperfectly imitable and non-substitutable (Barney, 1991). To overcome the problems of resource shortages, firms tend to strengthen their connections with external actors to ensure compliance, secure information, nurture associations and utilize government connections to ensure the availability of key resources (Scott, 2003). Resource dependence theory proposes that firms' survival is contingent on their ability to gain control over critical environmental resources. It also suggests that firms that extract critical resources may outperform those that do not. To build advantages through resource acquisition, firms need to scrutinize the environment to extract resources to enhance their legitimacy in the society and to achieve efficiency with improved performance (Pfeffer, 1972).

Knowledge-based view of the firm. Since knowledge is the most important resource of competitive advantage (Drucker, 1995; Spender & Grant, 1996) and complex, specialized, tacit knowledge generates more durable advantages for competing firms to imitate, researchers consider knowledge-based view (KBV) an extension of RBV (e.g., Hoskisson, et al., 1999). The need for knowledge and innovation has become increasingly intense in generating productivity, growth, and competitiveness in a number of industries

and the complexity, tacitness and specificity of a firm's knowledge contributes to its performance (McEvily and Chakravarthy, 2002).

According to KBV, the principal function of a firm is to create, integrate, and apply knowledge, and knowledge is the most important resource of competitive advantage and sustained superior performance (Nonaka, 1994; Spender, 1996; Spender and Grant, 1996). A firm's knowledge strategy affects the identification, development and application of key resources and has great contribution to its performance (e.g., Barney, 1991; Grant, 1996; Peteraf, 1993).

In particular, MNCs are in a favorable position to acquire and develop resources, and to leverage knowledge-based resources and capabilities across borders (Bartlett and Ghoshal, 1989; Gupta and Govindarajan, 1991, 2000; McCann and Mudambi, 2005). They can manage knowledge flows in multiple locations and leverage resources within their internal network, including knowledge exchange with local clusters, knowledge transfer between a parent and its subsidiary, and among its subsidiaries (Gupta and Govindarajan, 2000; Mudambi and Navarra, 2004). Their competence in mobilizing and leveraging geographically dispersed resources creates and sustains their competitive advantages (e.g., Doz, Santos, and Williamson, 2001; Mudambi, 1999).

Dynamic capability perspective. Extant studies suggest that firms are repositories of resources and capabilities (Teece, Pisano and Shuen, 1997) that are embodied in physical and human capital (Langlois, 1992). Firms can earn sustainable returns under the condition that they have superior resources and when those resources can be transformed and utilized to maximize returns. In addition to critical resource acquisition, firms' capabilities can be another source of competitive advantages that arise

from resource transformation and utilization (Majumdar, 1998). Dynamic capabilities determine a firm's ability to create and utilize organizational embedded resources to compete successfully in a global marketplace (Luo, 2002). The "dynamic capability" approach emphasizes firms' continuous development of management capabilities, combined with their organizational, functional and technological skills as new sources of competitive advantage (Teece, Pisano and Shuen, 1997). Distinctive capabilities provide firms the opportunity to expand into new businesses or foreign markets to exploit their economic value (Tallman, 1992).

Social capital perspective. Social capital has been conceptualized as a set of social resources embedded in relationships (Burt, 1992; Tsai and Ghoshal, 1998), including individuals (i.e. Belliveau, O'Reilly and Wade, 1996), organizations (Burt, 1992), interorganizational (Baker, 1990), societies (Putnam, 1995) and business units (Tsai and Ghoshal, 1998). Social capital is defined as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (Bourdieu, 1986: 248). According to Coleman (1988) and Burt (1992), social capital represents the ability of participants to secure benefits through the force of sharing memberships in social networks or other social structures (Portes, 1998). Social capital therefore has been described as a resource similar to financial and technological resources that exist within the social relationships in which firms are embedded (Bourdieu, 1986; Gulati, 1999). At the organizational level, social capital provides benefits including access to critical information, opportunities for new business, reputation, and the like. Viewed broadly,

social capital includes many aspects of social contexts, such as social ties, trusting relations and value systems.

Social networking and trust. According to Inkpen and Tsang (2005), a network of relationships is a valuable resource for the organization that results from informational advantages it obtains from its participation in interfirm networks based on its unique historical experience (Gulati, 1999). When firms develop network ties with others, such network ties can be later utilized as social capital resources. The network approach to FDI highlights the exploitation of network resources for firms' internationalization so that even small and weak firms may engage in FDI as long as they can successfully leverage external resources (Chen, 2003).

In China, *Guanxi*—a derivative of the Chinese Confucian philosophy and one of the major dynamics in Chinese society—has been practiced for centuries and remain highly relevant today. *Guanxi*, which refers to networking and trust building, has been viewed as a mechanism for firms to cope with the absence of a formal and reliable system of laws and regulations. *Guanxi* can be understood as how firms build human or organizational capital to gain competitive business advantages (Chen and Chen, 2004; Tsang, 1998; Yeung and Tung, 1996), improve economic efficiency by reducing transaction cost (Davies et al., 1995; Nee, 1992), or mobilize political support (Jacobs, 1994), and material exchange (Lee and Dawes, 2005). *Guanxi*, as a particular form of social networks, has been argued to favor certainty and trust over chaos (Hammond and Glenn, 2004).

Firms actively participate in the interorganizational network because of the existence of trust, and trust is necessary to ensure the willingness to transfer and receive

resources (De Wever et al., 2005). Trust functions as “a remarkably efficient lubricant to economic exchange reduces complex realities far more quickly and economically than prediction, authority, or bargaining (Powell, 1990: 305).” When two parties trust each other, they are willing to share resources without worrying that the other party will act opportunistically (Mayer, Davis and Schoorman, 1995). Therefore, cooperative behaviors that promote the acquisition of resources may persist when trust develops over time. It has been proposed that different levels of trustworthiness may result in different levels of resource exchange and accumulation among organizations (Tsai and Ghoshal, 1998).

Despite the divergent meanings that scholars have conveyed to the study of trust in international business research, there appears to be a consensus on the understanding of rational trust (cognition-based) and a shared sense of community of affect trust (Rousseau, Sitkin, Burt and Camerer, 1998; Tschannen-Moran and Hoy, 2000). Two fundamental types of trust—cognition- and affect-based (McAllister, 1995)—have been theoretically justified regarding how attributes of each of these dimensions facilitate the exchange of resources between firms.

Cognition-based trust promotes the selection of competent partners and defines trust as the expectation of another's reliability, predictability, and fairness (Rempel, Holmes and Zanna, 1985; Zaheer, McEvily and Perrone, 1998). Cognition-based trust reflects technical competency and a fiduciary obligation to perform (McAllister, 1995) that relies on a rational evaluation of other's ability to carry out obligations (Jeffries and Reed, 2000).

Affect-based trust, on the other hand, is rooted in emotional attachment and care and concern for the other party's welfare (McAllister, 1995; Pennings and Woiceshyn

1987; Rempel et al. 1985) with the believe that such caring sentiments are reciprocated (McAllister, 1995). Affect-based trust promotes the belief that exchange partners are not only confident in each other's behavior, but more importantly, are attentive to the partner's needs emotionally (Lewis and Weigert, 1985). Accordingly, agency problem is mitigated as exchange partners are confident that their interests will be fully protected and that formal monitoring of behavior is unnecessary (Lewicki and Bunker, 1995). The benefits of affect-based trust go beyond fairness, predictability, dependability and reliability that accrue from cognition-based trust.

Affect- and cognition-based trust are considered as representing two distinct forms of trusting relationships (McAllister, 1995). Cognition-based trust is understood as more superficial and less special than emotional trustworthiness. Once affect-based trust has been developed, a foundation of cognition-based trust may no longer be needed (McAllister, 1995). Although trust can be distinguished between cognition- and affect-based forms, they tend to be intertwined complements (Sako, 1992). As such, instead of treating the two types of trust as the two ends on a continuum, we suggest that two types of trust work both independently and interactively between Chinese firms and their networked partners.

Current trust relations have been primarily tested among MNCs from the triad regions, namely North America, the European Union and Japan, which have been the primary economic forces of globalization. Subsequently, trust relations were tested under formal institutions in developed countries where their investigative agencies and judicial institutions have a strong impact on enforcing contracts and prosecuting cheaters to keep economic agents honest (Zak and Knack, 2001). Nevertheless, foundations of trust may

differ across cultures (e.g. Lane, 1997). Since what trust means, when it matters, and sometimes the objectives of implicit trust vary across borders, investigating the emic dimensions of trust makes the understanding of trust in cross-border activities highly complex (Zaheer and Zaheer, 2006).

In examining the external environment of emerging economies, especially when considering both formal and informal institutional environments, conceptualization of trust has to pass beyond rational or calculative trust to various forms of social trust (Bijlsma and Koopman, 2003). Besides viewing trust with the perspective of competence, reliability, predictability and fairness (Rempel et al., 1985), which is a cognition-based trust relationship that relies on a rational evaluation of another's ability to carry out designated obligations; affect-based trust should be examined in understanding the unique context. Unlike Western business settings, the social norm to trust each other tends to be weaker and also universalistic (Bachmann, 1998); in China, longstanding personal connections, such as *Guanxi* relations, play a significant role in the Chinese system of network capitalism (Boisot and Child, 1996).

Since interpersonal and interorganizational trust have similar antecedent conditions and outcomes (Inkpen and Currall, 1997) and trust at the macro-level functions as a generalization of the mutual trust involving a greater number of individuals (Coleman, 1990), in this chapter, trust is analyzed at the interorganizational level.

2.2 Overview of the Study

This study examines three different aspects of factors that affect the internationalization of EMNCs. First of all, despite the long-held discussion regarding the impact of a firm's strategy on its business performance, little is known about the

innovation implications of a firm's knowledge strategies. Further, we know little concerning the impacts of a firm's internal competency and external networking competencies simultaneously and interactively, especially in an emerging economy context. These issues are examined in Chapter 3, in which the effects of knowledge strategies, organizational competencies and the co-alignment of firm strategy with external environment are analyzed in the same setting.

Further, since the level of trust can affect firms' network effectiveness in resource acquisition and value creation, we investigate how EMNCs enhance their competitive advantages through critical resources acquisition that are inaccessible to firms outside the network. Few studies have examined how EMNCs' foreign expansion benefits from inward internationalization by learning, digesting and utilizing critical resources and capabilities obtained from foreign MNCs and Overseas Chinese firms, respectively. Further, little research has empirically tested whether firms that receive high level of assistance in acquiring technological resources that are valuable, rare, imitable, non-substitutable and generate abnormal returns can achieve better performance. We address these issues in Chapter 4.

Last but not the least, although extant literature has emphasized the impact of government involvement in EMNCs' foreign expansion, little empirical evidence exists in examining such a relationship. Recent empirical research has investigated the advantages of managerial ties with government officials for firm performance (Peng and Luo, 2000) and the positive roles governments play in the promotion of internationalization of national firms (Sim and Pandian, 2003). To the best of our knowledge, there is little empirical evidence on the specific resource an EMNC can

acquire from the government support and whether such resource enhances (reduces) a firm's performance. Chapter 5 seeks to fill this void.

In summary, the present study attempts to address the neglected areas in understanding how EMNCs manage to internationalize and shed light on the further research of internationalization of multinational companies.

CHAPTER 3
INNOVATION PERFORMANCE OF MULTINATIONAL COMPANIES IN
EMERGING ECONOMIES- AN EVIDENCE OF
CHINESE MULTINATIONAL COMPANIES

3.1 Introduction

The knowledge-based view of the firm stresses knowledge as the most important resource for firms to possess a competitive advantage (e.g., Grant, 1996; Spender and Grant, 1996). A substantial body of literature supports the theory that a firm's knowledge strategy affects the identification, development, and application of key resources and has great contributions to its performance (Barney, 1991; Grant, 1996). Despite this prominence, most empirical studies on the knowledge strategy and innovation perspective have examined multinational companies originated from developed economies (MNCs). As many multinational firms from emerging economies (EMNCs) have improved their innovative capabilities in recent years, examining the factors affecting their innovation performance promises to provide some important theoretical and managerial contributions in international business by offering interesting insights into the workings of EMNCs.

Recent studies suggest that firms' internal capabilities and their interactions with external sources affect their level of innovativeness (e.g., Caloghirou, Kastelli, and Tsakanikas, 2004). The importance of a firm's internal capability and external networks has been examined separately and mostly in the Western context (Cohen and Levinthal, 1990; Granovetter, 1985; Uzzi, 1997). Further, in emerging economies, firms often rely on network-based relationships to acquire critical resources, due to the institutional voids and cultural heritages (Ahlstrom, Bruton, and Lui, 2000; Khanna and Palepu, 2000; Peng,

2003; Peng and Luo, 2000; Xin and Pearce, 1996). For instance, it is crucial for firms to establish political ties with their government to obtain financial support in absorbing failure, committing to and exploring new ideas, and supporting institutional changes. In addition, as active recipients of foreign direct investment (FDI) from developed countries, emerging economies benefit from the technology transfer from traditional multinational companies, which as a result benefit local firms as cooperating partners (e.g., Buckley, Clegg, and Wang, 2002; Shenkar, 2005).

Despite the long-held discussions regarding the impact of a firm's strategy on its business performance, little is known about the innovation implications of a firm's knowledge strategies. Further, the extant literature provides no insight on the impact of a firm's internal capabilities and external networking competencies simultaneously and interactively on its innovation performance, especially in an emerging economy context. Our study seeks to fill this void. Our objective is to investigate the extent to which an EMNC's internal and external competencies affect its innovation performance. Since a firm's social ties with external partners can produce both negative and positive consequences (Chen, Chen, and Xin, 2004), we further examine the conditions under which social ties enhance or lessen a firm's innovation performance. Furthermore, due to the high uncertainty and growth opportunities in emerging economies, it is essential to incorporate the real options analysis in evaluating the impact of market risks on a firm's strategies (Tong and Li, 2008). Hence, our second objective is to investigate the strategic options that are beneficial to a firm's innovation performance in a dynamic and competitive environment.

We contribute to the extant literature by addressing the following important questions:

- (1) Does a firm's knowledge strategy affect its innovation performance?

- (2) How should a firm align its knowledge strategy with a risky market environment to improve its innovation performance?
- (3) How does the presence of political and business ties enhance (or lessen) a firm's innovation performance?
- (4) When does a firm's absorptive capacity matter to its innovation performance?

The rest of this chapter is organized as follows. First, we review the extant literature and develop hypotheses. We then describe the methodology, data and variables. This is followed by a discussion of the empirical results. Finally, we conclude with a summary and discuss theoretical and managerial implications.

3.2 Literature Review

Knowledge-based View of the Firm. Resource-based view (RBV) provides one of the important explanations of persistent firm performance differences in the field of strategic management (Barney and Arikan, 2001). Since complex, specialized, tacit knowledge generates more sustainable advantages against competing firms to imitate (Winter, 1987), researchers consider knowledge-based view (KBV) an extension of RBV (e.g., Hoskisson, et al., 1999). As the need for knowledge and innovations has become increasingly intense in improving productivity, growth, and competitiveness in many industries, the complexity, tacitness and specificity of a firm's knowledge contributes to a higher performance over that of its competitors (McEvily and Chakravarthy, 2002).

According to KBV, knowledge is the most important resource of competitive advantage and sustained superior performance, and the principal function of a firm is to create, integrate, and apply knowledge (Nonaka, 1994; Spender, 1996; Spender and

Grant, 1996). Thus, a firm's knowledge strategy affects the identification, development and application of key resources and has great contributions to its performance (Barney, 1991; Grant, 1996).

Knowledge exploitation and knowledge exploration are two fundamental dimensions of knowledge strategies (March, 1991). According to March (1991: 85), exploitation refers to "the refinement and extension of existing competencies, technologies, and paradigms. Its returns are positive, proximate, and predictable." Exploration refers to "experimentation with new alternatives. Its returns are uncertain, distant, and often negative." A firm's incremental exploitation of current knowledge maximizes profits in the short run, whereas the exploration of radically new knowledge is more likely to maximize long-term firm success.

Innovations refer to new ideas, policies, and technologies (Dewar and Dutton, 1986). In this chapter, we examine innovations at the firm-level by uncovering a firm's adoption of a product that is new to the organization. Following Gopalakrishnan and Damanpour's typology (1997), innovations include radical and incremental innovations. Since a firm's focus on radical and incremental innovations requires different types of organizational cultures, capabilities, and structures (Schildt, Maula, and Keil, 2005), we suggest that different knowledge strategies have differential effects on its innovation performance.

Organizational Competency. Prahalad and Hamel (1990: 82) proposed the concept of core competency and indicate that "the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies" explains how a firm sustains its competitive advantage. Competitive

advantage requires a distinctive competency because “a firm may achieve rents not because it has better resources, but rather the firm’s distinctive competence involves making better use of its resources” (Mahoney and Pandain, 1992: 365). Thus, organizational competency determines a firm’s ability, power, authority, skill, and knowledge to succeed, and such competency arises from its internal capabilities and its cooperation with others in the strategic network (Kogut, 2000).

In examining the relationship between a firm’s competency and its innovation success, one school of thought suggests that a firm’s internal factors, such as its innovation process, corporate culture, cross-functional teams and technological competence, affect its innovation success (Brown and Eisenhardt, 1995; Cooper and Kleinschmidt, 1995; Ritter and Gemunden, 2004). Further, based on social network theory, economic actions are deeply embedded in networks of interpersonal relations, and social capital influences interactions and shapes economic actions (Batjargal, 2003; Granovetter, 1985; Tsai and Ghoshal, 1998; Uzzi, 1997). Accordingly, the second school of thought advocates a firm’s interorganizational collaborations with external partners and how the boundary spanning activities affect its innovation success (e.g., Hakansson, 1987), thus they are considered to be the firm’s networking capabilities. In this chapter, we examine two distinct organizational competencies: one describes a firm’s internal capability to cultivate organizational change and evolution (Zahra and George, 2002), and the other describes its networking capability to learn, share, diffuse, and create knowledge through interactions (Nonaka, 1994).

A key internal capability is a firm’s absorptive capacity, which refers to its ability to scan and monitor relevant technological and economic information, to identify

technical and market opportunities, to acquire knowledge, information and skills, to master a new technology or innovation and to adjust its system of coordination and control to match the new technological opportunities (Cohen and Levinthal, 1989, 1990; Zahra and George, 2002). Absorptive capacity allows a firm to change to match the dynamics of the market.

A firm's networking capability suggests a firm's ability to collaborate with different types of partners. Since in emerging economies, the new, market-based mechanisms have yet to be established, managers often rely on ties with government officials and legislators to acquire resources to support their business activities (Peng, 2003). The utilization of political ties with government officials entails both benefits and risks to firms' strategy implementation and day-to-day operation. In this chapter, we focus on when the presence of political ties is beneficial to a firm's innovation performance.

EMNCs' interactions with technologically advanced foreign MNCs also benefit them from gaining access to advanced technology, management skills, intellectual property, as well as physical and human capital (Calantone, Lee, and Gross, 1990; Di Benedetto, Calantone, and Zhang, 2003). Since business ties with foreign MNCs are critical to conduct business and coordinate exchanges in emerging economies (Peng and Luo, 2000), we focus on when the presence of business ties enhances a firm's innovation performance.

Real Options Analysis. A real option refers to the right, but not the obligation, to undertake certain business decisions, especially when making a capital investment. It is defined as "an investment decision that is characterized by uncertainty, the provision of

future managerial discretion to exercise at the appropriate time, and irreversibility” (Kogut and Kulatilaka, 2001: 746). Initially proposed by Myers (1977) on financial options in relation to issues associated with capital budgeting and the allocation of resources, real options analysis has won its popularity in the finance literature to explain a firm’s option to defer production, divest investment, and to change a project’s output mix (e.g., Majd and Pindyck, 1987; McDonald and Siegel, 1986). In the management literature, scholars have produced notable studies examining real options in the theory of organization and strategy (e.g., Chi, 2000; Kogut, 1983; Kogut and Kulatilaka, 1994; Leiblein and Miller, 2003; McGrath, 1999; Miller and Folta, 2000; Tong and Li, 2008). Recent studies have summarized the application of real options theory to the field of management (Adner and Levinthal, 2004; Leiblein, 2003; McGrath, Ferrier, and Mendelow, 2004; Trigeorgis, 1998). According to real options analysis, irreversibility, uncertainty, and the choice of timing alter the investment decision in critical ways (Kogut and Kulatilaka, 2001). Since an option indicates an investment, which provides the opportunity of a firm to purchase an underlying security at a later date (McGrath, 1996), real options analysis is useful in examining a firm’s innovation behavior concerning how firms may have a right to claim or demand future rent-generating opportunities through current investments.

Specifically, an investment can be irreversible when it is specific to a firm or to an industry or when there are government regulations, institutional arrangements, or differences in corporate culture. Further, an option has value when the firms have the right to buy a bundle of future investments (Trigeorgis, 1996). Since a firm’s R&D investment is irreversible, economical attractiveness of buying and exercising a real

option is contingent on how the value of the underlying investment develops over time. The value can be influenced by environmental factors, such as market risks which occur “where the future is not known, but the probability distribution of possible futures is known” (Miller, 1977: 1154).

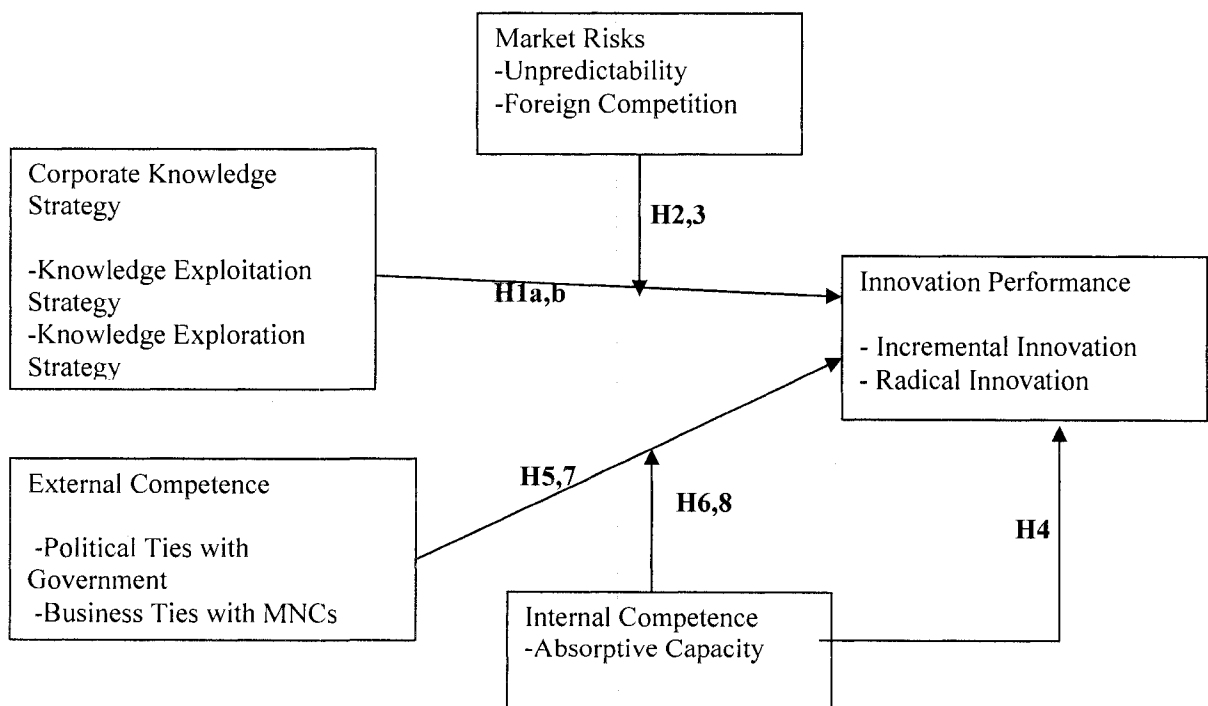
On the one hand, when a firm anticipates a decline in market demand for a product, it may limit downward risks to losing the price paid for the option without losing access to the opportunity (Kogut and Kulatilaka, 1994; Pindyck, 1991). The analogy is that firms’ R&D investment creates additional options that provide a firm the ability to conduct future investing, which is ‘*option of waiting*’. On the other hand, firms’ ‘*option of commitment*’ provides a firm the right to expand or develop a related product or technology in the future (Kogut and Kulatilaka, 1994; Leiblein and Miller, 2003; Pindyck, 1991). In other words, when a firm’s investments in R&D can lead to patents and new technologies, such an investment creates new or future market growth opportunities. In this situation, it is beneficial for firms to internalize activities associated with early generations of a product or technology to maintain a position to participate in future extensions of certain products or technology (Leiblein, 2003).

Because of the rapid economic growth and the tremendous growth opportunities, emerging economies are experiencing high market risks. The high market risks and growth opportunities provide an appropriate context to incorporate the real options analysis in evaluating the impact of market risks on a firm’s strategic options (Tong and Li, 2008). Since the environment-strategy co-alignment has a positive impact on performance (Venkatraman and Prescott, 1990), we examine whether a firm’s innovation

performance increases when the strategic allocation of resources align with the corresponding risky market environment.

In this chapter, we posit that a firm's knowledge strategy, organizational competencies, and its corresponding environment affect its innovation performance. We suggest that a firm's innovation performance is contingent on the presence of its internal capability, external networking capability, as well as the unpredictability and competition of the business environment in which it embedded. The conceptual model is presented in Figure 3.1.

Figure 3.1 Knowledge Strategy, Organizational Competency and Market Risks on Innovation Performance



3.3 Hypotheses Development

Knowledge strategy and innovation

Organizational strategy has been considered as one of the important drivers of innovations (Cozzarin and Percival, 2006; Souitaris, 2001). March (1991) identified two distinctive dimensions of knowledge strategies, which are exploitation strategy and exploration strategy. Although exploitation and exploration strategy can be pursued simultaneously (Bierly and Chakrabarti, 1996) and become complementary (Helfat and Raubitschek, 2000), we treat them as two distinct strategies due to the costs and benefits involved in implementing two distinct strategies (March, 1991).

Knowledge exploitation strategy reflects a firm's focus on investing resources to refine and extend its existing product knowledge, skills, and processes. It indicates a firm's commitment to achieve greater efficiency and dependability of existing innovation activities by reducing the variety and enhancing productivity in its existing products. To implement a knowledge exploitation strategy, a firm is more likely to conduct limited changes in technology based on its existing product-market experiences (Atuahene-Gima, 2005). However, a firm's strong commitment to an exploitation strategy entails trade-offs (March, 1991). It may enhance incremental innovations which represent little departure from existing practices, and innovations are variation, routine and instrumental (e.g., Dewar and Dutton, 1986), but may hinder radical innovations that involve clear departures from existing practices to create fundamental changes (Atuahene-Gima, 2005).

Knowledge exploration strategy, on the other hand, reflects a firm's commitment to invest resources to acquire entirely new knowledge, skills, and processes. Pursuing a

knowledge exploration strategy requires an organization to bear higher costs and increased risks on experimentation and technology breakthroughs to achieve a sustainable competitive advantage. A strong commitment to an exploration strategy entails trade-offs as well (March, 1991). For instance, a firm that focuses on exploration strategy may prevent it from realizing the benefits that are derived from these knowledge breakthroughs. Further, a firm's emphasis of knowledge exploration can slow down the development and the refinement of skills and processes associated with its current competencies. When pursuing a knowledge exploration strategy, a firm is motivated to conduct fundamental changes in its innovation behavior, which are reorientation, non-routine, and ultimate innovations (March, 1991). Thus, both knowledge strategies involve trade-offs and require different organizational capabilities, so different knowledge strategies require different levels of firms' commitment and resource allocation, resulting in differential innovation performance.

Hypothesis 1a. A firm's knowledge exploitation strategy is positively related to incremental innovation performance, but negatively related to radical innovation performance.

Hypothesis 1b. A firm's knowledge exploration strategy is negatively related to incremental innovation performance, but positively related to radical innovation performance.

Strategic fit between strategy and environment - A real options perspective

The strategic fit paradigm suggests that a firm's strategy and environment interact in a dynamic co-alignment process, and a match between them improves its performance (Venkatraman and Prescott, 1990). The importance of environment-strategy co-alignment for firm performance is contingent on the level of environmental uncertainty surrounding

the firm (Lukas, Tan, and Hult 2001). As institution builders, top managers would take great efforts to co-align firm strategy with the environment to achieve business success.

For EMNCs, market risks arise from the unpredictability of changes in consumer tastes and the fierce competition and globalization. In this study, market risks refer to the amount of change and unpredictability in consumer tastes, production or service technologies, and modes of competition in the firm's major industries (Miller, 1994). In light of the unpredictability of changes observed in customers, suppliers, regulations and technology, a firm's R&D investment could be irreversible, based on the fact that the future value of these investments is uncertain and unpredictable in keeping up with the fast-changing market (Kogut and Kulatilaka, 1994). In these situations, a firm's ability to limit downward risks without losing access to the opportunity, that is its '*option of waiting*' for new information and technological opportunity, may become an important source of flexibility (Kogut and Kulatilaka, 1994; Leiblein, 2003; McDonald and Siegel, 1986; Pindyck, 1991). Since the complexity and depth of knowledge tend to be less important for incremental than for radical innovations, incremental innovations are less costly and have more predictable outcomes (Dewar and Dutton, 1986). Accordingly, instead of following a knowledge exploration strategy which involves uncertain, distant, and sometimes negative returns, in light of environmental unpredictability, a firm may opt for knowledge exploitation strategy to refine and extend its existing products and technologies, thereby improving its incremental innovation performance. Thus:

Hypothesis 2. Knowledge exploitation strategy has a more positive effect on incremental innovation performance when environmental unpredictability is higher than when it is lower.

Globalization and intensified competition have forced firms to allocate resources efficiently towards activities that are essential to their survival. Although foreign MNCs present a greater potential for knowledge transfer through spillover effects, inward FDI not only complement (crowding in) but may also replace (crowding out) domestic investment (e.g., Agosin and Machado, 2005). As such, local firms have to respond to FDI inflows by increasing and updating their investment to face the competition. In particular, when there is a large technological gap between MNCs and local firms, local firms may opt for the '*option of commitment*' to participate in succeeding generations of new technologies or products (Leiblein, 2003) through committing radical changes in its existing goods and services. Firms' '*option of commitment*' preserves the right that an innovation can turn into self-sustained business growth for the option exercised. Instead of conducting small changes in technology and achieving little deviation from their existing product offerings, local firms' knowledge exploration strategy can unlock opportunities for future expansion. In preempting competition, those local firms could create strong growth options by which to sustain exclusive rights over potential competitors or even force existing entries to make room for their existence (Kulatilaka and Perotti, 1998). When they establish a first-mover or a competitive time-to-market advantage (e.g., a patent), they have the option of future commercialization or growth opportunities. Accordingly, to sustain the option value associated with future generations of the product and to compete with foreign MNCs, EMNCs may opt for a knowledge exploration strategy to experiment with new products to maximize their long-term success.

Hypothesis 3. Knowledge exploration strategy has a more positive effect on radical innovation performance when foreign competition is higher than when it is lower.

Organizational internal competency- An absorptive capacity perspective

Knowledge, which includes ‘knowing what’ and ‘knowing how’ (Kogut and Zander, 1993; Gupta and Govindarajan, 2000), is the most important resource of organizational competitive advantage (Nonaka, 1994; Spender, 1996; Spender and Grant, 1996). Organizational knowledge is embedded “not only in documents or repositories but also in organizational routines, processes, practices, and norms” (Davenport and Prusak, 1998: 5). As such, a firm’s ability to understand, use and exploit valuable knowledge and the state-of-the-art technologies enables it to sustain superior performance.

A firm’s absorptive capacity, which is path dependent, developed cumulatively, and builds upon existing knowledge, affects a firm’s innovation capability, implementation of innovation, and innovation performance (Cohen and Levinthal, 1990; Nieto and Quevedo, 2005; Zahra and George, 2002). Specifically, a firm’s potential absorptive capability enables it to value, acquire and assimilate external knowledge so that it can reconfigure its operation with strategic flexibility. Potential absorptive capability involves a firm’s capability to identify a potential market opportunity and value external knowledge. Further, a firm’s realized absorptive capacity is its ability to exploit externally generated knowledge, to transform and commercially apply knowledge that creates firm value (Zahra and George, 2002). Taken together, we suggest that a firm’s absorptive capacity affects its innovation performance by recognizing, leveraging, and adapting external knowledge to organizational routines, and by transforming and integrating externally and internally generated knowledge. Thus,

Hypothesis 4. A firm's absorptive capacity has a positive effect on its radical and incremental innovation performance.

Organizational external networking competency- A social network perspective

According to social network theory, the effectiveness of firm strategies is shaped by managers' connections with the external community. Hence, it is critical for firms to develop external networking competency to link their organization to others to allow interactions beyond organizational boundaries (Granovetter, 1985). In particular, top managers' external networks provide their firm with a rich source of new information and increased resource acquisition (Collins and Clark, 2003). Due to the lack of formal legal and regulatory frameworks in emerging markets (Khanna and Palepu, 2000), firms often rely on interpersonal ties to facilitate their business transactions (Xin and Pearce, 1996). In this spirit, top managers' external networking capability in acquiring information, exchanging offerings and collaborating technologically in the interorganizational networks can affect their firm's innovation performance.

A firm's informal embeddedness or interconnectedness with dominant institutions increases its legitimacy (Granovetter, 1985; Peng, Lee, and Wang, 2005; Powell and DiMaggio, 1991; Oliver, 1997), which is an important resource for gaining other resources (Zimmerman and Zeitz, 2002). Recent empirical research has investigated the advantages of political ties with government officials for firm performance (Peng and Luo, 2000). Peng and Zhou (2005) suggest that firms' dense networks of ties with dominant institutions allow them to capitalize on economies of scale based on their social relations.

Further, by cooperating with technologically advanced foreign firms, EMNCs benefit from international technology transfer originating from MNCs. Since an effective technology transfer requires close interpersonal interactions among the transfer and recipient firms to facilitate the transference of tacit knowledge, experience, and skills, an EMNC's strong business ties with MNCs can promote its exposure to new products, new processes and new forms of organizations, thereby affecting its innovation performance (Mytelka and Barclay, 2004). In this chapter, we examine the effects of a firm's political ties with the government and business ties with MNCs on its innovation performance, respectively.

Political ties with government

Political ties refer to top managers' connection with government officials, such as political leaders in various levels of government, and officials in industry bureaus and regulatory and supporting organizations (Peng and Luo, 2000). Scholars have described the importance of examining political networks between firms and their home governments in competitive analysis, particularly outside the U.S. (e.g., Porter, 1990). An EMNC's dense network of ties with dominant institutional players provides it with many benefits. For instance, political capital can improve its operational efficiency and profitability (Frynas, Mellahi, and Pigman, 2006), and contribute to the increase in shareholder value (Hillman and Zardkoohi, 1999; Shaffer and Hillman, 2000). In addition, top managers' close ties with the government provide them with a better understanding of how to solicit favors, gain access to critical resources, and capitalize on

economies of scale that are crucial to implement a firm's strategy (Luo, 1997; Peng et al., 2005).

Political ties promote a firm's innovation activities in the following ways. First, political ties with the government grant a firm with access to favorable financing and tax policies (such as preferential tax treatment, bank loans, long-term debt, and subsidies). The availability of financial resources allows a firm to conduct trial-and-error experimentation and buffers it from downside risk in pursuing its knowledge strategy. Second, political ties promote a firm's close collaborations with universities, research institutes, and the scientific and technological society. For instance, in China, the top Chinese domestic patent holders are mostly from public universities and government research institutes (www.973.gov.cn). The Chinese government has actively promoted technology transfer from local research institutions to domestic firms, including the initiatives of merging R&D institutions with existing enterprises and spinning off new technology enterprises from R&D institutions and universities (Zhang, 2006). As such, a firm's strong ties with the government strengthen its close collaborations with universities, research institutes, and the scientific and technological society, hence improving its capability in solving technological problems.

However, a firm that relies excessively on political ties may hurt its innovation performance. First, a firm that opts for using political ties in its business operations tends to rely on preferential treatment from the government to achieve business success (Luo, 2000). The high level of dependence could decrease the firm's motivation to pursue changes in technologies (March, 1991). Secondly, a firm's reliance on political ties leads to government intervention, as indicated by meeting the government requests to support

the fiscal and social welfare of the region, thus disrupting its normal operations and long-term strategy implementation (Shleifer and Vishny, 1998). In this sense, although a firm's political ties can strengthen its capability to handle external pressure or a threat to its continued growth through conducting innovation activities, its excessive dependence on political ties nevertheless can diminish its capability to conduct innovation activities that require reconstructive novelty, involve uncertainty, and may postpone the growth of the company. Taken together, we suggest that:

Hypothesis 5. A firm's political ties with the government have an inverted U-shaped relationship with its radical and incremental innovation performance.

Boddeyn and Brewer (1994) suggest that political behavior complements economic behavior, which is conditioned by firm, industry, and environmental factors. Political ties with the government generate both benefits and costs (Warren, Dunfee, and Li, 2004). On the one hand, it advances a firm's operational efficiency, financial sustainability and relational opportunity. On the other hand, it has the potential to cause harm for the firm because of the extensive time and money involved in sustaining long-term orientation and interactions (Luo, 2000). Nonetheless, due to the heterogeneity among firms, some may be strongly motivated to search for ways to improve their performance by nurturing political ties than others. For instance, when a firm demonstrates relatively weaker absorptive capacity than its competitors, it may opt for developing political ties with government officials with the expectation of obtaining preferential treatments to overcome its inability to create revenue-producing goods and/or services. A firm's political ties allow it to mitigate competitive disadvantages in the face of the fierce competition through gaining access to powerful indigenous networks, so that

it can survive the competition in certain product markets. This is consistent with the resource dependence model in that networks enhance the external legitimacy of the firm by protecting it against environmental uncertainty, thus increasing its chance of survival. On the other hand, when a firm demonstrates relatively stronger absorptive capacity than others, it may not be as enthusiastic about cultivating political ties as its competitors because the firm and the local government could form a situation of mutual dependence, which as a result, may lead to “continual bargaining over the terms of cooperation, hiding of slack resources, concealment of information, and under-provision of effort” (Tan, Li, and Xia, 2007: 789). Consequently, when a firm’s absorptive capacity is generally weaker than its competitors, it may be more eager to develop political ties with the government to enhance its innovation performance.

Hypothesis 6. The positive impact of political ties on both radical and incremental innovation performance is stronger for firms with weaker absorptive capacity than for firms with stronger absorptive capacity.

Business ties with MNCs

Business ties refer to managers’ connections with their counterparts at other organizations such as buyers, suppliers, and competitors (Peng and Luo, 2000). Business ties facilitate knowledge transfer, knowledge learning, and resource exchange (Adler and Kwon, 2002). They can become an important mechanism for a firm to absorb knowledge, expertise, tacit and explicit knowledge, and know-how through cooperation. Earlier studies suggest that FDI inflows from developed countries improve the economic growth rates of developing countries through technology transfer (e.g., Bernstein and Mohenen, 1998; Coe and Helpman, 1995; Hegazi and Safarian, 1999). Since MNCs are

the main contributor of technological resources, we propose that business ties with MNCs facilitate interorganizational social interactions and provide channels for knowledge exchange and technology transfer, thus enhancing EMNCs' innovation performance.

Specifically, lower levels of business ties with MNCs can provide heterogeneous information, which support firms to explore new ways of doing things (Hansen, 1999). Moderate levels of business ties, however, may limit the potential performance effects of such business relationship because they may hinder firms search for new knowledge that can facilitate the absorption, transfer, and exchange of cutting edge technologies and practices (Hansen, 1999). In the absence of close social interactions, however, partners may not develop the necessary relationships to share knowledge willingly (Inkpen and Tsang, 2005). As high levels of business ties develop, barriers to social interactions may be decreased, thus promoting and enhancing trust, reciprocity, and long-term orientation. With high levels of business ties, MNCs would be willing to work closely with and to transfer their tacit knowledge to their partner firms without worrying about opportunistic behavior. In other words, close social interactions lower the risk of opportunism by encouraging reciprocity and joint problem-solving opportunities in a long-term orientation (Uzzi, 1997). High levels of business ties also support the exchange of high-quality and diverse information and tacit knowledge (Burt, 1992) which spurs innovative activities (Woodman, Sawyer, and Griffin, 1993). In addition, close social interactions provide a firm the opportunity to gain insights in learning sophisticated manufacturing techniques, and understanding new product offerings so that it can later refine and extend its existing product designs, enhance manufacturing processes through reverse engineering, and become more efficient and flexible in implementing innovation

activities. Accordingly, firms that develop high levels of business ties with MNCs may experience higher innovation performance. Overall, we propose a U-shaped relationship, whereby very low and very high levels of business ties with MNCs will be associated with increased innovation performance, and the moderate levels of business ties will relate to lower levels of innovation performance. Hence,

Hypothesis 7. A firm's business ties with MNCs have a U-shaped relationship with its radical and incremental innovation performance.

MNCs are increasingly expanding their R&D activities to emerging markets because they are generally motivated to take advantage of the emerging economies' abundant skilled research personnel and lower cost of production (UNCTAD, 2005). As for EMNCs, they face two major liabilities: they are small in scale (Stinchcombe, 1965) and do not have the necessary experience in conducting R&D activities. However, when the technological gap between local firms and MNCs is too small, the presence of MNCs will not convey benefits to the local firms (Kokko, 1994). Similarly, when there is a wide technological gap, it requires local firms to have a strong absorptive capacity to absorb and adopt those advanced technologies to align with their existing stock of knowledge and technologies (Crespo and Fontoura, 2007). In other words, when firms lack indigenous technological capabilities to assimilate advanced technology, internalize knowledge created by others and modify it to fit into their existing applications, processes, and routines, they cannot benefit from the strong business ties with MNCs to improve their innovation performance. Hence,

Hypothesis 8. The positive impact of business ties on both radical and incremental innovation performance is stronger for firms with stronger absorptive capacity than for firms with weaker absorptive capacity.

3.4 Research Methods

We collected data for this study from Chinese MNCs. Sample firms were provided by the highest legislative body in China that governs Chinese state and non-state firms (such as public firms, state-owned enterprises, collectively-owned firms, and private enterprises). We randomly selected 500 firms that were engaged in international production, had foreign sales equal to 20 percent or more of their total sales in the last three years (2003-2006), and had partnership experiences with foreign MNCs. Specifically, we targeted 12 economically developed provinces along the east coast of China from which the majority of its FDI is originated.

Data were collected in three stages. During the initial stage, we pre-tested the questionnaire through field studies that consisted of plant visits and in-depth interviews with executives in Shandong, China. This procedure allowed us to clarify our questions and inappropriate translations. In the second stage, an introductory participation request letter, along with a summary of the proposed research, was sent to the presidents/CEOs/VPs of the identified firms. In the third stage, immediately after receiving the potential informants' agreement on meeting our representatives, face-to-face meetings were scheduled with the executives. The participation of the informants who were involved directly in important strategic decision making ensured the reliability of the information provided. The face-to-face meetings with the executives are considered to be effective in overcoming the single response bias (Luk et al., 2008).

In order to control for informant bias, we collected dual responses from 40 firms. A t-test analysis indicated no significant differences for all the variables between the 30%

of questionnaires completed by two informants and the 70% of questionnaires completed by a single informant. Further, we controlled for common method variance through including open-ended questions and reverse-coded survey questions. Following Podsakoff and Organ's (1986) study, we also conducted a factor analysis of the dependent and independent variables and did not find the problem of common method variance. Eventually, of the 145 responding firms, a usable sample of 121 firms, along with 40 dual responses, were collected with a response rate of 83.4%. The sample consisted of manufacturing and service firms in 16 sectors. Companies are well distributed among industries that reflect the heterogeneity of the sample. Table 3.1 presents the industry distribution of firms. Table 3.2 reports the ownership structure of the participating firms.

Table 3.1 Industry Distributions of Chinese Multinational Companies

Industry	Frequency	Percent
Food, beverage, cigarettes	15	12.4
Manufacturing	81	66.9
Utilities	2	1
Financial services and advertising agency	18	14.8
Other services	5	4.1
Total	121	100.0

Table 3.2 Ownership Structure Distributions of Chinese Multinational Companies

Ownership	Frequency	Percent
State-owned	16	13.2
Collectively-owned	3	2
Privately-owned	20	16.5
Publicly-owned	57	47.1
Joint venture ($\geq 50\%$ equity)	17	14
Joint venture ($< 50\%$ equity)	8	6.6
Total	121	100.0

Measurement

We present the measurement items and scales that were used to operationalize all the theoretical constructs in the *Appendix B*. We developed Likert-type measurement scales for the constructs in our conceptual framework. We adopted most of the constructs from prior studies. However, it was difficult to apply existing scales in their entirety. We modified some of the measurement items to reflect the specific context of our study. The development of the new items was informed by the field studies, which included semi-structured interviews with executives who were responsible for their firm's strategic development. In addition, our research partner in China provided us with valuable feedback on a pilot version of the questionnaire, and helped us refine key constructs and identify the appropriate use of words in the Chinese cultural setting. All of the Cronbach's alpha values are above the suggested value of 0.70 (Nunnally, 1978). We measured each indicator on a 5-point scale (1=strongly disagree,...5=strongly agree), unless stated otherwise.

Dependent Variables

Innovation (INV). We used *incremental innovation (INCRE)* and *radical innovation (RADICAL)* to measure firm's innovation performance. We asked respondents to report the number of incremental and radical products introduced in the last three years and offered a detailed explanation of incremental/radical innovation. In addition, to examine a firm's relative innovation performance, we asked respondents to report the frequency and intensity of incremental and radical innovations through a competitor-centered performance measurement approach by asking respondents to assess their innovation performance relative to that of its three largest direct competitors in its major product line (Clark and Montgomery, 1999).

Independent Variables

Knowledge strategy. Adopted from Atuahene-Gima's (2005) study, a firm's knowledge exploitation strategy (EXPLOI) (Cronbach's $\alpha = 0.79$) and exploration strategy (EXPLOR) (Cronbach's $\alpha = 0.71$) are each measured with 5 items. We asked respondents to evaluate their knowledge strategy in comparison to the three largest competitors in their industry in China.

Moderator Variables

Absorptive capacity (AC). Traditional measures of absorptive capacity, such as R&D expenditures or the number of R&D employees in the department, are considered inappropriate as they neglect the intensity of efforts from the department's employees (Zahra and George, 2002). However, empirical studies have not developed and validated a multidimensional construct of absorptive capacity. We built upon prior studies (Cohen and Levinthal, 1990; Zahra and George, 2002) and operationalized absorptive capacity with four indicators: acquisition, assimilation, transformation and exploitation. We asked respondents to evaluate their capability in comparison to the three largest competitors in their industry in China (Cronbach's $\alpha = 0.76$). Specifically, potential absorptive capacity examines a firm's knowledge acquisition and assimilation capabilities and realized absorptive capacity examines a firm's knowledge transformation and exploitation capabilities.

Political ties (PTIE) and business ties (BTIE). We built upon prior studies (e.g., Peng and Luo, 2000) and developed a six-item scale to examine top managers' ties with government officials (Cronbach's $\alpha = 0.81$) and with top managers at MNCs (Cronbach's $\alpha = 0.89$). We asked respondents to report the content and strength of

interconnections between networked members and the utilization of network ties to acquire critical resources.

Market risks (RISK). We built upon Atuahene-Gima and Murray's (2004) study and developed two dimensions of market risks; namely, *environmental unpredictability* using five items (Cronbach's $\alpha = 0.78$) by asking respondents to evaluate the amount and unpredictability of changes in consumer needs, production or service technology, and *foreign competition* using three items (Cronbach's $\alpha = 0.76$) by asking respondents to evaluate the modes of foreign competition and globalization in their firm's key industry.

Control Variables

Since a firm's innovation behavior can be influenced by the industry characteristics, market structures, and firm's characteristics (Damanpour, 1991), we controlled for industry-, market- and firm-specific factors in our study as follows: competitive isomorphism, industry competition, firm size, firm age, equity, and the degree of internationalization.

Competitive isomorphism (ISO). Since institutional environment constrains and influences firms' decision-making, we asked respondents to describe whether they are under competitive pressure to embrace innovation activities (Abrahamson and Rosenkopf, 1993) (Cronbach's $\alpha = 0.81$).

Industry competition (COMP). Since industry competition can influence business conduct (Peng and Luo, 2000), we asked respondents to describe the degree of competition in the industry, compared to 3 years ago, to validate industry competition. We measured industry competition on a 5-point scale (1=very low, ...5=very high).

Firm size (SIZE). Firm size is an important attribute that shapes firms' behaviors and decisions. Prior studies support that larger firms have the potential to attract more scientists and engineers and have less financial constraints to invest in new technologies and to bear risks in conducting innovation activities (e.g., Schumpeter, 1942). Audretsch and Acs (1991), however, report that small firms perform more innovation per employee. We measured firm size by the number of employees and sales volume (Rao and Naidu, 1992).

Firm age (AGE). Since length of operation can influence firm performance, we controlled for a firm's length of operation, which we defined as the number of years the firm operate in its major product market.

Firm equity (EQU). Economic transition in China has created a diversity of organizational forms, spanning from state- to non-state-owned businesses. Prior studies suggest that state-owned firms have an advantage over privately- or collectively-owned firms in terms of industry experience, market power, and production facilities (Luo, 2000). Hence, we controlled for firm equity in our study. The scale ranges from 1 to 6 as follows: 1=state-owned, 2=collectively-owned, 3=private, 4=public, 5=joint venture with a majority stake, 6=joint venture with a minority stake.

Internationalization (INTL). Researchers have examined the relationship between firms' internationalization and performance, and the results are conflicting. Thus, we controlled for the degree of firms' internationalization. We used foreign sales to total sales to capture firms' internationalization (Geringer, Beamish, and DaCosta, 1989; Grant, Jammine, and Thomas, 1988).

3.5 Analysis and Results

We present the mean, standard deviation and correlation of the variables included in the study in Table 3.3. The mean firm age in our sample is approximately 22 years. The average numbers of firms' incremental and radical innovation in the last three years from 2005 to 2007 are 19 and 6, respectively. The average degree of firms' internationalization is approximately 35 percent. The variance inflation factors (VIF) showed no indication of multicollinearity among the variables. The highest VIF statistic was 5.49, which was well below the rule of thumb level of 10 (Cryer and Miller, 1994).

We test the hypotheses by employing a two-step hierarchical multiple regression analysis. We enter all of the control variables in the first step (Model 1). In the second step, we include the predictor variables (Model 2) to the base model. The hierarchical procedure allows us to examine whether adding the predictor variables and the interaction terms increased the statistical power of the model.

Table 3.3 Descriptive statistics and Pearson correlation matrix

Variables	Mean	S.D.	1	2	3	4	5	6
EXPLOITATION (1)	3.06	0.36	1					
EXPLORATION (2)	3.17	0.26	.33**	1				
INCREMENTAL INNOVATION (3)	1.84	0.89	.26**	-.45**	1			
RADICAL INNOVATION (4)	2.50	1.20	-.15	.22*	.47**	1		
ABSORPTIVE CAPACITY (5)	3.46	0.44	.05	-.57**	.42**	.19*	1	
POLITICAL TIE (6)	3.96	0.48	.11	.09	-.03	-.31**	.20*	1
BUSINESS TIE (7)	4.39	0.47	.01	-.48**	.35**	-.07	.57**	.32**
UNPREDICTABILITY (8)	4.38	0.57	.08	-.26**	.39**	.12	.27*	.25**
FOREIGN COMPETITION (9)	3.09	0.34	.19*	-.27*	.17	-.37**	-.45**	-.52**
INDUSTRY COMPETITION (10)	3.61	1.06	-.17	.08	-.05	.09	-.37**	-.42**

ISOMORPHISM (11)	4.64	0.47	.08	-.35**	.23**	.05	.42**	.09
FIRM SIZE (12)	2.83	0.62	-.23*	-.02	-.14	.05	-.33**	-.23*
FIRM AGE (13)	22.0	14.7	-.40**	-.06	-.04	-.05	-.18	-.34**
FIRM EQUITY (14)	4.00	1.01	.09	.01	-.02	.09	-.02	-.03
INTERNATIONALIZATION (15)	35.4	17.1	.12	.09	.16	.33**	-.15	-.02

	7	8	9	10	11	12	13	14	15
7	1								
8	.69**	1							
9	-.52**	-.38**	1						
10	-.38**	-.21*	.19*	1					
11	.38**	.33**	-.05	-.24**	1				
12	-.50**	-.42**	.37**	.43**	-.09	1			
13	-.24*	-.10	.19	.39**	-.02	.39**	1		
14	-.01	-.02	.03	.14	-.06	.02	-.09	1	
15	-.27**	-.33**	.04	.11	-.08	.10	-.12	.10	1

Note: N=121. *p<.05 (two sided) **p<.01 (two sided)

Knowledge strategy and innovation performance

We report the effect of knowledge strategy on firms' innovation performance in Table 3.4. In the base model, we investigate the effects of the control variables on a firm's incremental and radical innovation performance. In H1a, we consider the effects of knowledge exploitation strategy on innovation performance. As shown in Table 2, knowledge exploitation strategy is positively related to incremental innovation performance ($p < .01$), and it has no significant relationship with radical innovation performance; therefore, H1a is partially supported. In H1b, we examine the effects of

knowledge exploration strategy on radical innovation performance. Consistent with our prediction, knowledge exploration strategy is positively related to radical innovation performance ($p < .01$), and negatively associated with incremental innovation performance ($p < .01$), which is consistent with H1b.

To gain more insights into how a firm's strategic options can be influenced by market risks, we also examined the effects of environmental unpredictability and foreign competition on strategic initiatives. Consistent with our prediction, in light of the unpredictability of changes in consumer needs, production or service technology, firms tend to adopt knowledge exploitation strategy to enhance incremental innovation performance ($p < .01$). When challenged by foreign competition, firms opt for knowledge exploration strategy which increases radical innovation performance ($p < .10$). Hence, both H2 and H3 are supported. Both models are highly significant with an adjusted R^2 of 0.39 ($F = 7.27$; $p < 0.01$) and R^2 of 0.30 ($F = 5.52$; $p < 0.01$), respectively.

Our result indicates that a firm's knowledge strategy plays an important role to its incremental and radical innovation performance. Specifically, a firm's knowledge exploitation strategy supports its incremental innovation performance, while its knowledge exploration strategy supports its radical innovation performance. Furthermore, strategic initiatives cannot be examined as stand-alone investments, but rather as a correlation to the market environment where they are embedded. By adding predictor variables, we have increased the statistical power of the base models with an increased R^2 of 0.33 and 0.22, respectively.

Table 3.4 Regression results of corporate knowledge strategies

	Incremental Innovation		Radical Innovation	
	Base	Base +Predictors	Base	Base +Predictors
Controls				
Isomorphism	.24**	.05	.10	-.02
Industry competition	.03	.03	.11	.09
Firm size	-.16	-.02	-.01	.01
Firm age	.03	-.09	-.04	-.18*
Equity	-.05	-.06	.01	.09
Internationalization	.21**	.36***	.32***	.46***
Predictors				
Exploitation		.51***		-.29
Exploration		-.24***		.43***
Moderator				
Knowledge exploitation strategy × Environmental unpredictability		.53***		-.41*
Knowledge exploration strategy × Foreign competition		-.10		.46*
Model F	2.11	7.27	3.51	5.52
P <	.05	.001	.05	.001
Adjust R²	.06	.39	.08	.30
Δ R²		.33		.22

Note: N=121. *p<.10 **p<.05 ***p<.01

Internal and external competencies and innovation performance

We report the effect of firms' internal and external competency on innovation performance in Table 3. Model 1 is the base model, which investigates the effects of the

control variables on innovation performance. The overall model is significant with an adjusted R^2 of 0.09 ($F = 2.60$; $p < .05$).

In Model 2, we examine the effects of the predictor variables on firms' innovation performance. Since the effects of firms' absorptive capacity and their internal and external competency hold true for both radical and incremental innovation performance, we present the combined results in this section to reduce redundancy. In H4, we investigate the role of absorptive capacity on firms' innovation performance. Consistent with our prediction, absorptive capacity is positively related to innovation performance ($p < .05$). In Model 2, we also examine the effects of firms' political ties with the government and business ties with MNCs on their innovation performance. Consistent with our prediction, political ties has an inverted U-shaped relationship with innovation performance ($p < .05$), in support of H5. H7, which predicts a U-shaped relationship between business ties and innovation performance, is also supported ($p < .01$). The overall model is highly significant with an adjusted R^2 of 0.39 ($F = 7.82$; $p < 0.01$). Adding the predictor variables improved the explanatory power of the model with an increased R^2 of 0.30.

Our results indicate that firms' absorptive capacity matters to their innovation performance. Furthermore, our findings imply that social ties have mixed results on firms' innovation performance. Specifically, overly relying on political ties with the government hurts innovation performance. However, in terms of business ties with MNCs, it is essential to either maintain lower levels of business ties or nurture higher levels of business ties to benefit firms' innovation performance.

Table 3.5 Regression results of political and business ties

	Model 1 (Base model)	Model 2 (Base + predictors)
<i>Controls</i>		
Isomorphism	.19**	.01
Industry competition	.08	.08
Firm size	-.07	-.06
Firm age	-.01	-.09
Equity	.02	.01
Internationalization	.32***	.31***
<i>Predictors</i>		
Absorptive capacity		.60**
Political tie		4.72*
Political tie ²		-4.42**
Business tie		-2.6*
Business tie ²		3.01***
Model F	2.60	7.82
P <	.05	.001
Adjust R²	.09	.39
Δ R²		.30

Note: N=121. *p<.10 **p<.05 ***p<.01

To gain more insights into these various relationships between social ties and innovation performance, we used the mean of the absorptive capacity ($\mu = 3.46$) as the cutoff point to divide the total sample into the high absorptive capacity group ($n = 78$) and the low absorptive capacity group ($n = 43$) in the subgroup analysis. As shown in Table 4, firms that possess low absorptive capacity are more likely to benefit from political ties to improve their innovation performance ($p < .10$). The overall model is significant with an adjusted R^2 of 0.24 ($F=4.75$; $p < 0.01$). Further, firms that possess high absorptive capacity can take advantage of business ties to enhance their innovation performance ($p < 0.05$). The overall model is significant with an adjusted R^2 of 0.29 ($F=4.79$, $p < 0.01$). Hence, both H6 and H8 are supported.

Our result indicates that firms' absorptive capacity intertwines with their networking strategies to improve innovation performance. These findings imply that firms that are equipped with higher absorptive capacity are more likely to benefit from having stronger business ties with MNCs. Furthermore, political ties mitigate firms' problem of possessing inadequate capabilities to accommodate growth. In light of their lower absorptive capacity, firms may opt for maintaining favorable relations with the government to mitigate their competitive disadvantages in sustaining their innovation performance.

Table 3.6 Regression results of absorptive capacity

Variables	Innovation Performance	
	Low AC (n=43)	High AC (n=78)
<i>Controls</i>		
Isomorphism	.07	.04
Industry competition	.12	.05
Firm size	.03	-.01
Firm age	-.70***	-.61***
Equity	-.80***	-.03
Internationalization	.81***	.69***
<i>Predictors</i>		
Business tie	-1.49*	2.82**
Political tie	1.21*	-1.26
Model F	4.75	4.79
P <	.001	.001
Adjust R²	0.24	0.29

Note: N=121. *p<.10 **p<.05 ***p<.01

Control variables and innovation performance

The control variables in this chapter are as follows: competitive isomorphism, industry competition, firm size, firm age, firm equity, and internationalization.

Interestingly, we find that competitive isomorphism is positively related to firms' innovation performance, particularly in relation to incremental innovation performance. This finding implies that while management motivation, growth desire and technological capability determine a firm's radical innovations, incremental innovations could emerge due to external factors (Subrahmanya, 2005). To cope with competition, firms may adopt incremental innovations, such as progressive and continuous changes to improve the present technology, by following large numbers of adopters (Abrahamson and Rosenkopf, 1993). Our finding confirms bandwagon effects in that when competitors in the industry are competitive and are involved in innovation activities, firms may engage in innovation behaviors to conform to the pressures created by other organizations.

Firm age is found to be negatively related to innovation performance, in particular to radical innovation performance. As firms mature, they may focus more on exploiting existing competencies to generate innovations and elaborating and refining older areas of technologies, instead of engaging in knowledge exploration activities (Sørensen and Stuart, 2000). In addition, although state-owned firms have an advantage over privately- or collectively-owned firms in resource acquisition and innovation facilities, they suffer from poorer innovation performance than non-state firms. Not surprisingly, firms' internationalization shows a significant impact on their innovation performance. This finding implies that since EMNCs do not have adequate experiences in conducting R&D activities, they benefit from 'learning by doing' and 'learning from others' during the process of internationalization.

3.6 Discussion and Conclusions

We find that a firm's knowledge exploitation and exploration strategies create real options for it to obtain the right to enhance its innovation performance in accordance with market risks. Our findings also indicate that a firm's absorptive capacity—its ability to acquire, assimilate, exploit, and transform the state-of-the-art technologies internally—plays an important role in enhancing its innovation performance. Although prior studies support that MNCs are effective in generating technology transfers and spillovers to emerging economies, what we have found is that different levels of business ties with MNCs may produce distinct effects on a firm's innovation performance and with the presence of its absorptive capacity. One potential explanation is that because of the wide technological gaps between MNCs and EMNCs, MNCs may operate in “enclaves” so that EMNCs could not benefit from the presence of MNCs directly (Kokko, 1994). This is also the case when EMNCs do not possess the capacity to absorb and adopt advanced technology, and the capacity to internalize knowledge created by MNCs and to modify those advanced technology to fit into their own applications, processes, and routines. In addition, due to a weak legal framework and intense competition, MNCs may opt for protecting their proprietary technologies than sharing with their potential competitors.

It is noteworthy that employee mobility between MNCs and EMNCs may indirectly benefit local firms' innovation performance. MNCs contribute to the human capital building of local economies because they train local employees with advanced knowledge and skills, so the employee mobility not only helps EMNCs absorb acquired knowledge but also facilitates the transfer of value-enhancing capabilities or know-how

(Kim, 1997). Employee mobility enhances EMNCs' innovation performance by integrating external and internal sources of knowledge and by reducing the associated cost and time of recognizing, accessing, and assimilating new technologies (Song, Almeida, and Wu, 2001).

Interestingly, we find that a firm's political ties have an inverted U-shaped relationship with its innovation performance. Although political ties can be used by a firm to mobilize political support and material exchange, reduce transaction cost, and mitigate organizational disadvantages (e.g., Luo, 2000), they can be harmful to the firm. Our finding supports that moderate levels of political ties may be beneficial to improve a firm's innovation performance, but very high levels of political ties can be detrimental, as costs started outweighing potential benefits.

We addressed the following research questions in this chapter: (1) *Does a firm's knowledge strategy affect its innovation performance?* (2) *How should a firm align its knowledge strategy with the uncertain market environment?* (3) *How does the presence of political and business ties enhance (or lessen) a firm's innovation performance?* (4) *When does a firm's absorptive capacity matter to its innovation performance?* We found that a firm's knowledge strategy matters to its innovation performance. Further, a firm's knowledge strategy has to be co-aligned with its market environment so that its investment can generate economic values, regardless of whether it provides the 'option of waiting' or the 'option of commitment'. In addition, although political ties with the government and business ties with MNCs provide a firm with an opportunity to gain access to valuable resources and new technological knowledge that are inaccessible to others outside the network (Dyer and Singh, 1998), our finding confirms that a firm's ability to handle new technology and develop routines to gather, interpret and transfer

knowledge and complementary assets is essential to its innovation performance. Even if governments in emerging markets are closely involved in helping local businesses with financing, information, and technology through institutional mechanisms and regulatory regimes (Li and Atuahene-Gima, 2002; Luo, 2000), strong ties with the government can harm a firm's innovation performance. Furthermore, to compete internationally against MNCs that have abundant technological and business experiences, an EMNC needs to focus on developing its absorptive capacity internally to enhance its innovation performance.

To the best of our knowledge, our study is the first to investigate the influence of knowledge strategy, organizational competencies and business environment on EMNCs' innovation performance. In light of the emergent research on how EMNCs leapfrog to internationalization, we provide important insights to uncover factors that are essential to improve EMNCs' innovation performance, which in turn supports their internationalization. Although prior studies support the positive presence of strong ties with the government and business partners, a thorough investigation of the strong tie mechanism on firms' innovation performance reveals that institutional and business relatedness alone cannot enhance a firm's competitive advantages. They only matter when combined with a strong absorptive capacity of the firm.

This study provides important implications for policy makers. It provides a comprehensive picture of the major factors that contribute to EMNCs' innovation performance. This study confirms that the government's favorable support could only be a necessary, but not a sufficient condition for firm success (Li and Zhang, 2007). Further, the impact of knowledge spillover from MNCs may not be as much as previously believed, due to the possible technological gap that is either too big for local firms to

understand and assimilate or too little to be benefited from the cooperative relationships. To fully benefit from FDI and international technology transfer, it is worthwhile for firms from emerging countries to improve their indigenous innovative capability and to aggressively learn from their counterparts through close social interactions.

Our study also provides important implications for practitioners. Although the experiences of Original Equipment Manufacturers (OEM), Original Design Manufacturers (ODM), and Original Brand Manufacturers (OBM) help firms precede organizational innovations, it is essential for EMNCs to pay more attention to develop absorptive capacity in enhancing its innovation performance. Firms should focus on in-house R&D activities to develop their innovation capability and supplemented with external alliances (Fan, 2006). On the one hand, firms should develop their 'learning from others' capability to acquire market knowledge and to further enhance their engineering and technical skills to support innovation. On the other hand, firms should establish managerial attitude toward change and develop an extensive knowledge base from their technological and market-related experiences to facilitate innovations (Dewar and Dutton, 1986). Firms' internal capabilities and openness towards external networks for knowledge sharing are important for upgrading innovation performance (Caloghirou, Kastelli, and Tsakanikas, 2004).

There are several limitations in this chapter. First, considering the innovation activities of EMNCs, we mainly focused on the innovation activities of headquarters. Since EMNCs' FDI is generally small in scale and they lack international competitive capacity, it is assumed that the majority of EMNCs' subsidiaries rely on their headquarters to develop innovations. In our study, we examine the early stage of

EMNCs' innovation behaviors. Nonetheless, with their increased FDI, EMNCs may gradually implement innovation initiatives in subsidiaries located in developed countries and leverage knowledge-based resources and capabilities across borders (e.g., Bartlett and Ghoshal, 1989; Gupta and Govindarajan, 1991, 2000; McCann and Mudambi, 2005). Since the role of a subsidiary evolves over time (Birkinshaw, Hood, and Jonsson 1998), foreign subsidiaries in developed countries could develop capabilities in both acquiring and integrating knowledge through interacting with external and internal networks and become centers of excellence. Thus, an EMNC's capability of mobilizing and leveraging geographically dispersed resources helps it create and sustain competitive advantage (e.g., Doz, Santos, and Williamson, 2001; Mudambi, 1999).

Further, this study only examined firms' incremental and radical innovation. Henderson and Clark (1990) suggested that there are different types of innovation that requires different organizational forms. Besides the traditional distinction between radical and incremental innovations, firms also involve in modular and architectural innovations. Specifically, a modular innovation refers to a firm's change in the core design concept of a component that does not affect its relationships with the others, whereas an architectural innovation is defined as a change in the relationships between a product's components that leaves the core design concepts untouched.

In addition, in light of the intensified competition, independent R&D investments by competitors may lead to a competition that can damage one or both parties. Accordingly, a key strategic question is: when and under what conditions should two firms pursue competing, co-operative, and co-opetitive R&D activities to maximize their

investment (Luo, 2007)? Future studies should investigate the dynamic pattern of knowledge strategy and innovation performance of EMNCs.

Finally, we obtained data from multinational companies in China; care must be taken before generalizing these findings to other countries. We call for further empirical research to extend our understanding of what drives the innovation performance of firms from emerging economies.

CHAPTER 4

THE EFFECT OF TRUST RELATIONSHIPS ON TECHNOLOGICAL RESOURCES ACQUISITION AND FIRM PERFORMANCE

4.1 Introduction

Recent studies suggest that the network relations between EMNCs and traditional MNCs from developed countries are a potential growth determinant in developing countries (Sun, 1998). Over time, through inward internationalization by learning, digesting and utilizing critical resources and capabilities obtained from foreign MNCs (Buckley, Clegg and Wang, 2002), EMNCs can leverage their absorbed resources in their outward internationalization at different stages, including exporting, contractual agreement and foreign direct investment (Malhotra, Ulgado and Agarwal, 2003). Since China has become the world's largest and fastest-growing emerging economy, it provides an excellent research context for investigating how EMNCs in China acquire critical resources from their home markets and how resources provide a strong base to support their internationalization.

One factor that distinguishes EMNCs in China from traditional MNCs is that the country's vibrant overseas communities play a critical role in its firm's internationalization. The country's multi-million overseas emigrants foster a strong Overseas Diaspora with the potential to assist in the country's development in areas such as capital and technological know-how, education, and business experience (Gillespie, et al., 1999; Kapur and Ramamurti, 2001). For instance, inbound FDI from the Overseas Chinese since the 1980s accounts for as much as 80 percent of the total foreign direct investments in China. It is supported that China's development might have been very different without the support of Overseas Chinese in terms of accessing capital, technology, and export markets (Ramamurti, 2004). Accordingly, it is necessary to

examine how business relationships between Chinese MNCs and their Overseas Chinese partners affect Chinese firms' critical resources acquisition, in particular, technological resources.

Further, as active recipients of foreign investment from other developed countries, China attracts Western MNCs (hereafter referred to as foreign MNCs that exclude overseas Chinese MNCs) from all over the world that bring skills to the country from which Chinese firms would acquire skills and technologies by acting as cooperating partners (e.g., Buckley et al., 2002). Since foreign MNC partners are the main contributors of technological resources to Chinese firms, it is necessary to investigate how the nature of the business relations between Chinese MNCs and their foreign MNC partners affects Chinese firms' critical resources acquisition, such as technological resources.

In China, unlike relationships that are conducted at arms' length transactions in other industrial economies, relationships are often managed through interpersonal accommodation. Consequently, trust becomes necessary to create the willingness for people and organizations to transfer and receive resources. The level of trust can affect firms' network effectiveness in resource acquisition and value creation (de Wever, Martens and Vandenbempt, 2005).

In this chapter, we elaborate on how trust differs in their effects on firms' resource acquisition. We suggest that interorganizational trust depends on, and is influenced by, the social and institutional environment in which the relationships are embedded (Bachmann, 2001; Lane and Bachmann, 1996; Zucker, 1986). We offer comprehensive views as to how different types of trust complement or substitute each other in different relationships. Our goal is to investigate how different types of trust affect EMNCs' acquisition of critical resources from their external partners, namely

foreign MNCs and overseas Chinese MNCs that are inaccessible to firms outside the network.

We contribute to the extant literature by addressing the following important questions:

- (1). How do different trust relations affect firms' critical resources acquisition?
- (2). Can critical resources acquired from their partners affect firms' performance?

The rest of this chapter is organized as follows. First, we review the extant literature and develop hypotheses. We then describe the methodology, data and variables. This is followed by a discussion of the empirical results. Finally, we conclude with a summary and discuss theoretical and managerial implications.

4.2 Literature Review

Resource-based View and Resource Dependence Theory

As early as 1950s, Penrose (1959) argued that a firm is a collection of productive resources, rather than an administrative unit. Resources include physical, intangible human, and organizational resources. Consistent with earlier research findings that technological resources have pronounced effects on firms' operations and decisions (Kotabe, Srinivasan, and Aulakh, 2002), we define critical resources as the product and process technology resources that a firm acquires.

Resources that are heterogeneous among firms allow them to sustain their competitive advantage when the resources are valuable, rare, imperfectly imitable and non-substitutable (Barney, 1991). Resource dependence theory proposes that a firm's survival is contingent on its ability to gain control over critical environmental resources, and firms that extract critical resources may outperform those that do not (Pfeffer, 1972). To mitigate the problems of resource shortages, firms are inclined to strengthen their

connections with external actors to ensure compliance and secure information and to nurture associations that ensure the availability of key resources (Scott, 2003).

Trust

Despite the divergent meanings that scholars have conveyed to the study of trust in international business research, there appears to be a consensus on the understanding of rational, cognition- trust and affect-based trust based on a shared sense of community (Rousseau, Sitkin, Burt and Camerer, 1998; Tschannen-Moran and Hoy, 2000). Studies have shown that these two fundamental types of trust, cognition- and affect-based (McAllister, 1995), facilitate the exchange of resources between firms.

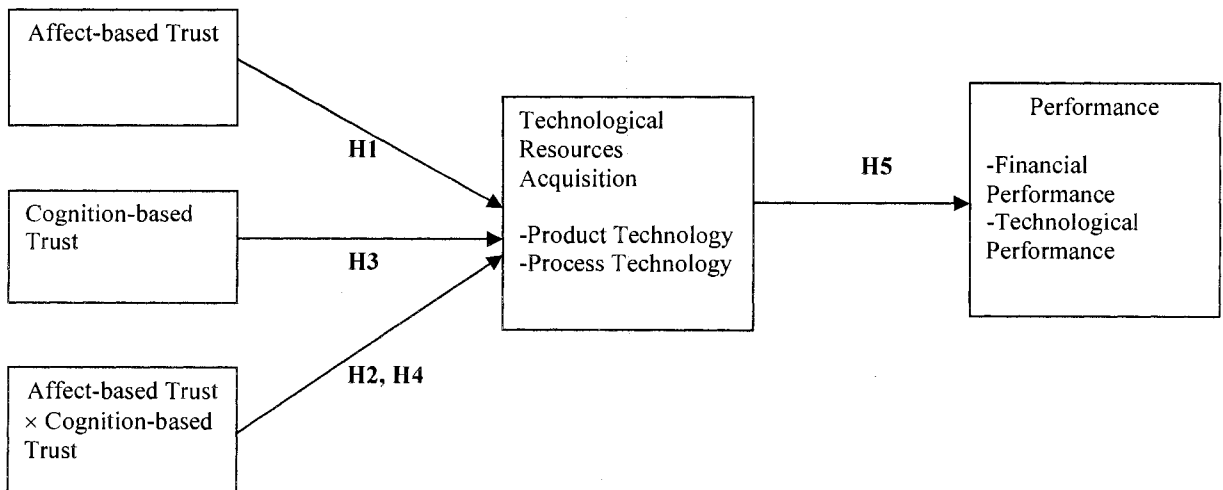
Cognition-based trust is defined as one's expectation of another's reliability, predictability, and fairness which reflects technical competency and a fiduciary obligation to perform (McAllister, 1995), based on a rational evaluation of the other's ability to carry out obligations (Jeffries and Reed, 2000). It promotes the selection of competent partners (Rempel, Holmes and Zanna, 1985; Zaheer, McEvily and Perrone, 1998).

Affect-based trust, on the other hand, is rooted in one's emotional attachment to, and care and concern for, the other party's welfare (Rempel et al. 1985; Pennings and Woiceshyn 1987; McAllister, 1995), and the belief that these caring sentiments can be reciprocated (McAllister, 1995). Affect-based trust means that exchange partners are not only confident in each other's behavior, but more importantly, they are attentive to the partner's emotional needs as well (Lewis and Weigert, 1985). Accordingly, agency problem is mitigated as exchange partners are confident that their interests will be fully protected and that formal monitoring of behavior is not necessary (Lewicki and Bunker, 1995). The benefits of affect-based trust go beyond the fairness, predictability, dependability, and reliability that accrue from cognition-based trust.

Affect- and cognition-based trust represents two distinct forms of trusting relationships (McAllister, 1995). Cognition-based trust is understood as more rational and less special than emotional trustworthiness. Once affect-based trust has been developed, a foundation of cognition-based trust may no longer be needed (McAllister, 1995). Although trust has both distinct cognition- and affect-based forms, they are complementary (Sako, 1992). As such, instead of treating the two types of trust as the two ends on a continuum, we suggest that two types of trust work both independently and interactively between Chinese firms and their networked partners. In this study, we examine trust at the inter-organizational level.

The purpose of this chapter is to investigate how cognition- and affect-based trust with external partners, separately and interactively, contributes to firms' technological resources acquisition and how technological resources affect their performance outcomes. We present the conceptual model in Figure 4.1.

Figure 4.1 Trust Relations, Technological Resources Acquisition and Performance Implications.



4.3 Hypotheses Development

Trust with Overseas Chinese Partners and Technological Resources Acquisition

In recent years, China has become one of the most important destinations for FDI, estimated at some \$60 billion a year (see Appendix C). FDI has been one of the major determinants for productivity growth and economic development of the country. While foreign MNCs have provided abundant resources such as capital and technology for China's economic development, Overseas Chinese have also played a catalytic role in generating technological spillover and providing export opportunities through their investments in China. In the last two decades, while the United States, the European Union, and Japan account for less than 20% of the total FDI into China, inbound FDI from Overseas Chinese represents 80% of its total foreign investments (see Appendix D). Specifically, a daunting 60 percent of inbound FDI is originated from Hong Kong, Taiwan, and other Southeast Asian countries (MOFTEC, 2007). Overseas Chinese, therefore, have caught both businesses executives' and researchers' attention in understanding China's recent economic boom (e.g., Buckley, et al., 2002; Sim and Pandian, 2003; Ramamurti, 2004).

Overseas Chinese, a little fewer than 60 million people, who live mainly in Hong Kong, Taiwan, and Southeast Asia, is arguably the third largest economy in the world, after the United States and Japan with an estimated Gross National Product (GNP) of \$1.5 trillion (Beng, 2002). Recent studies support that FDI from Overseas Chinese has greatly enhanced Chinese firms' marketing skills and capabilities in adapting mature technologies to certain labor-intensive contexts (Gillespie, et al., 1999; Buckley, et al., 2002; Ramamurti, 2004). Moreover, Overseas Chinese has provided expertise to Chinese firms, enabling them to climb the technological ladder through facilitating massive investments in higher education, local infrastructure development, and knowledge retention capabilities (Shenkar, 2005). As recognized by former president Mr. Deng

Xiaoping that Overseas Chinese presents a unique opportunity for China's economic development (Zhuang, 2006: 11):

China is different from other countries because China has several ten millions overseas compatriots who can offer a unique opportunity to China's development and they have made great contributions for China.

Even today, Chinese president Mr. Hu Jintao pays high attention to the contribution of Overseas Chinese to the country's economic development (Zhuang, 2006: 12):

There are several ten millions overseas compatriots distributing in different regions in the world and about 30 millions of their relatives in China, and all of them are the important strength for China's modernization, nation-united and the revival of Chinese people.

Prior studies suggest that the absence of a strong and coherent legal framework in a country may result in a high degree of uncertainty, leading to a serious lack of coordination of economic exchanges, as seen in many developing countries (Sako, 1992). Shared values and beliefs, however, can promote coordination because they reduce uncertainties by making others' behaviors more predictable (Casson and Godley, 2000). Since people's drive to protect their own family tends to be strongest for blood relatives and diminishes as one moves down the family tree, trust could be higher in more ethnically and socially homogeneous societies (Zak and Knack, 2001).

Ethnic social networks not only 'glued' multiple actors from different countries together in economic cooperation through mutual investment and joint production, but also 'lubricated' cross-border economic cooperation between those from Hong Kong, Taiwan and China's Guangdong and Fujian provinces (Chen, 2000). As commented by the former President of Singapore, Mr. Lee Kuan Yew that (Hunington, 1997: 170):

We are ethnic Chinese and share a basis for culture and language. It makes for easy rapport and trust, which is the foundation for all business relations.

One explanation of the high trust propensity is that business relations can be enforced through the kinship network that serves as a third-party enforcer by rewarding trustworthy behavior with a sound reputation and social status while punishing unacceptable behavior with a bad reputation and even isolation from the entire network (Peng, 2004). Strongly embedded in the century-long history of ethnic networks, these long-standing, often centuries' old, shared identities affect trust and cooperation (Brewer and Kramer, 1985) between Chinese firms and their Overseas Chinese partners. The affect-based trust could help firms adapt to unforeseen circumstances, reduce transaction costs, and keep a balance between market and hierarchy (Williamson, 1985). Since trust is an important factor in the process of complex knowledge sharing, shared social identity promotes shared values and perceptions, which are important contributors to complex knowledge sharing (Buckley et al., 2005; Chowdhury, 2005). Therefore, we suggest that:

Hypothesis 1. The higher the level of affect-based trust with Overseas Chinese MNCs, the higher the extent of assistance a Chinese firm receives on technological resources acquisition.

Since the country's open door policy in 1979, many Overseas Chinese have actively invested in China with the expectation of benefiting from the country-level comparative advantages in production factors, including the low cost of labor, land, raw materials, and preferential policy in China. Overseas Chinese are motivated to find alternative manufacturing bases to maintain their firms' profitability.

Although high affect-based trust reduces the need of the trusting party to worry about opportunistic behavior and promotes their willingness to assume risk, it cannot invert the day-to-day business relationship between transaction hazards and concern for control. In other words, even though shared values reduce uncertainties by making the

partner's action more predictable, it also matters whether the partner possesses the professional credentials and is able to carry out reliable role performance (McAllister, 1995). Besides developing and maintaining affect-based trust with their partners, in order to mitigate the inherent relational risks, trust can also be based on the expectation of other party's reliability, predictability, and fairness in conducting business activities (Rempel et al., 1985; Zaheer et al., 1998), as well as on the cooperating party's technical competency and a fiduciary obligation (Butler, 1983). The cognition-based relationship promotes professional collaboration and helps minimize risks involved in transaction hazards. Accordingly, we suggest that cognition-based trust complements affect-based trust through increased coordination necessity. Hence,

Hypothesis 2. High cognition-based trust reinforces the positive relationship between a Chinese firm's affect-based trust with Overseas Chinese MNCs and the extent of assistance it receives on technological resources acquisition.

Trust with Foreign MNC Partners and Technological Resources Acquisition

Prior studies found that foreign MNCs play a crucial role in upgrading an emerging country's infrastructure and technology bases, which benefit local firms as cooperating partners (e.g., Buckley, et al., 2002; Buckley, et al, 2007; Ciruelos and Wang, 2005; Shenkar, 2005). When investing in emerging economies, foreign MNCs are paying the price of knowledge spillover to local partners or even proprietary technology transfer to local firms.

Due to the increased competition and the lack of formal legal and regulatory frameworks in emerging markets (Khanna and Palepu, 2000), MNCs may be concerned with sharing advanced technology, management skills, and intellectual property with their foreign counterparts. From the foreign MNCs' perspective, they may wish to retain technologies internally or to charge a market price for technology transfer to business

partners. However, in China, due to the attractiveness of its domestic market, it is able to leverage its “seller’s market” bargaining power to request foreign investors to pay the price of technology transfer. Occasionally, foreign MNCs have to transfer “state-of-the-art technologies” to gain a foothold or to establish a beachhead in the market, a market with enormous market potential for foreign investors (Shenkar, 2005). Chinese firms, on the other hand, are willing to collaborate with the MNC partner to take advantage of internationally competitive inputs and to learn sophisticated manufacturing techniques. Accordingly, foreign MNCs and Chinese partners come together, but are motivated with different goals and expectations. Trust, therefore, relies on a rational evaluation of one’s ability to carry out designated obligations as well as on the expectation of the other party’s reliability, predictability, fairness and professionalism (Rempel et al., 1985; Zaheer et al., 1998). Since cognition-based trust is associated with relationship effectiveness that facilitates much higher complex knowledge sharing than those firms with lower levels of trust, we hypothesize that:

Hypothesis 3. The higher the level of cognition-based trust with foreign MNCs, the higher the extent of assistance a Chinese firm receives on technological resources acquisition.

However, foreign MNCs face the liability of foreignness (Zaheer 1995). Besides encountering differences in economic environment in terms of market size, economic risk, competitive environment and local infrastructure, they have to combat with the unpredictable institutional environment. Due to the country’s insufficient property rights-based contract law (Peng and Heath, 1996), foreign MNCs encounter high *ex post* transaction costs in that it is not only costly and infeasible to specify every contingency and each term of a contract, but also difficult to govern the business transactions (Williamson, 1975, 1985).

Foreign firms may opt for utilizing networks to overcome the uncertainty and distrust that disrupt economic transactions. Networks serve as an intermediate form of governance between market and hierarchy that economize on transaction costs and enforce contractual activities (Park and Luo, 2001). Through networking with local partners, foreign firms may reduce the liability of foreignness by accessing important local resources, learning from local communities and gaining access to a partner's local knowledge and even improving business-government relations. To develop and maintain networking with local firms, foreign MNCs need to be attentive to their partners' needs and be willing to help them when necessary. Greater affection between foreign MNCs and local partners will generate higher affect-based trust that promotes reciprocity and complex knowledge sharing.

Similarly, Chinese firms could be eager to develop and maintain affect-based trust with foreign MNCs so that their foreign partners are attentive to their needs in obtaining invaluable machinery and technical assistance as well as management skills, thereby enhancing their design capability and the capability of manufacturing products on their own (Shenkar, 2005). Accordingly, we suggest that affect-based trust reinforces the relationship between cognition-based trust and the level of assistance a firm receives on technological resources acquisition through enhanced social interactions, shared values and interests. Hence,

Hypothesis 4. High affect-based trust reinforces the positive relationship between a Chinese firm's cognition-based trust with foreign MNCs and the extent of assistance it receives on technological resources acquisition.

Technological Resources Acquisition and Performance Implications

Resource-based view (RBV) provides one of the important explanations on the differences of persistent firm performance in the field of strategic management (Barney and Arikan, 2001). With the early theoretical works of RBV, such as the traditional

studies of distinctive competencies (Selznick, 1957), Ricardian and Penrosian economics (Penrose, 1959), Wernerfelt (1984) and Barney (1991) argued that a firm's possession of resources that are valuable, rare, inimitable and non-substitutable attain competitive advantages. The RBV suggests that firms within an industry are heterogeneous in the valuable resources they possess, and that the bundle of unique resources possessed by a firm is the key factor contributing to gaining and sustaining superior performance.

FDI has been considered an important source of both direct capital inputs and technology and knowledge spillovers. Specifically, technological resources create firms' competitive advantage by offering new products or utilizing new processes. Through introducing novel products or technology processes, firms are able to revise the rules of competition by deterring the entry of rivals or by redrawing their industry's boundaries (Golder and Tellis, 1993; Utterback, 1994; Zahra, et al., 1995). In addition, since MNCs from developed countries conduct much of the world's R&D activities and possess the majority of the world's stock of advanced commercial technologies, they can generate a positive impact of technological knowledge transfer to local partners through licensing, OEM, joint venture and even cooperative R&D activities. For instance, Overseas Chinese have helped China boost its exports of manufactured goods, especially labor-intensive products; whilst foreign MNCs have generated knowledge spillover in product and process innovation and technological development (e.g., Buckley et al., 2007; Wei and Liu, 2006).

The availability of extensive technology transfer from MNCs to local firms, especially some state-of-the-art technology, enhances Chinese firms' technological skills and provides them with a competitive edge over rivals in the home and foreign markets. Further, adoption of foreign-developed technology by firms in developing countries can accelerate the speed by which they become globally competitive in new product development (Di Benedetto, Calantone and Zhang, 2003). Accordingly, a firm's

acquisition of technological knowledge base enhances its financial and technological performance. Thus,

Hypothesis 5. The extent of assistance a Chinese firm receives on technological resources acquisition is positively related to its financial and technological performance.

4.4 Method

Data

Data collection process has been described in chapter 3. Before face-to-face meetings with 121 Chinese multinational companies, in-depth field interviews, lasting between 60 to 120 minutes, were conducted with several top executives. On-site interviews complemented our literature review and helped us clarify measures adopted from strategic management and international business studies. During in-depth interviews, respondents indicated that foreign and Overseas Chinese partners have assisted them in acquiring technological resources that have played a significant role in firms' internationalization. In addition, trust functions as a lubricant to facilitate business activities in China. The field interviews not only helped us verify our measures, but also ensured that Chinese executives could understand all constructs along with their measurement items. For instance, our field interview with one of the senior executives at the Haier Group, the world's 4th largest white goods manufacturer, reveals the following:

We are newcomers in the industry compared with our international competitors. It is similar to a primary school student who competes with those that have already completed higher education. Haier's joint venture with German Liebherr Company and Italian Merloni Company not only enabled the company to absorb advanced European technologies, but also strengthened the company's position on its road to diversification and internationalization. In today's fierce competitive environment, however, to fend against the challenge from Chinese manufacturers, many foreign companies will not license or sell technologies anymore to their Chinese partners. Winning the trust of multinational corporations helps the company access to the relevant product technology, market knowledge, and even social relations.

Another interviewee, one senior executive at Qingjian Group- one of China Top

Contractors, comments the following:

We benefit from establishing long-term cooperative and trusting relationships with Overseas Chinese partners. As a small market player in the international market, our close connection with Overseas Chinese partners has facilitated our foreign expansion, especially during the initial stage. On the one hand, obtaining technological assistance from Overseas Chinese is crucial for Chinese companies' foreign expansion; on the other hand, since it is very difficult for us to understand the international market, winning the trust of Overseas Chinese partners benefits the company to solve business problems in the process of internationalization.

Measurement and Variables

In order to check for non-response bias, we obtained reliable internal data records compiled by the *China Ministry of Commerce, China Securities Regulatory Commission, and the China State-owned Assets Supervision and Administration Commission (SASAC)*. From their internal data source, we randomly selected 500 Chinese firms that have involved in FDI activities concerning their firm characteristics, such as the number of employees, length of operations, relative financial performance, and the stock market performance. The mean difference between respondent firms and those obtained sample firms on the key firm characteristics was tested by an unpaired t-test. Non-significant results were found. Further, following Luo and Peng's (1999) study, we ran the Kolmogorow-Smirnow's D test to check whether the two groups were drawn from the same distribution. Again, non-significant results were found, indicating no significant response bias.

To control for common method variance, we adopted the following approaches. First, we inserted some open-ended questions relating to some constructs throughout the questionnaire so that respondents would not fall into a pattern linked to Likert or semantic differential scales. In addition, following Podsakoff and Organ's (1986) study, we ran factor analysis of the dependent and independent variables; no single variable

emerged from the variables, indicating that common method variance is not likely a concern in this study.

The measurement items and scales that we used to operationalize all the theoretical constructs are presented in *Appendix B*. We developed Likert-type measurement scales for the constructs contained in our conceptual framework. In developing constructs, we adopted most measurement items from prior studies. However, it was difficult to apply existing scales in their entirety. We modified some of the measurement items to reflect the specific context of this study. The development of the new items was informed by the field interviews with executives responsible for their firm's strategic development. In addition, our partner at the *China Capital University of Economics and Trade* provided us with some feedback on a pilot version of the questionnaire, and helped us refine key constructs and identify the appropriate use of words in the Chinese cultural setting. All of the Cronbach's alpha values are above the suggested value of 0.70 (Nunnally, 1978). Below are the details of the development of major constructs and measurement of items and scales that we used to operationalize all the theoretical constructs. We measured each indicator on a 5-point scale (1=strongly disagree...5=strongly agree), unless stated otherwise.

Variables

Dependent Variables

Firm performance (FINPERF and TECHPERF). We used multidimensional constructs to measure firm performance, including financial performance and technological performance. We measured financial performance (FINPERF) by return on sales; we also used return on investment and profit growth to check the robustness of the analysis. We measured technological performance (TECHPERF) by new product sales; we also used profits from new product sales to check the robustness of the analysis.

Following Clark and Montgomery's (1999) study, we measured performance by a competitor-centered performance measurement approach. We asked respondents to assess the performance of their corporation vis-à-vis that of its three largest direct competitors in its major product lines.

Independent Variables

Technological resources (RES). We asked respondents to evaluate the degree of assistance their firm receives from Overseas Chinese and foreign MNCs partners, correspondingly, in acquiring technological resources. Since resources can be a source of competitive advantage when demonstrating VRIN (valuable, rare, imitable, non-substitutable) traits, we measured technological resources as product and process technologies that are valuable, rare, imitable, non-substitutable, and generate sustained abnormal returns. We measured each indicator on a 5-point scale from 1 (very little assistance) to 5 (a great deal of assistance).

Trust (TRUST). Consistent with previous studies (McAllister, 1995; Zaheer, McEvily and Perrone, 1998), we operationalized cognition-based trust (COG) by using three indicators: predictability, reliability, and fairness. This measure consists of 7 items. We operationalized affect-based trust (AFFT) by a combination of previous scales (e.g., McAllister, 1995; Sheppard and Tuchinsky, 1996) and new items. We included three indicators to measure affect-based trust, which include affect, shared interests, and flexibility. This measure consists of 7 items. Varimax-rotated principal components analysis on these items confirmed the tenability of the dichotomy of cognition- and affect-based trust. By using the variables with high loadings ($>.6$) on each factor, a summated variable subsequently was developed to represent cognition- and affect-based trust, respectively (Cronbach's alpha of .79 and .81).

Control Variables

Market risks (RISK). We built upon Atuahene-Gima and Murray's (2004) study and controlled for market risks. It is measured by asking respondents to evaluate the amount and unpredictability of changes in consumer needs, production or service technology, and the modes of foreign competition and globalization in their firm's key industry. This measure consists of 7 items (Cronbach's $\alpha = 0.77$)

Industry competition (COMP). Since industry competition can influence business conduct (Peng and Luo, 2000), we asked respondents to evaluate the degree of competition in the industry when compared to 3 years ago to validate industry competition. We measured industry competition on a 5-point scale from 1 (very low) to 5 (very high).

Firm size (SIZE). Firm size is an important attribute that shapes firms' behaviors and decisions. It has been viewed as an indicator of scale economies and market power because large firms are able to maintain favorable access to capital and resources. Firm size is considered by some as a resource. Larger firms have greater stocks of resources (Barney, 1991) and bargaining power. We controlled for firm size, which is measured by the number of employees and sales volume (Rao and Naidu, 1992).

Firm age (AGE). Since the length of operation can influence firm performance, we controlled for a firm's length of operation, which is defined as the number of years that a firm has operated in its major product market.

Firm equity (EQU). Economic transition in China has created a diversity of organizational forms, spanning from state-owned to non-state-owned businesses. State-owned firms have an advantage over privately- or collectively-owned firms in terms of industry experience, market power, and production and innovation facilities. Further, state-owned firms have privileged access to state-instituted distribution channels and enjoy preferential treatment by the government when selecting market segments (Luo,

1998). Hence, we controlled for firm equity in this study. The scale ranges from 1 to 6 as follows: 1 (state-owned), 2 (collectively-owned), 3(private), 4 (public), 5 (joint venture with equal or majority stake), 6 (joint venture with minority stake).

Internationalization (INTL). Researchers have examined the relationship between firms' internationalization and performance, and the results are conflicting. For example, linear relationship, U-shaped, inverted U-shaped relationship, and S-curve relationship have been reported on the link between internationalization and performance (Grant, 1987; Morck and Yeung, 1991; Hitt, Hoskisson and Ireland, 1994; Sullivan, 1994; Ramaswamy, 1995; Kotabe, Srinivasan, and Aulakh, 2002; Lu and Beamish, 2004). Thus, we controlled for the degree of firms' internationalization. We used foreign to total sales (FSTS) to capture firms' internationalization (Geringer, Beamish and DaCosta, 1989; Grant, Jammine and Thomas, 1988).

4.5 Results

The Effects of Trust on the Level of Assistance Firms Receive to Acquire Technological Resources

We present the mean, standard deviation and correlation of the variables included in the study in Table 4.1. The mean firm age in our sample is approximately 22 years. The average degree of firms' internationalization is approximately 35 percent. The variance inflation factors (VIFs) showed no indication of multicollinearity among the variables. The highest VIF statistic was 4.23, which was well below the rule of thumb level of 10 (Cryer and Miller, 1994).

Table 4.1 Descriptive statistics and Pearson correlation matrix

Variables	Mean	S.D.	1	2	3	4
COGNITION TRUST (1)	3.27	0.45	1			
AFFECT TRUST (2)	4.02	0.57	0.24*	1		

TECHNOLOGICAL RESOURCES (3)	2.10	0.90	-0.47**	0.33**	1	
FINANCIAL PERFORMANCE (4)	2.40	0.53	-0.62**	-0.44**	0.11	1
TECHNOLOGICAL PERFORMANCE (5)	2.86	0.44	0.10	0.05	-0.07	-0.04
MARKET RISKS (6)	4.38	0.57	0.38**	0.40**	-0.02	-0.34**
COMPETITION (7)	3.61	1.06	-0.38*	-0.01	0.11	0.36**
FIRM SIZE (8)	2.83	0.62	-0.43*	-0.32**	0.15	0.45**
FIRM AGE (9)	22.0	14.70	-0.42**	-0.02	0.10	0.37**
FIRM EQUITY (10)	4.00	1.01	-0.11	-0.24*	0.20*	0.05
INTERNATIONALIZATION (11)	35.43	17.15	-0.03	-0.35**	-0.32**	0.23*

	5	6	7	8	9	10	11
TECHNOLOGICAL PERFORMANCE (5)	1						
MARKET RISKS (6)	0.23*	1					
COMPETITION (7)	-0.14	-0.22*	1				
SIZE (8)	-0.04	-0.43**	0.43**	1			
AGE (9)	-0.02	-0.10	0.40**	0.39**	1		
EQUITY (10)	-0.04	-0.02	0.15	0.03	-0.10	1	
INTERNATIONALIZATION (11)	-0.02	-0.33**	0.11	0.10	-0.12	0.10	1

Note: N=121. *p<.05 (two sided) **p<.01 (two sided)

We tested the hypotheses by hierarchical multiple regression analysis. To test the significance in predicting the level of assistance on firms' technological resources acquisition and the impact of the technological resources on performance, we used a two-step hierarchical regression analysis. We entered all of the control variables in the first step (Model 1). In the second step, we added all the independent variables to the base model (Model 2). This allowed us to examine whether adding the independent variables increased the statistical power of the model.

Table 4.2 reports the effect of trust with Overseas Chinese MNCs on the level of assistance Chinese firms receive in acquiring technological resources. Model 1 is the base model, which investigates the effects of all control variables on the level of assistance

firms receive on technological resources acquisition. The overall model is highly statistically significant with an adjusted R^2 of 0.15 ($F = 4.20$; $p < 0.01$). The model reveals that firms' equity is positively related to the level of assistance firms receive in acquiring technological resources ($p < 0.01$), whereas firms' degree of internationalization has a significant negative effect on the level of assistance in acquiring technological resources ($p < 0.01$). Model 2 indicates that affect-based trust with Overseas Chinese has a significant positive effect on the level of assistance firms receive on technological resources acquisition. Cognition-based trust with Overseas Chinese, however, has a significant negative effect on the level of assistance that firms receive on technological resources acquisition. The model is significant with an adjusted R^2 of 0.47 ($F=12.76$; $p < 0.01$). Hypothesis 1, which examined the effect of affect-based trust with Overseas Chinese MNCs on the level of assistance for a firm to acquire technological resources, is supported. Model 3, which suggests that cognition-based trust with Overseas Chinese MNCs strengthens the positive relationship between affect-based trust and the level of assistance firms receive on technological resources acquisition, supports hypothesis 2. The model is significant with an adjusted $R^2 = 0.51$ ($F=11.01$; $p < 0.01$).

Table 4.2 Regression analysis predicting the level of assistance on technological resources acquisition (Overseas Chinese MNCs)

	Model 1	Model 2	Model 3
<i>Control variables</i>			
Market risks	-0.32	-0.33	-.15*
Industry competition	0.29	-0.03	.08
Firm size	0.61	0.08	.09
Firm age	-0.01	-0.01	-.14*
Equity	0.56***	0.26**	.11
Internationalization	-0.05***	-0.02**	-.15*
<i>Direct effects</i>			
Cognition trust		-1.89***	-1.03*
Affect trust		1.59***	2.38***
<i>Interaction</i>			
Affect trust × Cognition trust			2.80**
Model F	4.20***	12.76***	12.94***
P<	0.01	0.01	0.01
Adjust R²	0.15	0.47	0.51
Δ R2		0.32	0.36

Note: N=121. *p<.10 **p<.05 ***p<.01

Table 4.3 reports the effect of trust with foreign MNCs on the level of assistance that firms receive in acquiring technological resources. Model 1 is the base model, which investigates the effects of all control variables on the level of assistance that firms receive in acquiring technological resources. The overall model is highly statistically significant

with an adjusted R^2 of 0.16 ($F = 4.38$; $p < 0.01$). Similar to previous model, the base model reveals that firms' equity is positively related to the level of assistance that firms receive on technological resources acquisition, whereas firms' degree of internationalization has a significant negative effect on the level of assistance that firms receive on technological resources acquisition.

Model 2 indicates that affect-based trust with foreign MNCs has a significant positive effect on the level of assistance that firms receive in acquiring technological resources. Cognition-based trust with foreign MNCs, however, has a significant negative effect on the level of assistance that firms receive in acquiring technological resources. The model is significant with an adjusted R^2 of 0.40 ($F=11.01$; $p < 0.01$). Hypothesis 3, which examined the positive effect of cognition-based trust with foreign MNCs on the level of assistance that firms receive in acquiring technological resources, is not supported.

In Model 3, the negative interaction effect ($p < .05$) suggests that cognition-based and affect-based trust jointly reduces the level of assistance that firms receive on technological resources acquisition. Thus, hypothesis 4 is not supported. The model is significant with an adjusted R^2 of 0.46 ($F=12.56$; $p < 0.01$).

In model 4, firm equity was controlled for as dummy variables to examine whether different types of ownership have different effect on how trust relationships with foreign MNCs affect Chinese firms' technological resources acquisition. We included five dummy variables to separate six categories of ownership structure, with state-owned enterprises as the reference group. We found that compared to state-owned enterprises, non-state-owned enterprises, such as private firms, public firms, joint ventures, are more likely to benefit from establishing cognition-based trust with foreign MNCs to assist their technological resource acquisition. The model is significant with an adjusted R^2 of 0.45 ($F=8.31$; $p < 0.01$).

Table 4. 3 Regression analysis predicting the level of assistance on technological resources acquisition (Foreign MNCs)

	Model 1	Model 2	Model 3	Model 4
<i>Control variables</i>				
Market risks	.19*	.39*	.10	.08
Industry competition	.04	-.04	-.02	.03
Firm size	.14	.23	.20	-.07
Firm age	-.04	-.01	-.09	.01
Equity	.29***	.28***	.27***	
Internationalization	-.28***	-.01***	-.20**	-.16*
<i>Direct effects</i>				
Cognition trust (COG)		-.008***	-.89*	-.37***
Affect trust		1.80***	.64**	.29***
<i>Interaction effect</i>				
Affect trust × Cognition trust			-1.36**	
<i>Dummy variables</i>				
COG × collectively- owned firm				.25**
COG × private firm				.39**
COG × public firm				1.01***
COG × joint venture (majority stake)				.68***
COG × joint venture (minority stake)				.40**
Model F	4.38***	11.01***	12.56***	8.31***
Adjust R²	.16	0.40	0.46	.45
Δ R²		0.24	0.30	.29

N=121. *p<.10 **p<.05 ***p<.01

The Effects of the Level of Assistance Firms Receive to Acquire Technological Resources on Performance

Table 4.4 presents the results of the hierarchical regression analysis predicting the effects of the level of assistance firms receive to acquire technological resources on their financial performance. Model 1 is the base model which examines effects of control variables on firms' performance. Firm size and age are found to be positively related to financial performance ($F=7.10$; adjusted $R^2=0.26$). Models 2 and 3 show the effects of the level of assistance firms receive from overseas Chinese and foreign MNCs in acquiring technological resources on financial performance, respectively. Model 2 reveals that the level of assistance firms receive from Overseas Chinese in acquiring technological resources is significantly positively related to firms' financial performance, with an adjusted R^2 of 0.44 ($F=13.02$; $p < 0.01$). Model 3 reveals that the level of assistance firms receive from foreign MNCs in acquiring technological resources is moderately positively related to firms' financial performance, with an adjusted R^2 of 0.42 ($F=11.99$; $p < 0.01$). Hypothesis 5, which hypothesized the positive effects of the level of assistance firms receive in acquiring technological resources on financial performance, has been partially confirmed.

Table 4.4 Regression results of financial performance

	Model 1 (Base model)	Model 2 (Overseas Chinese)	Model 3 (Foreign MNCs)
<i>Control variables</i>			
Market risks	-0.17	-.07	-.18**
Industry competition	0.07	.04	.08
Firm size	0.36**	.38***	.35***
Firm age	0.01**	.25***	.26***
Firm equity	0.04	-.02	-.02
Internationalization	0.01	.15*	.10
<i>Direct effect</i>			
Technological resources		.23***	.15*
Model F	7.10	13.02	11.99
P<	0.01	0.01	0.01
Adjust R²	.26	.45	.42
Δ R²		.19	.16

Note: N=121. *p<.10 **p<.05 ***p<.01

Table 4.5 presents the results of the hierarchical regression analysis predicting the level of assistance that firms receive from Overseas Chinese MNCs and foreign MNCs to acquire technological resources on their technological performance. Model 1 is the base model which examines the effects of control variables on firms' technological performance. Market risks are found to be negatively related to technological performance (F=1.41; adjusted R²=0.04). Model 2 suggests that the level of assistance

firms receive in acquiring technological resources from Overseas Chinese MNCs has no effect on their technological performance. Model 3 indicates that firms suffer poor technological performance with the level of assistance on technological resources acquisition from their MNC partners. Hypothesis 5, which hypothesized the positive effects of the level of assistance that firms receive to acquire technological resources on technological performance of firms, is not supported. This result suggests that the level of assistance that firms receive in acquiring technological resources, regardless of whether they receive it from Overseas Chinese or foreign MNC partners, fails to enhance their technological performance.

Table 4.5 Regression results of technological performance

	Model 1 (Base model)	Model 2 (Overseas Chinese MNCs)	Model 3 (Foreign MNCs)
<i>Control variables</i>			
Market risks	-0.22**	-.28**	-.41**
Industry competition	-0.06	.15	-.05
Firm size	0.18	.04	.05
Firm age	0.10	.02	.04
Equity	0.01	.05	.02
Internationalization	0.01	-.15	.09
<i>Direct effect</i>			
Technological resources		-.08	-2.44***
Model F	1.41	1.51	6.41
Adjust R²	.03	.04	.29
Δ R²		.01	.26

Note: N= 121. *p<.10 **p<.05 ***p<.01

The control variables in this study were as follows: market risks, industry competition, firm size, firm age, firm equity, and degree of the firms' internationalization. Two control variables were significantly related to the level of assistance firms obtain in terms of technological resources acquisition ($F=4.20$; adjusted $R^2=0.15$). Specifically, a firm's equity is positively related to the level of assistance it receives in acquiring technological resources, suggesting that non-state-owned firms are more likely than state-owned firms to receive support from their foreign partners to acquire technological resources. The negative relationship between the degree of internationalization and the level of assistance firms receive in acquiring technological resources suggests that more internationalized firms are less enthusiastic to receive support from their foreign partners at home to acquire technological resources.

As for the impact of those control variables on firms' performance, we found that firm size and the length of operation have a significant positive effect on their financial performance. It makes sense in that firm size can be an indicator of scale economies and market power. When the financial and legal environments are under-developed, small firms are more likely than large ones to be adversely affected by obstacles, and large firms are able to maintain favorable access to capital and resources (Luo, 2000). Further, large firms have bargaining power with the government hierarchy, whereas small firms are subject to frequent government intervention and hindrance (Luo, 2000). Since the length of operations can influence firm performance, it is not surprising that we found a positive relationship between firm age and financial performance. Finally, we found a moderate negative relationship between market risks and a firm's technological performance ($F=1.41$; adjusted $R^2=0.03$). Our finding also indicates that Chinese firms'

technological performance was negatively affected by the increased density of globalization and intensified competition.

4.5 Conclusions and Future Research Directions

The findings indicate that in a collectivist culture, such as in China, both affect- and cognition-based trust should be taken into consideration in examining business relations. This finding is supportive of Bijlsma and Koopman's (2003) study that conceptualization of trust has to go beyond rational or calculative trust to various forms of social trust when considering different institutional environments.

Interestingly, we find that cognition-based trust with Overseas Chinese can complements affect-based trust on the level of assistance Chinese MNCs receive on technological resources acquisition. Due to the predetermined *Guanxi* (networking in Chinese) relationships, which are blood-based and involve the exchange of feelings for the satisfaction of the need for love and belongingness between Overseas Chinese and mainland Chinese (Chen and Chen, 2004), Chinese firms are able to receive assistance from their Overseas Chinese partners on technological resources acquisition. However, although the same social identity promotes good-faith relationship between parties, cognition-based trust strengthens cooperation and complements the inherent social relationships that have been nurtured over century-long history of ethnic association.

Interestingly, our empirical analyses support that affect- based trust with foreign MNCs supports firms' technological resource acquisition. As for the effect of cognition-based trust with foreign MNCs on the level of assistance Chinese MNCs receive on technological resource acquisition, we found that it only matters to non-state-owned enterprises, such as private firms, public firms, and joint venture firms. Our study supports that state-owned firms are less motivated to acquire technological resources from their foreign partners through the development of cognition- based trust. Non-state-

owned firms, however, are interested in developing not only affect- based trust but also cognition- based trust with their foreign counterparts to access to invaluable technological resources.

A possible explanation is that although foreign MNC partners intend to cooperate with the Chinese partner based on the extent of reliable role performance and the extent of professional credentials of the partner, when they believe that their caring sentiments might be reciprocated, they are more likely to respond to the Chinese partner's requests for sharing critical resources to exchange factors or solicit favors and access to other resources. Thus, foreign MNCs are following the old adage, "When in Rome, do as the Romans do." Instead of solely relying on a rational evaluation of the other partner's ability to perform business activities, such as Chinese state-owned and collectively-owned enterprises, foreign MNCs are following the norms of reciprocal obligations, which allow them to respond to requests for assistance, seek preferential policies, and provide access to the most promising markets and/or industries. As such, to overcome their liability of foreignness, foreign MNCs in China may be eager to develop *Guanxi* with local state-owned-enterprises as a powerful mechanism to exploit critical resources that are fundamental for their operation. As for non-state-owned enterprises, however, it is important for them to develop both types of trust with foreign MNCs to access to invaluable technological resources.

In addition, we found that firms that receive high level of assistance on technological resources acquisition may outperform those that do not. High level of assistance on the acquisition of product and process technologies appears to improve financial performance. However, firms cannot benefit their technological performance from the high level of assistance received in acquiring technological resources. One possible explanation is that resources are not productive in and of themselves. It is the deployment of resources, that is, a firm's ability to transform and integrate various

activities safeguards the resources it acquired and creates firm value (Ethiraj, Kale, Krishnan and Singh, 2005). In this sense, firms' capabilities are essential in appropriately adapting, integrating, and reconfiguring internal and external resources so as to gain a significant competitive advantage (Teece, et al., 1997). Therefore, in addition to acquiring technological resources through the assistance of foreign partner firms, it become essential for firms to develop capability to transform and utilize acquired resources that are valuable, rare, imitable, non-substitutable to sustain competitive advantage.

It is worth mentioning that China is a dynamic country whose national economy is undergoing massive transformation at an accelerating rate. Since China's accession into WTO in 2001, there is evidence of some market-based resource allocation at both the micro and macro level. Over time, with the development of China's legal environment, there maybe a gradual shift of firms' depending on informal trust relations to system trust when firms feel assured to relying on appropriate structures in the business transactions. Since trust-based relationship and the generation of trust are strongly dependent on the nature of the institutional environment in which firms are embedded, when the institutional environment is less problematic, Chinese firms and their foreign partners may opt for the "*governance by trust*" relationship instead of maintaining the informal trust relations (Mudambi and Helper, 1998; Sako, 1998) (see Appendix E).

This chapter aims to investigate how different trust relations between Chinese multinational companies and their foreign partners affect the level of assistance a firm receives to acquire technological resources that are valuable, rare, imitable, non-substitutable, and generate abnormal returns and ultimately the performance outcomes.

Current trust relationships have been tested primarily among MNCs from the triad regions, namely North America, the European Union and Japan, the primary economic forces of globalization. Trust relationships were studied in formal institutions in developed countries where investigative agencies and judicial institutions enforce contracts and prosecute cheaters to guarantee honest economic agents (Zak and Knack, 2001). Foundations of trust may differ across cultures (Lane, 1997). Our study suggests that unlike in Western business settings, where the social norm to trust each other tends to be weaker and also universalistic (Bachmann, 1998), in China, both cognition-based trust and affect-based trust play a significant role in the Chinese system of network capitalism.

Although the RBV scholars have developed the VRIN (valuable, rare, inimitable, and non-substitutable) attributes of resources (Barney, 1991; Eisenhardt and Martin 2000), empirical studies have not validated the multidimensional attribute of the construct. This study empirically tested whether resources that are valuable, rare, inimitable, non-substitutable and generate abnormal returns can bestow firm competitive advantage. This study suggests that in a dynamic market environment, resources, such as product and process technologies that are VRIN, cannot be a source of sustainable competitive advantage.

This chapter has important implications for practitioners. For Chinese managers, it is essential to strengthen cognition-based trust with Overseas Chinese partners and balance cognition-based with affect-based trust with foreign MNCs partners to obtain assistance on technological resources acquisition. In addition, more attention must be directed to the development of a firm's capacities to distinguish itself from competitors with sustained technological performance. Our results indicated that technological resources acquisition alone may not enhance firms' technological performance. It is

critical for firms not only to acquire technological resources from their foreign partners, but also to extract appropriate rents through the development of dynamic capabilities to enhance their performance.

There are several limitations in this chapter. First, trust involves dyadic relationships. In this study, we surveyed executives of Chinese MNCs on their perceived trust relationships with external partners, Overseas Chinese and foreign MNCs, respectively. Inclusion of additional variables, such as the perception of trust from the executives of foreign MNCs and Overseas Chinese, would be beneficial to our understanding of the importance of trust in the dyadic relationships. Further, a longitudinal study would provide more insight into probable causation among the relationships. Furthermore, data were obtained from multinational companies in China; care must be taken before generalizing these findings to a different country. Accordingly, this study calls for more research to extend our understanding of how firms' external relationships with other partners support their technological resources development and what drives the fast internationalization of firms from emerging economies.

CHAPTER 5 INSTITUTIONAL RELATEDNESS, RESOURCE ACQUISITION, AND PERFORMANCE OUTCOMES OF CHINESE MULTINATIONAL COMPANIES

5.1 Introduction

Emerging economies are countries that experience a rapid pace of economic development (Arnold and Quelch, 1998). In addition, their governmental policies favor economic liberalization and the adoption of a free market system. Emerging economies are transitioning toward market-based systems, economically and politically (Luo and Tan, 1998). During the transition, two types of mechanisms coexist: the market mechanism characterized by the allocation of resources mainly by market forces, and the redistributive mechanism characterized by the allocation of resources mainly by governmental agencies (Nee, 1989; Zhou, 2000).

One important distinction between EMNCs and traditional MNCs is that the government of emerging economies plays a direct and important role in promoting the internationalization of their national firms, from actively providing incentives to local firms to expand and compete in foreign markets (Erramilli and Srivastava, 1999; Sim and Pandian, 2003). For instance, supported by the Brazilian government, Embraer has become the world's leading manufacturer of regional jets. The company currently owns the third largest annual delivery of commercial aircraft with the fourth largest workforce. Similarly, Huawei Corporation, a leading Chinese company in telecommunication networks, has set up regional headquarters and 55 branch offices around the world. Due to the availability of the financial backing from the government, such as its \$10 billion

credit line from *China Development Bank*, the company is able to set up R&D centers in developed countries, conduct trial-and-error experimentation, and collaborate among project teams and departments to compensate for its competitive disadvantage in innovation and technological opportunities (www.huawei.com).

The above mentioned government support is less likely to happen in a developed country where the government has a less direct and involved role (Sim and Pandian, 2003). In addition to providing financial support such as subsidies, tax abatement, training and infrastructure support, government loans and loan guarantees to support firms' foreign expansion, governments can also provide accommodating regulatory policies and conditions to foster the rapid development of local firms in assisting their internationalization activities.

China has become the world's largest and fastest-growing emerging economy. Similar to most EMNCs, Chinese MNCs have been challenged by inadequate marketing experience, insufficient management skills and manufacturing, product and process development capabilities (Deng, 2004; Pradhan, 2004). However, Chinese governments are closely involved in helping local businesses with financing, information, and technology through institutional mechanisms and regulatory regimes (Li and Atuahene-Gima, 2002; Luo, 2000). For example, Lenovo, the world's third-largest manufacturer of personal computers, was founded in 1984 with \$25,000 in seed money from the Chinese Academy of Science, an institution of the State Council of China. It is believed that relying on the protection and goodwill of the Chinese Academy of Science, a silent stakeholder of Lenovo with 27 percent of the company stake, Lenovo has been able to circumvent government rules to achieve its goals (*Economist*, 2006). Accordingly, it

provides an excellent research context for investigating how EMNCs in China acquire resource from the government's assistance to support their internationalization efforts.

Although extant literature has emphasized the impact of government involvement on EMNCs (e.g., Sim and Pandian, 2003), little empirical evidence exists to support such a relationship. Recent empirical research has investigated the advantages of managerial ties with government officials for firm performance (Peng and Luo, 2000) and the positive roles governments play in promoting their national firms' internationalization (Sim and Pandian, 2003). To the best of our knowledge, there is scant empirical evidence on the types of resource an EMNC can acquire from the government's assistance and how they affect a firm's performance. This chapter seeks to fill this void.

Our second goal is to examine the moderating effect of firms' absorptive capacity. Since a firm's possession of resources cannot guarantee its ability to use them effectively (Mahoney and Pandain, 1992), and resources can be of limited value to the firm in isolation (Newbert, 2007), firms can earn sustainable returns when they have superior resources, and when those resources can be transformed and utilized to maximize returns (Amit and Schoemaker, 1993; Teece, Pisano and Shuen, 1997). However, little research has empirically tested how a firm's absorptive capacity affects the resource-performance relationship.

We contribute to the literature by focusing on three important questions:

- (1) Does government connection assist a Chinese firm's acquisition of valuable resources?
- (2) How does the level of assistance on valuable resources acquisition affect a Chinese firm's performance outcome?

- (3) How does a firm's absorptive capacity affect the resource- performance relationship?

We organize the rest of the chapter into four sections. First, we review the literature and develop our hypotheses. We then describe the methodology, data, and variables. This is followed by a discussion of the empirical results. Finally, we conclude with a summary and discuss managerial implications.

5.2. Literature Review

Resource-Based View of the Firm

As early as the 1950's, Penrose (1959) argued that a firm is more than an administrative unit, in that it is a collection of productive resources. Resources refer to firm-specific value-enhancing assets that are valuable, rare, inimitable, and non-substitutable (e.g., Selznick, 1957; Penrose, 1959; Wernerfelt, 1984; Barney, 1991). Resources that are heterogeneous among firms allow them to sustain their competitive advantage (Barney, 1991).

As extant research has suggested that resources may include "soft" and "hard" capital, we further categorize resources into those that encompass social capital (Peng, Lee and Wang, 2005) and market capital (Song, Droge, Hanvanich and Calantone, 2005). Among all the resources a firm possesses, technological and marketing resources have pronounced effects on firms' operations and decisions (Kotabe, Srinivasan, and Aulakh, 2002; Song et al., 2005). We refer to these resources as a firm's market capital.

Further, to understand a firm's resource, institutional analysts in organizational theory have advocated for an understanding of the influence of social and cultural context

within which the firm is embedded (Scott, 1995). A firm's behavior can be shaped by broader cognitive, normative and regulatory forces that are maintained and enforced by powerful actors such as government officials, legislators, trade associations and the like (DiMaggio and Powell, 1983). A firm's informal embeddedness or interconnectedness with dominant institutions increases its legitimacy (Granovetter, 1985; Powell and DiMaggio, 1991; Oliver, 1997; Peng et al., 2005). A firm's legitimacy is an important resource for gaining other resources (Zimmerman and Zeitz, 2002). Peng et al. (2005) suggested that firms' dense networks of ties with dominant institutions allow them to capitalize on economies of scale based on their non-market forms of capital: social, political and reputational capital. As these non-market forms of capital are interrelated, we refer to those resources simply as a firm's social capital.

Although its national economy is undergoing massive transformation at an accelerating rate, China is characterized by a weak legal system that does little to protect intellectual property and discourages development of factor markets, most notably labor and financial markets (Peng and Heath, 1996). As a result, interpersonal trust plays an important role in facilitating economic activities. In order to cope with the absence of a formal and reliable system of laws and regulations, *Guanxi*, 'an intricate and pervasive relational network which Chinese cultivate energetically, subtly, and imaginatively' (Luo, 1997: 43), has played an important role in establishing external relations and legitimacy and facilitating economic activity in such volatile and underdeveloped business environments (Park and Luo, 2001). Chinese firms actively develop *Guanxi* with key stakeholders, such as government officials and legislators, to acquire valuable resources

in the form of policy preference, important information, financial backing, material resources, among others (Peng, 2003; Braendle et al., 2005).

Guanxi Dynamism

Guanxi—a derivative of the Confucian philosophy and one of the major dynamics in Chinese society—has been practiced for centuries and remains highly relevant to this day. *Guanxi* is an indigenous Chinese construct that means “an informal, particularistic personal connection between two individuals who are bounded by an implicit psychological contract to follow the social norm of *Guanxi* such as maintaining a long-term relationship, mutual commitment, loyalty, and obligation” (Chen and Chen, 2004: 306). Affect, reciprocity of favor, and face preserving are recognized as the three necessary components of *Guanxi* (Lovett, Simmons and Kali, 1999; Park and Luo, 2001; Lee and Dawes, 2005). We discuss their characteristics in details in the following section.

Affect. The positive role of *Guanxi* can be influenced by the degree of closeness between exchange partners, which is further determined by “*Ganqing*” or affection (Luo, 2000). Affection is rooted in one’s emotional attachment to, and care and concern for, the other party’s welfare (Rempel et al. 1985; Pennings and Woiceshyn 1987; McAllister, 1995). With affection, there is a belief that the caring sentiments can be reciprocated (McAllister, 1995), and exchange partners are not only confident in each other’s behavior, but are attentive to the emotional needs of the partner (Lewis and Weigert, 1985). Greater affection between two partners generates a higher level of trust than a rational evaluation of a firm’s ability to carry out designated obligations. However, *Guanxi* relations can exist without the presence of emotional attachment. *Guanxi* can be instrumental and utilitarian rather than emotional, as long as both parties continue to

follow the obligations associated with *Guanxi* relations (Alston, 1989; Park and Luo, 2001).

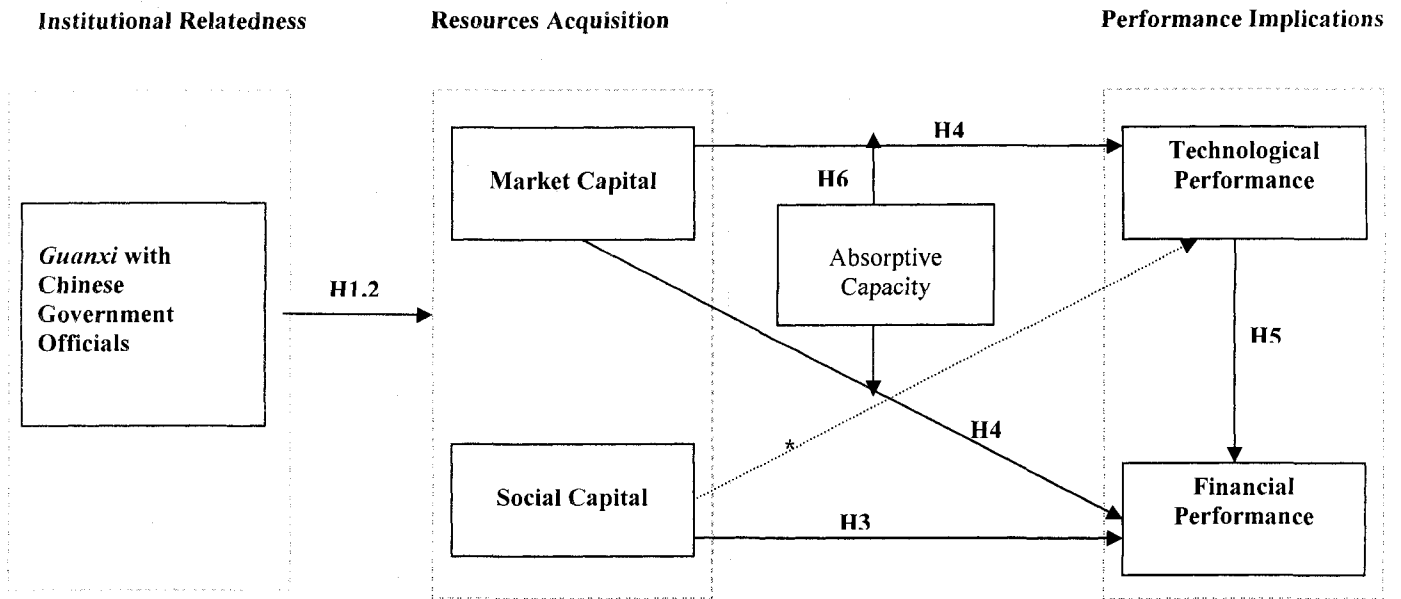
Reciprocity of favor. The notion of reciprocal obligation and indebtedness is central to the Chinese system of *Guanxi*. One special characteristic of *Guanxi* is that, unlike Western networks where reciprocity entails exchanges of roughly equivalent values, *Guanxi* links people across uneven ranks so that relationship exchanges tend to favor the weaker partner without an equal level of reciprocal obligation (Alston, 1989; Fock and Woo, 1998; Luo, 2000). Further, *Guanxi* is transferable so that a firm's *Guanxi* relationship with one government official can extend its connection to the official's entire network (Luo, 2000). In this spirit, *Guanxi* members are tied together through an invisible and unwritten code of reciprocity and equity based on the exchange of favors (Alston, 1989; Park and Luo, 2001).

Face preserving (Mianzi). Face, also called *Mianzi*, is recognition by others of an individual's social standing and position (Lockett, 1988). Face preserving is intrinsic to maintaining personal and interpersonal relationship in China (Buckley, Clegg and Tan, 2006). Generally speaking, the higher the position of the bureaucrat, the more intangible social currency and institutional legitimacy a firm can extract from his/her network. Not providing face to the bureaucrat, making him/her 'lose face', can cause a loss of other exchange privileges within the bureaucrat's entire network. As a result, the more *Guanxi* a firm develops with government officials and legislators, the more *Mianzi* a firm possesses in their network, thereby creating more opportunities for the firm to acquire intangible social currency and institutional legitimacy from the entire network (Luo, 2000).

Overall, the existing studies reported the benefits of *Guanxi* building with government officials and legislators (e.g., Chen and Chen, 2004; Davies et al., 1995; Jacobs, 1994; Lee and Dawes, 2005; Nee, 1992; Tsang, 1998; Yeung and Tung, 1996). However, these studies have fallen short of identifying the specific types of resources that can be acquired by building *Guanxi* relationships. We contribute to the international management literature both empirically and theoretically by examining the antecedents and outcomes of EMNCs' acquisition of resources. We utilize the *Guanxi* dynamism in examining how firms' institutional embeddedness in the external networks of social relations affects the degree of firms' acquisition of social and market capital which, in turn, affects performance outcomes.

Further, a firm's survival and growth depends not only on its distinctive resources, but also on how the firm utilizes them in a new environment (Barney, 1991). Resources form the basis for unique value-creating strategies that enable a firm to respond to specific markets and customers in distinctive ways (Eisenhardt and Martin, 2000). We posit that in order for EMNCs to capitalize on acquired resources and gain a competitive advantage in a dynamic and uncertain market, they must possess unique value-creating capabilities to enhance their performance. We suggest that the optimal deployment of a firm's resources is contingent on the presence of other complementary assets, such as its absorptive capacity. We present the conceptual model in Figure 5.1.

Figure 5.1 Institutional Relatedness, Resources Acquisition and Performance Implications



* Dash line - no relationship

5.3 Hypotheses Development

***Guanxi* and Social Capital Acquisition**

In emerging economies, a firm's possession of social capital is critical due to the high level of opportunism in business transactions (Peng, 2005). China is a typical example of this phenomenon. In the Chinese institutional structure, all firms are controlled by hierarchically structured governments, including authorities at the central, provincial, municipal, county and township levels. The Chinese government system provides government officials the power and legitimacy to directly control various types of equity ownership, from state to private ownership (Luo and Tan, 1998). The

administrative control system inevitably gives the government the power and authority to grant firms legitimacy, prestige, business opportunities, access to critical resources, and privileged rights (Tan et al., 2007).

EMNCs' dense network of ties with dominant institutional players allows them to capitalize on economies of scale, based on their possession of social capital (Peng, Lee and Wang, 2005). Social capital refers to "the aggregate of the actual or potential resources that are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (Bourdieu, 1986: 248). Social capital represents the ability of participants to secure benefits by sharing memberships in social networks or other social structures (Portes, 1998). At the organizational level, social capital provides legitimacy (D'Aveni, 1990) and access to critical resources (Nahapiet and Ghoshal, 1997).

A second aspect of social capital is political capital. Earlier scholars have described the importance of examining political networks between firms and their home governments in competitive analysis, particularly outside the U.S. (i.e., Porter, 1990). Political capital can improve firms' operational efficiency and profitability (Frynas et al, 2006), and contribute to the creation of shareholder value (Hillman and Zardkoohi, 1999; Shaffer and Hillman, 2000). Further, in China, business executives participate in politics directly as congressmen (or congresswomen) that are elected from every level of society. Although there is no legal requirement for the members of congress to be approved by the Communist Party of China, in practice, government officials influence the election of the congressmen. Once elected, business congressmen can vote for or against the bills that are favorable or detrimental to their operation. In this sense, business congressmen

can foster a favorable legislative environment for their company's best interests (Gao, 2006). In addition, a CEO's participation in politics provides a better understanding of how to access critical resources, such as preferential tax treatment and bank loans, and facilitate long-term debt obligations (Luo, 1997).

A third aspect of social capital is reputational capital. Reputation refers to "a perceptual representation of a company's past actions and future prospects that describes the firm's overall appeal of all of its key constituents when compared with other leading rivals" (Fombrun, 1996: 72). When there is insufficient information among players, a firm's reputation is an asset that can generate future income by affecting stakeholders' beliefs, attitudes and behaviors (Weigelt and Camerer, 1988; Hayton, 2005). Although the Chinese economy is gradually transitioning from a planned to a market-oriented economy, the country still lacks objective information concerning its firms' ability and credibility. When market information is unavailable, a firm's reputation forms the basis for stakeholders' determination of the relative position of an organization (Peng et al., 2005). A positive perception can increase stakeholders' confidence in the company's ability to deliver the goods and services, thus reducing information asymmetry between firms and stakeholders (i.e., consumers, employees, investors) (Peng et al., 2005).

Given that the Chinese government is actively involved in the media, positive publicity gives a firm easier access to important market resources, information, and cooperative opportunities, thus improving visibility and business opportunities vis-à-vis its rivals. Further, when recognized by the government as a 'Champion' or a 'Leading firm' in the industry, a Chinese firm gains legitimacy that provides access to the resources it needs to survive and grow (Zimmerman and Zeitz, 2002).

Since *Guanxi* is reciprocal, intangible, and transferable among parties (Standifird and Marchall, 2000), sound *Guanxi* relations with government officials can create an environment that facilitates the firm's growth and reduces uncertainty concerning its viability. Accordingly, rather than relying on legal contracts to obtain scarce resources, it appears that *Guanxi* with government officials provides social capital for the firm, such as gaining access to the official's entire network of contacts (e.g., investors, creditors, auditors) or soliciting favors, establishing reputation, obtaining legitimacy and access to scarce resources (Luo, 2000).

Hypothesis 1. The higher the level of Guanxi with government officials, the higher the extent of assistance a Chinese firm receives on social capital acquisition.

***Guanxi* and Market Capital Acquisition**

Since *Guanxi* mitigates a firm's problem of possessing inadequate resources to accommodate growth (Luo, 1997), a *Guanxi*-connected business network is considered a lubricant that increases the firm's operational efficiency and effectiveness (Luo and Chen, 1997). In addition to the non-market form of social capital a firm can acquire from its external network of relations, we argue that *Guanxi* can also enhance a firm's acquisition of market capital. Among all the resources a firm possesses, marketing and technological resources have the most pronounced effects on its operations and decisions (Kotabe, Srinivasan, and Aulakh, 2002; Song et al., 2005).

Marketing resources is an important aspect of a firm's market capital. Marketing resources refers to the assets used to differentiate goods and services from competitors and build positive brand images (Kotabe, Srinivasan, and Aulakh, 2002). *Guanxi* connections can increase firms' marketing resources by providing the opportunity to

procure government projects, obtaining government support in distribution and promotion assistance, ensuring smooth payment collection and efficient logistics, and facilitating production arrangement (Davies, et al., 1995; Luo, 1997; Warren, Dunfee, and Li, 2004).

In addition, a firm's growth and survival depends on its strategies for handling and processing market information (Turner, 1991; Ruekert 1992; Maltz and Kohli, 1996; Li and Calantone, 1998). In China, the central government deliberately controls and disseminates information that it considers of strategic importance so that relevant information for strategic decisions comes at a premium price. Accordingly, *Guanxi* building with government officials is beneficial in procuring information and gaining access to valuable resources that can expedite a firm's business activities (Tung and Worm, 2001). In light of the information asymmetry in the Chinese market, having access to market intelligence allows the firm to fine-tune its product mix. It is especially the case when much of the market information is unavailable to competing firms. In general, how fast a firm collects information and how efficiently it utilizes such information in transforming business activities is a key source of competitive advantage (Sinkula and Hampton, 1988; Glazer, 1991).

A second aspect of market capital is a firm's technological resources. Technological resources refer to product and process technology that can be used to develop new products or formulate innovative manufacturing processes (Moorman and Slotegraaf, 1999; Silverman, 1999). When compared to large-scale MNCs from developed countries, EMNCs face liabilities in two major areas: they are small in scale (Stinchcombe, 1965) (see Appendix F) and do not have the necessary experience in

conducting R&D activities. For instance, Chinese MNCs are inadequately equipped with intangible assets and capabilities that lead to decreased competitive capacity in terms of developing new products and enhancing innovative manufacturing processes. To build new competencies, Chinese MNCs have to acquire advanced technology and manufacturing know-how to compensate for their competitive disadvantages in the global economy (Deng, 2004). Since firms located in developing countries gain from international technology transfer through cooperating with technologically advanced foreign firms (Calantone, Lee, and Gross, 1990; Di Benedetto, Calantone and Zhang, 2003), it is advantageous for Chinese MNCs to cooperate with foreign MNCs, especially those from developed countries, to build new capabilities and skills through learning, and/or revitalizing existing skills under new conditions (Luo, 2002).

Due to its seller's market advantage, the Chinese government has been mandating that foreign MNCs transfer technology to Chinese firms, and has used this as a negotiating tool as foreign MNCs seek cooperative projects in China (Shenkar, 2005). To form an alliance relationship, the partnership has to comply with the country's industrial catalog requirement. When a Sino-foreign partnership needs approval to enter a restricted area or to expedite the approval process, *Guanxi* connections with the administrative body permit it to solicit special favors and preferential treatment. Chinese firms, once given the opportunity to cooperate with foreign MNCs, either as alliance partners, suppliers, Original Equipment Manufacturers (OEM), or Original Design Manufacturers (ODM), are able to understand customer requirements and receive direct support from the foreign MNCs in areas of machinery, technical assistance, and even management skills (Shenkar, 2005).

Further, financial support from the Chinese government supports Chinese firms' innovation activities. Beginning in 1997, the Chinese government has approved the *National Basic Research Program*, also called 973 Program, which finances firms' R&D projects that are in line with the national goals. Every project receives government financing, ranging from US\$3 - 4 million over a 5-year-period. It is estimated that from 2001 to 2005, the government has made a financial investment of over US\$330 million to support firms' research and development (www.973.gov.cn).

In addition to obtaining financial support from the government, firms' access to the 973 Program also promotes close collaborations with universities, research institutes, and the scientific and technological society (www.973.gov.cn). This enables firms to solve their technological problems in line with the national objectives. So far, the 973 Program has spurred key technological breakthroughs and applications and transfer of research with 1,765 patents in 2 years. The top 10 regions, receiving a daunting 87% of the total investment, are located in the economically advanced east coast of the country from which a majority of Chinese MNCs originated (www.973.gov.cn).

Moreover, at the provincial and municipal level, the governments have provided favorable financing and tax policies that promote a firm's innovation activities. Since EMNCs lag behind traditional MNCs technologically, the availability of slack resources legitimates trial-and-error experimentation and buffers organizations from downside risk (Singh, 1986; Thompson, 1969). Furthermore, the availability of financial resources support substantial inter-firm hiring and transfer of key research personnel across regions and countries, which in turn promote knowledge integration with speed and flexibility (Song et al., 2003). Consequently, the availability of financial resources enhances a

firm's flexibility in recognizing business opportunities, resolving unforeseen circumstances during the knowledge acquisition and integration process (Mishina, Pollock, and Porac, 2004), as well as quickening the rate of new product development.

In general, a firm's *Guanxi* development with government authorities can be conducive to the development of marketing resources, technology resources, personnel training, etc. that are essential to support a firm's growth and innovation activities.

Hypothesis 2. The higher the level of Guanxi with Chinese government officials, the higher the extent of assistance a Chinese firm receives on market capital acquisition.

Performance Implications.

Social Capital. As China transitions from a planned to a market economy, formal constraints that facilitate market transactions are either absent or weak (Peng and Heath, 1996). In such volatile and under-developed business environments (Peng, 2002) and since Chinese government officials have considerable power to allocate resources and approve projects, a firm's possession of social capital is advantageous in gaining access to crucial materials for its production, and taking advantage of important regulations, preferential policies and business opportunities (Luo, 2000). A firm's social capital may also affect the speed at which it realizes globalization. For instance, although the government provides incentive policies to support firms' internationalization, it is crucial for firms to understand not only the policies but also their application. Given the information asymmetry between the legislative body and firms in China (Sun, Tong and Tong, 2002), the majority of firms may not fully understand the policies or, even when understood, they may not have the knowledge or experience to take full advantage of

them. Firms' social contacts with authorities can enhance their understanding of the policy and ensure that they obtain specific guidance from the government officials in a timely manner.

Similarly, a firm's social capital is associated with operational efficiency, market power, and legitimacy that can enhance its profitability (Peng and Luo, 2000; Fisman, 2001). Social capital provides a firm an opportunity to serve in major product markets, thus separating it from rivals that do not possess such capital. A well-recognized firm will pay less for necessary resources when its exchange partner is not concerned with the firm's ability to fulfill its implicit and explicit requirements. With a reduced perception of uncertainty, there is less need to monitor the relationship (Williamson, 1975). Legitimacy also enhances a firm's ability and flexibility in acquiring and dispensing with resources (Hayton, 2005). Furthermore, a firm with a strong reputation can attract employees from rival firms. Inter-firm employee mobility influences the local transfer of knowledge (Almeida and Kogut, 1999) that enhances firms' innovation capability, thereby reducing costs, stimulating changes, and reducing poor performance (Droege and Hoobler, 2003).

Although developing *Guanxi* with government officials can provide protection and access to scarce resources, *Guanxi* relations with government officials may also have negative effects on firms' performance (Warren, Dunfee, and Li, 2004). For instance, firms that focus on *Guanxi* building may lower their ethical standards and may be perceived as corrupt by stakeholders, resulting in damaged reputations and image (Warren, et al., 2004). Similarly, those firms may be lulled into believing a false sense of security as a result of government favoritism and investing less in technological, manufacturing, and other capabilities. Furthermore, it is expensive and time-consuming

to build and maintain *Guanxi* relationships because *Guanxi* has to be developed and reinforced through continuous long-term interactions (Luo, 2000) and consequently, spending much time and many resources in establishing and maintaining *Guanxi* with government officials can be counterproductive (Fock and Woo, 1998). Although firms with high social capital have a competitive advantage by gaining approval for or access to critical resources that are inaccessible by their counterparts, these resources might not sustain their performance.

Prior studies suggest that social capital facilitates knowledge acquisition and exploitation through interorganizational relationships (e.g., Dyer and Singh, 1998; Lane and Lubatkin, 1998; Nahapiet and Ghoshal, 1998). For instance, a firm's social capital provides cooperative opportunities with domestic and foreign firms and research institutions. These strategic alliance relationships support firms' acquisition of new knowledge to enhance their new product development capabilities. As knowledge and innovation become increasingly intensive in generating productivity, growth, and competitiveness in a number of industries (e.g., Aghion and Howitt, 1998; Barro and Sala I-Martin, 1995; Battisti and Stoneman, 2003; Grossman and Helpman, 1991; Hansen and Løvas, 2004), acquired new knowledge and technology have profound effects on firms' competitiveness.

However, knowledge acquisition through a firm's acquisition of social capital cannot necessarily guarantee enhanced technological performance. It is crucial for a firm to transform and exploit the acquired knowledge (Cohen and Levinthal, 1990; Murray and Chao, 2005) to offer new products or utilize new processes, revise the rules of competition, or redefine the industry's boundaries (Utterback, 1994), thereby achieving

competitive advantage. In this sense, it requires a firm not only to acquire new knowledge, but also to internalize new knowledge and transform and reconfigure its knowledge base to achieve a superior technological performance (Teece et al., 1997). Based on previous arguments, a firm's acquisition of social capital is significantly related to its financial, but not technological performance. Specifically, the relationship between a firm's acquisition of social capital and its financial performance is curvilinear.

Hypothesis 3. There is an inverted U-shaped relationship between the level of assistance a firm receives on social capital acquisition and its financial performance.

Market Capital. Among all the resources firms possess, marketing resources are found to have an idiosyncratic effect on performance (Srivastava et al., 1999, Bharadwaj et al., 1993 and Day, 1994). If a firm is skilled in understanding market and competitive trends, it achieves a competitive advantage vis-à-vis its competitors and exhibits better financial performance (Kohli and Jaworski 1993, Day 1994). Further, firms' acquisition and synthesis of new knowledge affects their innovations (Cohen and Leventhal, 1990). Acquiring advanced technology from foreign MNCs allows firms to take advantage of internationally competitive inputs by modifying and adapting these technologies to the local market and later applying them to other foreign markets, thereby enhancing their productivity, innovation performance and competitiveness (Ahuja and Katila, 2001; Buckley et al., 2002). It is especially the case when firms in developing countries can adopt foreign-developed technology. A recent study suggests that adopted technology from foreign MNCs will accelerate the speed by which EMNCs become globally competitive in new product development (Di Benedetto, Calantone and Zhang, 2003).

Hence, a firm's acquisition of market capital, such as its diverse, sophisticated and complex market knowledge and technological resources, enhances its financial performance and spurs its innovative activities with enhanced new product performance.

Taken together, we hypothesize that:

Hypothesis 4. There is a positive relationship between the level of assistance a firm receives on market capital acquisition and its financial and technological performance.

Prior studies support a positive relationship between a firm's R&D activities and its growth and profitability (Bobillo, Sanz and Gaité, 2006; Eberhart, Maxwell and Siddique, 2004). A firm's ability to rationalize and modernize its production improves its productivity. Further, a firm's R&D activities, such as its manufacturing know-how or improved quality for an existing product and/or services, promote its market power and product differentiation, and hence are favorable for market growth (Porter, 1985). Accordingly, a firm's technological performance helps improve manufacturing and other capabilities and enhance its competitiveness in global markets, which subsequently improves financial performance.

Hypothesis 5. There is a positive relationship between a firm's technological and financial performance.

A Contingency Perspective

A firm's survival and growth depends not only on its distinctive resources, but also on how it utilizes them in a new environment (Barney, 1991). Recent studies suggest that RBV is inadequate in explaining how and why certain firms possess competitive advantage in rapid and unpredictable conditions (Eisenhardt and Martin, 2000) and how resources contribute to a firm's competitive advantage (e.g., Mosakowski and McKelvey,

1997; Priem and Butler, 2001). A firm's capabilities have been recognized as a special type of resources that is embedded and non-transferable in the organization. Studies propose that a firm's distinctive capabilities would enable it to achieve its goals and/or to exploit their economic value (Nelson and Winter, 1982; Teece, 1984; Tallman, 1992).

Resources are the necessary inputs that form the basis of unique value-creating strategies that enable a firm to respond to specific markets and customers in distinctive ways, thus leading to a competitive advantage over its rivals (Eisenhardt and Martin, 2000). In order for MNCs to capitalize on acquired resources to gain a competitive advantage in a dynamic and uncertain market, they must possess unique value-creating capabilities to enhance firm performance (Makadok, 2001). In other words, although a firm may successfully accumulate and acquire resources, it is the utilization of these resources that determines firm value.

The optimal deployment of a firm's resources depends on the presence of other complementary assets, such as its absorptive capacity. Absorptive capacity refers to a firm's ability to acquire and assimilate new external knowledge, and also its ability to transform and exploit learned knowledge and apply it to commercial ends (Cohen and Levinthal, 1990; Zahra and George, 2002). Absorptive capacity is built upon prior related knowledge and can be developed cumulatively. It is a strategically valuable capability that is path dependent, firm-specific, and socially embedded (Cohen and Levinthal, 1990).

Since a firm's performance demands a high degree of efficiency and effectiveness at all levels of an organization, resources alone cannot bestow advantages until a firm has the dynamic ability to exploit and deploy the bundles of assets efficiently and effectively

to create a competitive advantage (Oliver, 1997). Hence, we suggest that it is a firm's absorptive capacity—its ability to master, adapt and further deploy the complexities of resources—that creates value.

Hypothesis 6. The higher the firm's absorptive capacity, the stronger the impact of the market capital that a firm receives from government assistance on its financial and technological performance.

5.4 Methods

Data collection process has been described in Chapter 3. In-depth field interviews, lasting between 60 to 120 minutes, were conducted with several top executives (e.g., president, vice president, directors) and several municipal, state, and central-government officials and legislators in Shandong province and Beijing, the capital of China, respectively. On-site interviews complemented our literature review and helped us clarify measures adopted from strategic management and international business studies. During in-depth interviews, Chinese firms indicated that government support, regardless of whether it is in the form of social or market capital, has played a critical role in firms' resources acquisition, which as a result, expedite the speed of their internationalization. As for the government officials, they emphasized the diminishing roles of the government officials' direct participation in firms' business activities and their shifting mechanism from direct administration to an indirect role in terms of facilitating and supporting firms' business activities.

In order to control for informant bias, we collected dual responses from 40 firms. A t-test analysis indicated no significant differences for all the variables between the 30% of questionnaires completed by two informants and the 70% of questionnaires completed by a single informant. Further, we controlled for common method variance through including open-ended questions. Following Podsakoff and Organ's (1986) study, we also

conducted a factor analysis of the dependent and independent variables and did not find the problem of common method variance.

Measurement

We present the measurement items and scales that were used to operationalize all the theoretical constructs in *Appendix B*. We developed Likert-type measurement scales for the constructs in our conceptual framework. We adopted most of the constructs from prior studies. However, it was difficult to apply existing scales in their entirety. We modified some of the measurement items to reflect the specific context of our study. The development of the new items was informed by the field studies, which included semi-structured interviews with executives who were responsible for their firm's strategic planning and foreign expansion and some senior government officials and legislators at various levels of the administration. All of the Cronbach's alpha values are above the suggested value of 0.70 (Nunnally, 1978). We measured each indicator on a 5-point scale (1=strongly disagree...5=strongly agree), unless stated otherwise.

In addition, our field interviews with government officials and legislators at municipal, provincial and central-government, respectively, help us refine key constructs and identify the appropriate use of words in the Chinese cultural setting. For instance, our field interviews with business executives and government officials reveal the following:

It is extremely difficult for firms to achieve internationalization without the government's support, including policy preference, employment policy, market information, financial backing and among others (commented by one senior executive at Hisense Group- a leading electronics manufacturer in China).

Chery Automobile, established in 1997, has become the largest independent Chinese automaker and one of the fastest growing automakers in the world. Chery is invested by local governments, hence the company does not subject to the pressure of return on investment in the short-term period. In addition, the Anhui Provincial government has coordinated financial institutions to provide a large amount of credit secured loans to Chery. With the financial support, Chery has established Automobile Research Institute with an initial investment of \$3.6

million, and plans to invest up to \$2 billion (commented by one senior government official in Beijing).

With the support of the Chinese Government, Pakistan Haier - Nuba economic zone was established in Pakistan in 2006. It is the first Chinese foreign trade and economic zone established in foreign countries. Chinese president Mr. Hu Jintao attended its grand opening ceremony. Named the economic zone after the company's name, Haier Group's brand name will be greatly promoted in Pakistan and the neighboring countries (commented by one senior government official in Shandong Qingdao city).

Dependent Variables

Firm performance (FINPERF and TECHPERF). We used multidimensional constructs to measure firm performance, which included financial and technological performance. We measured financial performance (FINPERF) in terms of a firm's return on sales, return on investment and profit growth (Cronbach's $\alpha=0.84$). We measured technological performance (TECHPERF) in terms of the levels and rates of growth of technological activities (Leiblein, Reuer, Dalsace, 2002). We asked respondents to evaluate their new product performance on three measures: new product sales, profitability of new products, and time-to-market for new products (Easingwood, Moxey and Capleton, 2006) (Cronbach's $\alpha=.0.71$). Following Clark and Montgomery's (1999) study, we measured performance by a competitor-centered performance measurement approach by asking respondents to assess their corporation's performance relative to that of its three largest direct competitors in its major product line.

Independent Variables

Social capital (SCAPITAL). Following prior studies (e.g., Fombrun and Shanley, 1990; Hayton, 2005; Peng, et al., 2005), we used social, political and reputational capital

to measure a firm's social capital. We measured each indicator on a 5-point scale. This measure consists of 5 items (Cronbach's $\alpha = 0.81$).

Market capital (MCAPITAL). Following prior studies (e.g., Song et al., 2005), we used marketing and technological resources to measure a firm's market capital. Since resources can be a source of competitive advantage when demonstrating VRIN (valuable, rare, imitable, non-substitutable) traits, we asked respondents to evaluate the degree of assistance that their firms receive from the Chinese government in acquiring marketing and technological resources that are valuable, rare, imitable, non-substitutable, and generate sustained abnormal returns, correspondingly. We measured each indicator on a 5-point scale (1=very little assistance and 5=a great deal of assistance). This measure consists of 3 items (Cronbach's $\alpha = 0.72$).

Guanxi (GUANXI). Prior literature suggests that Guanxi can be understood as affect, reciprocal favor and Mianzi (Lovett et al., 1999; Park and Luo, 2001). We asked respondents to evaluate their Guanxi relations with government officials and other regulatory authorities including taxation bureau, banks, and commercial administration bureau (Park and Luo, 2001). We measured each indicator on a 5-point scale. This measure consists of 5 items (Cronbach's $\alpha = 0.88$).

Moderator Variable

Absorptive capacity (AC). Traditional measures of absorptive capacity, such as R&D expenditures or the number of R&D employees in the department, are considered inappropriate as they neglect the intensity of efforts from the department's employees (Zahra and George, 2002). However, empirical studies have not developed and validated a multidimensional construct of absorptive capacity. We built upon prior studies (Cohen

and Levinthal, 1990; Zahra and George, 2002) and operationalized absorptive capacity with four indicators: acquisition, assimilation, transformation and exploitation. We asked respondents to evaluate their capability in comparison to the three largest competitors in their industry in China. This measure consists of 14 items (Cronbach's $\alpha = 0.76$).

Control Variables

Since the degree and pattern of *Guanxi* applications can be influenced by the industry characteristics, market structures, and firm's characteristics (Luo, 1991, 1998), we controlled for industry-, market- and firm-specific factors in our study as follows: market risks, industry competition, firm size, firm age, firm equity, and the degree of the firm's foreign expansion.

Market risks (RISK). Since market risks has been found to affect firm performance (Atuahene-Gima and Murray, 2004), we controlled for market risks which included rapidly changing consumer tastes and an uncertain competitive and technological environment. We asked respondents to evaluate the amount and unpredictability of changes in consumer needs, production or service technology, and modes of competition in the firm's key industry (Cronbach's $\alpha = 0.77$).

Industry competition (COMP). Since industry competition can influence business conduct (Peng and Luo, 2000), we asked respondents to describe the degree of competition in the industry, compared to 3 years ago, to validate industry competition. We measured industry competition on a 5-point scale (1=very low ...5=very high).

Firm size (SIZE). Firm size is an important attribute that shapes firms' behaviors and decisions. It has been viewed as an indicator of scale economies and market power because large firms are able to maintain favorable access to capital and resources and

with much bargaining power (Barney, 1991; Luo, 1998). We measured firm size by the number of employees and sales volume (Rao and Naidu, 1992).

Firm age (AGE). Since length of operation can influence firm performance, we controlled for a firm's length of operation, which we defined as the number of years the firm had operated in its major product market.

Firm equity (EQU). Economic transition in China has created a diversity of organizational forms, spanning from state- to non-state-owned businesses. We argue that state-owned firms have an advantage over privately- or collectively-owned firms in terms of industry experience, market power, and production and innovation facilities. Furthermore, state-owned firms have privileged access to state-instituted distribution channels and enjoy preferential treatment by the government when selecting market segments (Luo, 1998). Hence, we controlled for firm equity in our study. The scale ranges from 1 to 6 as follows: 1=state-owned, 2=collectively-owned, 3=private, 4=public, 5=joint venture with an equal or majority stake, 6=joint venture with a minority stake.

Internationalization (INTL). Researchers have examined the relationship between a firm's internationalization and its performance, with conflicting findings. For example, linear, U-shaped, inverted U-shaped, and S-curve relationship have been reported on the link between internationalization and performance (Grant, 1987; Morck and Yeung, 1991; Hitt, Hoskisson and Ireland, 1994; Sullivan, 1994; Ramaswamy, 1995; Kotabe, Srinivasan, and Aulakh, 2002; Lu and Beamish, 2004). Therefore, we controlled for the degree of a firm's internationalization. We used foreign to total sales to capture a firm's internationalization (Geringer, Beamish and DaCosta, 1989; Grant, Jammine and Thomas, 1988).

5.5 Results

The Effects of Guanxi on the Level of Assistance on Resources Acquisition

We present the mean, standard deviation and correlation of the variables included in the study in Table 5.1. The mean firm age in our sample is approximately 22 years. The average degree of firms' internationalization is approximately 35 percent. The variance inflation factors (VIFs) showed no indication of multicollinearity among the variables. The highest VIF statistic was 3.12, well below the rule of thumb level of 10 (Cryer and Miller, 1994).

Table 5.1 Descriptive statistics and Pearson correlation matrix

Variables	Mean	S.D.	1	2	3	4
GUANXI (1)	2.93	0.26	1			
SOCIAL CAPITAL(2)	3.37	0.39	.71**	1		
MARKET CAPITAL(3)	1.71	0.31	.55**	-.47**	1	
ABSORPTIVE CAPACITY (4)	3.46	0.44	.44**	.49**	-.49**	1
FINANCIAL PERFORMANCE (5)	2.40	0.53	-.44**	.56**	.55**	-.25**
TECHNOLOGICAL PERFORMANCE (6)	2.86	0.44	-.37**	.29*	.29*	.53**
MARKET RISK (7)	4.38	0.57	.31**	-.41**	-.41**	.77*
COMPETITION (8)	3.61	1.06	-.35**	.53*	.52*	-.37*
SIZE (9)	2.83	0.62	-.19	.48*	.47*	-.33*
AGE (10)	22.0	14.70	-.39**	.35*	.34*	-.18
EQUITY (11)	4.00	1.01	-.26*	-.18	-.18	-.02
INTERNATIONALI-ZATION (12)	35.43	17.15	-.16	.08	.08	-.15

	5	6	7	8	9	10	11	12
FINANCIAL PERFORMANCE (5)	1							
TECHNOLOGICAL PERFORMANCE (6)	-.04	1						
MARKET RISKS (7)	-.34**	.23*	1					
COMPETITION (8)	.36**	-.14	-.22*	1				
SIZE (9)	.45**	-.04	-.43**	.43**	1			
AGE (10)	.37**	-.02	-.10	.40**	.39**	1		

EQUITY (11)	.05	-.04	-.02	0.15	.03	-.10	1	
INTERNATIONALI- ZATION (12)	.23*	-.02	-.33**	0.11	.10	-.12	.10	1

Note: N=121. *p<.05 (two-sided) **p<.01 (two-sided)

We tested the hypotheses by employing hierarchical multiple regression analysis. To test the significance in predicting the level of assistance on resources acquisition and its impact on performance implications, we used a two-step hierarchical regression analysis. We entered all the control variables in the first step (Model 1). In the second step, we added the independent variables to the base model (Model 2). This allowed us to examine whether adding the independent variables increased the statistical power of the model.

We report the effect of *Guanxi* with government officials on the level of assistance on resource acquisition by Chinese firms in Table 5.2. Model 1 is the base model, which investigates the effects of all control variables on the level of assistance on social capital acquisition. The overall model is highly statistically significant with an adjusted R^2 of 0.16 ($F=4.33$; $p < 0.01$). Model 2 indicates that *Guanxi* relations with government officials have significant positive effects in assisting firms' social capital acquisition. The model is significant with an adjusted R^2 of 0.58 ($F=22.23$; $p < 0.01$). Adding *Guanxi* variable significantly improved the explanatory power of the model with an increased R^2 of 0.42. Hypothesis 1, which posits that *Guanxi* with government officials is positively related to the level of assistance on social capital acquisition, is supported.

Model 3 is the base model, which investigates the effects of all control variables on the level of assistance on firms' market capital acquisition. The overall model is

highly statistically significant with an adjusted R^2 of 0.30 ($F = 8.43$; $p < 0.01$). Model 4 indicates that *Guanxi* relations with government officials have significant positive effects in assisting market capital acquisition. The model is significant with an adjusted R^2 of 0.37 ($F = 9.80$; $p < 0.01$). Adding *Guanxi* variable improved the explanatory power of the model with an increased R^2 of 0.07. Our result shows that *Guanxi* with government officials is positively related to the level of assistance on market capital acquisition; therefore, Hypothesis 2 is supported.

Table 5.2 Regression results of Guanxi and resources acquisition

	Model 1 (Base model)	Model 2 (social capital)	Model 3 (Base model)	Model 4 (market capital)
<i>Controls</i>				
MARKET RISKS	0.16**	0.17***	-0.27**	-0.27***
COMPETITION	0.10	0.08	0.30**	0.29**
SIZE	-0.29**	-0.26***	0.26	0.27
AGE	-0.01**	-0.01	0.01	0.01***
EQUITY	-0.01	-0.06**	-0.05	-0.08*
INTERNATIONALI- ZATION	0.01	0.01**	0.01	0.01
<i>Predictor</i>				
<i>GUANXI</i>		0.86***		0.49***
Model F	4.33	22.23	8.43	9.80
P<	0.01	0.01	0.01	0.01
Adjust R^2	0.16	0.58	0.30	0.37
ΔR^2		0.42		0.07

Note: N=121. *p<.10 **p<.05 ***p<.01

The Effects of the Level of Assistance in Acquiring Resources on Firm Performance

In Table 5.3, we present the results of the hierarchical regression analysis predicting the effects of the level of assistance in acquiring resources on firms' financial performance. Model 1 is the base model that examines the effects of control variables on firms' performance. Model 1 is significant with an adjusted R^2 of 0.25 ($F=4.93$; $p < 0.01$). Model 2 ($F=21.10$; $p < 0.01$) and Model 3 ($F=23.79$; $p < 0.01$) examine the effects of social and market capital on firms' financial performance. The results show that there is a positive relationship between the level of assistance a firm receives on market capital and its financial performance; whereas an inverted U-shaped relationship between the level of assistance a firm receives on social capital and its financial performance, with adjusted R^2 of 0.63 and 0.66, respectively. Hypothesis 3, which hypothesized the curvilinear effects of the level of assistance on social capital acquisition on financial performance, is supported. Hypothesis 4, which hypothesized the positive effects of the level of assistance in acquiring market capital on financial performance, is also supported.

Model 4 investigates the effect of a firm's absorptive capacity on its financial performance, which will be elaborated in the next section. Model 5 investigates the effects of a firm's technological performance on its financial performance. The result indicates no significant relationship between a firm's technological and financial performance (Adjusted $R^2 = 0.63$; $F=20.93$; $p < 0.01$). Hence, Hypothesis 5, which

hypothesized the positive impact of a firm's technological performance on its financial performance, is not supported.

Table 5.3 Regression results of resources, capability and financial performance

	Model 1 (Base model)	Model 2 (Base +social +market capital)	Model 3 (Base +social + social² + market)	Model 4 (Base +social + market+ market*AC)	Model 5 (Base +social + market +tech perf)
<i>Controls</i>					
MARKET RISKS	- 0.33***	-0.18**	-0.19**	-0.20**	-0.18**
COMPETITION	0.01	-0.06	-0.09	-0.06	-0.06
SIZE	0.70***	0.56***	0.55***	0.56***	0.56***
AGE	0.01***	0.01**	0.01**	-0.01**	0.01**
EQUITY	-0.03	-0.03	-0.02	-0.02	-0.02
INTERNATIONALI- ZATION	-0.01	-0.01	-0.01	-0.01	-0.01
<i>Predictors</i>					
SOCIAL CAPITAL		0.30***	0.72**	0.29***	0.30***
SOCIAL CAPITAL ²			-0.07**		
MARKET CAPITAL		0.36***	0.36***	0.31**	0.36***
MARKET CAPITAL× ABSORPTIVE CAPACITY				0.16***	
TECHNOLOGICAL PERFORMANCE					-0.01
Model F	4.93	21.10	23.79	22.94	20.93
P<	0.01	0.01	0.01	0.01	0.01
Adjust R²	0.25	0.63	0.66	0.66	0.63
Δ R²		0.38	0.41	0.41	0.38

Note: N=121 *p<.10 **p<.05 ***p<.01

In Table 5.4, we present the results of the hierarchical regression analysis predicting the level of assistance firms receive in acquiring social and market capital on their technological performance. Model 1 is the base model that examines the effects of the control variables on firms' technological performance. Model 1 is significant with an adjusted R^2 of 0.18 ($F=4.24$; $p < 0.01$). Model 2 ($F=4.08$; $p < 0.01$) indicates that there are no significant relationships between the level of assistance a firm receives in acquiring social and market capital on its technological performance, with an adjusted R^2 of 0.19. H4, which hypothesized the positive effect of the level of assistance a firm receives in acquiring market capital on its technological performance, however, is not supported.

Moderator Effects of Firms' Absorptive Capacity

We examined Hypothesis 6 by using moderated regression analyses in Tables 5.3 and 5.4. As shown in the derivative analyses, the level of assistance a firm receives on market capital acquisition has a positive effect on its technological performance when the level of its absorptive capacity is above the average than it is below the average. However, absorptive capacity does not intertwine with market capital to affect a firm's financial performance. Hypothesis 6, predicting that a firm's absorptive capacity moderates the relationship between its resources acquisition and performance, is partially supported. Both models are statistically significant with an adjusted R^2 of 0.66 and 0.24, respectively. Therefore, we can conclude that a firm's absorptive capacity moderates the relationship between the level of assistance a firm receives in acquiring market capital and technological performance.

Table 5.4 Regression results of resources, capability and technological performance

	Model 1 (Base model)	Model 2 (Base +social +market capital)	Model 3 (Base + social + market +market*AC)
<i>Controls</i>			
MARKET RISKS	0.03	0.05	-0.14
COMPETITION	0.33***	0.34***	0.36***
SIZE	0.14	0.11	0.05
AGE	-0.01	0.01	0.01
EQUITY	0.02	-0.01	0.01
INTERNATIONALI- ZATION	0.01	0.01***	0.01**
<i>Predictors</i>			
SOCIAL CAPITAL		-0.11	-0.10
MARKET CAPITAL		-0.01	-0.63**
MARKET CAPITAL × ABSORPTIVE CAPACITY			0.16***
Model F	4.24	4.08	4.66
P<	0.01	0.01	0.01
Adjust R²	0.18	0.19	0.24
Δ R²		0.01	0.06

Note: N=121 *p<.10 **p<.05 ***p<.01

Note: To examine how the level of assistance on market capital acquisition and absorptive capacity affect firms' financial and technological performance, partial derivatives of the regression equations are analyzed.

$$\partial(\text{FINPERF}) / \partial(\text{MCAPITAL}) = 0.31 + 0.16 \times (\text{AC}) > 0 \text{ since } 1 \leq \text{AC} \leq 5$$

$$\partial(\text{TECHPERF}) / \partial(\text{MCAPITAL}) = -0.63 + 0.16 \times (\text{AC}) > 0 \text{ if } \text{AC} > 3.93 > 3.46 (\text{Mean})$$

The first derivative shows that no matter whether a firm demonstrates absorptive capacity or not, market capital has a positive effect on its financial performance. The second derivative indicates that the impact of the assistance on market capital acquisition on firms' technological performance is boosted proportionately more if the level of firms' absorptive capacity is above the average than it is below the average.

Control Variables

The control variables in this study are as follows: market risks, industry competition, firm size, firm age, firm equity, and degree of the firm's internationalization. Three control variables were significantly related to the level of assistance a firm receives on social capital acquisition ($F=4.33$; adjusted $R^2=0.16$) and on market capital acquisition ($F=8.43$; adjusted $R^2=0.30$). Specifically, a firm's size and age is negatively related to the level of assistance it receives on resources acquisition from *Guanxi* relations with the government and legislators, suggesting smaller and younger firms are more likely to be maintaining favorable relations with government to mitigate their competitive disadvantages in an emerging market, where small firms are more likely than large ones to be adversely affected by obstacles (Beck, et al., 2005). Furthermore, we found that market risks are positively related to the level of assistance a firm receives on resources acquisition from the *Guanxi* relations with the government and legislators. Given the amount and unpredictability of changes in consumer needs, production or service technology, and fierce competition from domestic and foreign competitors, firms may opt for building *Guanxi* with government officials and legislators to gain access to resources and seek protection to mitigate their organizational disadvantages.

As for the impact of control variables on firms' financial performance, we found that firm size and the length of operation have a significant positive effect on their

financial performance ($F=4.93$; adjusted $R^2=0.25$). It confirms that, compared with small firms, large firms have advantages to acquire valuable resources under the unpredictable financial and legal environments (Luo, 2000). Furthermore, large firms have bargaining power with the government hierarchy, whereas small firms are subject to frequent government intervention and hindrance (Luo, 2000). Since the length of operations can influence firm performance, it is not surprising that we found a positive relationship between firm age and financial performance. Finally, we found a negative relationship between market risks and a firm's financial performance. Our finding indicates that Chinese firms' financial performance was negatively affected by the increased density of globalization and intensified competition. One possible explanation is that the firms, especially private firms, may underreport their financial performance to minimize taxes in light of the intensified competition and globalization. Only one variable, industry competition, was found to be significantly related to a firm's technological performance. Since China launched its economic reforms and encouraged foreign capital participation in its economy in 1979, China has become the second largest FDI recipient in the world and the largest host country among developing countries. As the country is gradually liberalizing its economic policies and the government provides accommodating regulatory policies and conditions to attract foreign investment, it has opened up its domestic markets to foreign MNCs, resulting in a higher competition in China. In light of the intensified competition from domestic and foreign firms, Chinese firms are propelled to improve their technological performance to sustain their competitive advantages.

5.6 Discussion and Conclusions

The main purpose of this chapter is to investigate whether the institutional relatedness of EMNCs helps them acquire social and market capital that influence their financial and technological performance. Our findings indicate that in emerging economies, such as China, as the formal and reliable system of laws and regulations is still in the development process, social relations still play a critical role for firms to gain important resources. *Guanxi*, for instance, still plays a prominent role for firms to mobilize political support (Luo, 2000) and material exchange (Lee and Dawes, 2005), reduce transaction cost (Davies, Leung, Luk and Wong, 1995; Nee, 1992), achieve economic efficiency, and mitigate organizational disadvantages (Luo, 2000). From the Chinese government's perspective, in order to implement its "*Go global*" strategy as part of its long-term development plan, it is willing to support Chinese firms to improve their competitive positions so as to secure an international business presence through internationalization.

However, *Guanxi* can be a double-edged sword (see Appendix G). Since building *Guanxi* not only requires a greater amount of set-up costs but also maintenance costs, it is costly and time consuming to maintain such informal relations. We found that although *Guanxi* building with government officials and legislators enhances the level of assistance firms receive on resources acquisition, both in the form of social and market-capital, overly relying on *Guanxi* hurts firms' performance. Furthermore, we found that resources obtained through *Guanxi* relations cannot improve firms' technological performance. In other words, *Guanxi* building with government officials is a necessary, but not a sufficient condition for business success in China (e.g., Tsang, 1999); it matters

only when the firms are competitive (Li and Atuahene-Gima, 2001). It also suggests that government is helpful for firms to catch up when the country is far from the technological frontier; however, as the country's economy approaches its technological frontier, government's role must shift from a centralized role to a market-oriented role otherwise it could be harmful to its firm (Mahmood and Rufin, 2005).

Our findings also support the notion that resources are not productive in and of themselves; it is the deployment of resources (i.e., a firm's ability to transform and integrate various activities) that safeguards the acquired resources and creates firm value (Ethiraj, Kale, Krishnan and Singh, 2005). Firms' capabilities are essential in appropriately adapting, integrating, and reconfiguring internal and external resources so as to gain a significant competitive advantage (Teece, et al., 1997). Therefore, our findings confirm that firms' capabilities can be an important source of competitive advantages that arise from resources transformation and utilization (Majumdar, 1998). It is essential for firms to pay more attention to building market-related competitive advantages than relying on the non-market mechanism to build their competitive competencies (Li and Zhang, 2007).

Surprisingly, we found that a firm's technological performance does not matter to its financial performance. One possible explanation is that due to the absence of legal protection, firms that develop new knowledge encounter the difficulties of maintaining their monopolistic power, so they achieve low returns of R&D investment and 'underutilization' of innovative capabilities (Zhao, 2006). In such volatile and underdeveloped business environments, firms may need internal organizations to substitute for inadequate external institutions (Zhao, 2006). It is essential for firms to

protect knowledge from spillover through developing complementary capabilities and assets such as utilizing marketing, distribution channels, and other services that will support innovation commercialization (Levin et al., 1987; Teece, 1986).

It is noteworthy that China is a dynamic country whose economy is undergoing massive transformation at an accelerating rate. Since China's accession into WTO in 2001, the concept of government supervision of the economy has shifted from one of direct state control to one of indirect guidance of a more dynamic economy (Tan et al., 2007). Accordingly, the primary role of the government is shifting from direct participation in business activities to facilitating effective business transactions (Tan et al., 2007). Over time, with the development of China's legal system, there may be a gradual shift of firms' dependence on *Guanxi* relations to system trust when firms feel assured to relying on appropriate structures in the business transactions. Instead of relying on *Guanxi* building to overcome their strategic and institutional weaknesses and to gain access to critical resources, it becomes essential for firms to gain a competitive advantage vis-à-vis their competitors through developing dynamic capabilities to improve their performance (Song, et al., 2005).

Moreover, *Guanxi* is not unique to China and has been found to be a universal phenomenon (Davies et al., 1995; Park and Luo, 2001). It pervades the business cultures of Japan, Korea, India, Russia and other managed economies where intimacy with those in authority, be they political, military or bureaucratic is important (Luo, 2000). *Kone* or *Kankei* in Japan, *Kwankye* in Korea, *Blat* in Russia are all practices based on connections. For instance, in Japan, success depends almost on who one knows. *Kone* or *Kankei* (connection and relation) are crucial to life in Japan because Japanese life is an

unremitting trade in favors. Kone networks may derive from one-time favor, school ties or shared experiences, or may be obtained from mutual beneficial deals. In general, *Guanxi*, Kone, Kankei, Blat and other personal network relationships are products of specific cultural heritages and as such have their own particular characteristics and business implications.

In sum, we addressed three important research questions in this chapter: (1) *Does government connection assist EMNCs' acquisition of valuable resources?* (2) *How does the level of assistance on valuable resources acquisition affect EMNCs' performance outcomes?* and (3) *How does a firm's absorptive capacity affect the resource-performance relationship?* The answer to the first question found in this study is “yes.” That is to say, *Guanxi* building with government officials and legislators assists firms' acquisition of critical resources. However, our findings suggest “it depends” to the second research question. In other words, government assistance can only influence firm performance to an optimal point so that excessive reliance on *Guanxi* actually hurts firm performance. As for the third research question, our findings indicate that the acquisition of valuable resources cannot sustain a firm's competitive advantage. Our study supports that direct government support for firms' R&D activities, in forms of marketing and technological resources, fails to enhance firms' innovation activities when in absence of the firms' absorptive capacity.

To the best of our knowledge, our study is the first to extensively investigate the influence of institutional relatedness on EMNCs' performance. In light of the emergent research on how EMNCs leapfrog to internationalization, we provide insights to uncover how government support assists EMNCs' fast growth in global markets. We found that,

to a certain extent, the governments of emerging economies, such as in China, play important roles in promoting the financial performance of their national firms, which may, in turn, influences firms' internationalization efforts (Sim and Pandian, 2003; Erramilli and Srivastava, 1999). However, a thorough investigation of the *Guanxi* mechanism on firms' performance reveals that institutional relatedness cannot sustain the EMNCs' competitive advantages, as evidenced by the non-significant effect of the assistance they receive in acquiring resources that are VRIN through *Guanxi* relations on their technological performance.

Our study provides important implications for practitioners. For EMNC managers, it is essential to pay more attention to a firm's capabilities to distinguish itself from its competitors with sustained technological performance. The impact of acquired critical resources on performance increases with the level of absorptive capacity. Our results clearly indicate that a firm's access to critical resources may not sustain its competitive advantages; therefore, it is critical for firms to develop dynamic capabilities in enhancing its performance.

There are several limitations in this study. A longitudinal study would provide more insight into probable causation among the relationships. Furthermore, a longitudinal study can capture the dynamic change of the country's institutional environment, such as the structural change of pre- and post-WTO accession on *Guanxi* mechanism and firms' performance outcomes. In addition, we obtained data from multinational companies in China; care must be taken before generalizing these findings to a different country. Accordingly, this study calls for further empirical research to extend our understanding of how firms' institutional embeddedness supports their resources development and what drives the fast internationalization of firms from emerging economies.

CHAPTER 6

CONCLUSIONS

The present study examines important factors that affect the internationalization of EMNCs. It enhances our understanding of the fast growth of emergent multinational companies and empirically tested multinational companies from China from a perspective that current research has not focused upon. For instance, how does an EMNC's knowledge strategy affect its innovation performance? Do internal competency, external networking competencies, and the co-alignment of strategic options with the business environment make a difference to a firm's performance? How do trust relations with foreign MNCs and Overseas Chinese MNCs affect the level of assistance on resources acquisition? What roles do government and regulatory agencies play in supporting an EMNC's resource acquisition and its performance outcomes? How does a firm's absorptive capacity affect the resource- performance relationship?

First, empirical findings of this study show that knowledge strategies affect innovation performance and more importantly, the co-alignment of strategic options with uncertain environment benefits firm innovation performance. Specifically, the impact on firms' incremental innovation performance of knowledge exploitation strategy is stronger when there is a high degree of environment unpredictability, largely due to the 'option of waiting' perspective. In addition, the impact on firms' radical innovation performance of knowledge exploration strategy is stronger when there is a high degree of foreign competition and globalization, which can be explained by the 'option of growth' perspective. Furthermore, it supports earlier research that a firm's absorptive capacity plays an important role to digest and exploit the foreign advanced technology; however,

an EMNC has been found to mitigate its competitive disadvantages through political ties when it suffers weak absorptive capacity.

Second, empirical findings of this study support the notion that affect- and cognition-based trust are closely related to the level of assistance firms receive in acquiring technological resources, no matter with foreign MNCs and with Overseas Chinese partners. High cognition-based trust with Overseas Chinese reinforces the positive relationship between affect-based trust and the level of assistance a firm receives on resources acquisition. High affect-based trust with foreign MNCs affects the level of assistance Chinese firms receive on technological resources acquisition. In addition, the effect of cognition-based trust with foreign MNCs on Chinese firms' access to technological resources is more prominent for non-state-owned-enterprises than for state-owned-enterprises. State-owned-enterprises could acquire technological resources from foreign partners through nurturing affect-based trust when they are relatively less competent to undertake business activities. Non-state-owned-enterprises, however, when possess the necessary competency to perform business activities, benefit from developing cognition- based trust with foreign MNCs on technological resources acquisition.

Furthermore, although the RBV scholars have developed the VRIN (valuable, rare, inimitable, and non-substitutable) attributes of resources (Barney, 1991; Eisenhardt and Martin 2000), few empirical studies have validated the multidimensional attribute of the construct. This study empirically tested whether resources that are valuable, rare, inimitable, non-substitutable and generate abnormal returns can bestow firm competitive advantage. It suggests that in a dynamic market environment, resources, such as product

and process technologies that are VRIN, cannot be a source of sustainable competitive advantage.

In addition, current empirical studies have not empirically validated the multidimensional construct of absorptive capacity that composed of knowledge acquisition, assimilation, transformation and exploitation (Zahra and George, 2002). This study validates the multidimensional construct of absorptive capacity and confirms that the more a firm demonstrates its absorptive capacity, the more it exhibits dynamic capabilities to sustain its competitive advantage. It is a firm's absorptive capacity that enhances the positive effect of the level of assistance it receives in acquiring resources that are VRIN on its technological performance.

Third, empirical results show that a firm's institutional relatedness with government and regulatory agencies confers resources, no matter 'soft' resources (i.e., social, reputational, and political capital) and 'hard' resources (i.e., marketing and technological resources). Our results also confirm that a firm's institutional relatedness with government and regulatory agencies entails benefits as well as costs, as demonstrated by the curvilinear relationship between the government's assistance on social capital acquisition and the firm's financial performance. In addition, we found that resources (valuable, rare, imitable, non-substitutable and generate abnormal returns) obtained through government assistance cannot improve a firm's technological performance. In other words, institutional relatedness with government officials is not a sufficient condition for firms to sustain competitive advantage. Our results highlight the criticality of firms to enhance their internal capabilities to maintain their competitive advantage.

Lately, EMNCs have invested on a global basis, as witnessed by their concurrent investment in both industrial and developing countries (Deng, 2007). For instance, according to the Ministry of Commerce of the People's Republic of China (MOFTEC, 2007), it was estimated that by the end of 2005, 10,000 Chinese firms have involved in foreign direct investment, valued at \$50 billion. Among them, over 60% of their FDI outflows went to Hong Kong, the United States, Canada and Australia (UNCTAD, 2005). It is reported that more than 70% of Chinese overseas subsidiaries have been established in developed countries, when excluding Hong Kong and Macau (Deng, 2007). Consequently, the empirical findings of the present study have several managerial implications for EMNCs.

First of all, it is important for managers to understand when it is necessary for the firm to obtain government's favorable support. Our empirical findings suggest that firms' institutional relatedness generates benefits as well as costs. On the one hand, the formal and reliable system of laws and regulations is still in the development process so that social relations still play a critical role for firms to gain important resources and to mitigate organizational disadvantages. On the other hand, political ties with government cannot guarantee better performance and can only function as a necessary, but not a sufficient condition for business success. What really matters is whether the firm can supplement acquired resources with dynamic internal capabilities to sustain competitive advantage.

Second, although the experiences of Original Equipment Manufacturers (OEM), Original Design Manufacturers (ODM), and Original Brand Manufacturers (OBM) help firms precede innovations, in order to acquire critical resources, such as product and

process technology, firms need to uphold a balance between cognition- and affect-based trust relationships with their foreign partners. More importantly, technological resources acquisition may not enhance firms' technological performance. It is critical for firms not only to receive assistance in acquiring critical resources from their foreign partners through trust development, but also to extract appropriate rents through the development of internal capabilities to enhance their performance. Therefore, EMNCs should focus on in-house R&D activities to develop their absorptive capacity and innovation capability and supplement it with critical resources acquired from external alliances. Firms' internal capabilities and openness towards external networks for knowledge sharing are essential for enhancing performance.

Third, as institution builders, the top management teams have significant influence on the direction and performance of a firm because they set the direction of the firm and their commitment affects the culture and strategic activities (Hambrick and Mason, 1984). As such, management attitudes toward change can be instrumental in facilitating dynamic capability development, which will have an impact on innovation performance and the competitiveness of the firm.

In general, the most interesting perspective for future work is the analysis of evolution of multinational companies from emerging economies and the dynamic development of firm-level capabilities. A longitudinal study would provide more insight into the probable causation among all the relationships and capture the evolution of firms' internationalization. In addition, it is essential to utilize qualitative research methods to refine our broader understanding of firm resources and capabilities and lessen potential problems of cross-cultural ambiguity and ethnocentric assumptions. Qualitative research can be particularly appropriate in developing countries where secondary data

collection is more difficult than in developed countries and where social, face-to-face relations and trust relationship building are valued (e.g., Kotabe, Parente, and Murray, 2007). Finally, this study calls for more research in other emerging economies to extend our understanding of factors that lead to the internationalization of firms originated from emerging economies.

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APPENDIX A

EXAMPLES OF EMERGING MULTINATIONAL COMPANIES IN THE WORLD

Company Name	Country	Examples
Bajaj Auto	India	Bajaj is India's biggest and the world's 4 th largest maker of two and three-wheeled vehicles.
Bharat Forge	India	Bharat Forge is the world's second largest forging company and a leading supplier to the motor industry in the world. It has set up manufacturing plants in Asia, Europe, and North America.
Cemex	Mexico	Cemex is the world's largest building materials supplier and the third largest cement producer. It has production facilities in 50 countries in North America, the Caribbean, South America, Europe, Asia, and Africa.
Chery Auto	China	Chery has become the largest independent Chinese automaker and one of the fastest growing automakers in the world. It has produced an approximate 305,000 cars in 2006. The company plans to build plants in Eastern Europe, the Middle East and South America.
Embraer	Brazil	Embraer has become the world's leading maker of regional jets. It currently has the third largest yearly delivery of commercial aircraft with the fourth largest workforce. By 2006, more than 95% of its \$3.8 billion sales were generated outside Brazil. As one of Brazil's biggest exporters, the company succeeds through combining lost-cost manufacturing with advanced R&D.
Haier Corp.	China	Haier Corp., a leading manufacturer of white goods in China and the number two refrigerator manufacturer in the world, has established 26 R&D units in developed countries from which to monitor new technologies and other non-indigenous research activities (UNCTAD, 2006). It has set up thirteen overseas factories and plans to build 7 more factories by 2010 in foreign countries.
Hisense Group	China	Hisense, a \$3.3 billion consumer-electronics group, is a leading electronics manufacturer in China. It owns 10% of the market for TV sets in China and sells over 10 million TVs and 3 million air conditions in over 40 countries annually. It produces best-selling brand of flat-screen TVs in

		France.
Huawei Group	China	Huawei, a leading Chinese company in providing telecommunication networks, has set up regional headquarters and 55 branch offices around the world. Products are deployed by more than 300 operators in 80 countries Based on its global network, Huawei is currently serving 28 of the world's top 50 telecommunication operators with R&D centers set up in both developed and developing countries.
Lenovo	China	Lenovo acquired IBM's PC business for \$1.75 billion in 2004 and became the world's third largest PC manufacturer.
Tata Group	India	Tata Motor is currently the world's eighteenth largest automobile company with the world's cheapest car, the Tata Nano. Tata Steel is the world's fifth largest steel producer. Tata Tea is the world's second largest manufacturer and distributor of tea company.

APPENDIX B

VARIABLES IN CHAPTERS

VARIABLES IN CHAPTER 3

Measures, items and reliability

Incremental innovation performance (Developed on the basis of Atuahene-Gima, 2005)

1. What is the number of incremental products introduced by your firm in the last three years?
2. When compared to the three largest firms in our industry in China, we introduced more incremental new products in the last three years.
3. When compared to the three largest firms in our industry in China, we frequently introduced incremental new products into new markets in the last three years.

Radical innovation performance (Developed on the basis of Atuahene-Gima, 2005)

1. What is the number of radical products introduced by your firm in the last three years?
2. When compared to the three largest firms in our industry in China, we introduced more radical new products in the last three years.
3. When compared to the three largest firms in our industry in China, we frequently introduced radical new products into markets totally new to the firm in the last three years.

Knowledge exploitation strategy (Adopted from Atuahene-Gima, 2005) (Cronbach's $\alpha = 0.79$)

1. We upgraded current knowledge and skills for familiar products and technologies.
2. We invested in enhancing skills in exploiting mature technologies that improve productivity of current innovation operations.
3. We enhanced competencies in searching for solutions to customer problems that are near to existing solutions rather than completely new solutions.
4. We upgraded skills in product development processes in which the firm already processes significant experience.
5. We strengthened knowledge and skills for products that improve efficiency of existing innovation activities.

Knowledge exploration strategy (Adopted from Atuahene-Gima, 2005) (Cronbach's $\alpha = 0.87$)

1. We acquired manufacturing technologies and skills entirely new to the firm.
2. We learned product development skills and processes (i.e. product design, prototyping new products, timing of new product introductions, and customizing products for local markets) entirely new to the industry.
3. We acquired entirely new managerial and organizational skills that are important for innovation (i.e. forecasting technological and customer trends, identifying new markets and technologies, coordinating and integrating R&D, marketing, manufacturing, product development process, etc).
4. We learned new skills in areas such as funding new technology, staffing R&D function, training and development of R&D, engineering personnel for the first time.
5. We strengthened innovation skills in areas where we had no prior experience.

Absorptive capacity (Developed on the basis of Cohen and Levinthal, 1990; Zahra and George, 2002; Wong, Shaw and Sher, 1999) (Cronbach's $\alpha = 0.76$)

Potential absorptive capacity (We have the capability to...)

1. identify new knowledge that can be imitated, adapted or improved upon
2. acquire product innovation.
3. interpret acquired new knowledge.
4. identify possible modification of current technology.
5. identify possible substitution of current technology.

Realized absorptive capacity (We have the capability to...)

1. adapt acquired new knowledge to fit the firm's development needs.
2. develop new product/service by using assimilated new knowledge.
3. develop new applications by applying assimilated new knowledge.
4. find alternative uses of assimilated new knowledge.
5. fuse assimilated new knowledge with existing knowledge.
6. revise manufacturing processes based on acquired new knowledge.
7. revise business procedures based on acquired new knowledge.
8. introduce product innovation based on acquired new knowledge.
9. revise quality control operations based on acquired new knowledge.

Business ties (Developed on the basis of Peng and Luo, 2000) (Cronbach's $\alpha = 0.89$)

1. We are capable of networking with foreign partners.
2. We maintain relationships with many foreign partners
3. We are closely connected with foreign partners
4. We have connections with different foreign partners
5. We frequently contact foreign partners regarding important issues.
6. Our top managers meet with foreign MNC partners face-to-face on a regular basis.

Political ties (Developed on the basis of Peng and Luo, 2000) (Cronbach's $\alpha = 0.81$)

1. We are capable of networking with government and regulatory departments.
2. We maintain relationships with many Chinese government officials and regulatory departments.
3. We are closely connected with Chinese government in China
4. We frequently contact Chinese government officials and regulatory departments for important issues
5. Our top managers and Chinese government officials meet face-to-face on a regular basis
6. Our relationships with government officials have given us confidence in our business activities.

Market risks (Developed on the basis of Atuahene-Gima and Murray, 2004) (Cronbach's $\alpha = 0.78$)

1. The market has been growing at a satisfactory rate.
2. Forecasting the market potential for a new product/service has become more difficult than 3 or 5 years ago.
3. Customer needs and preferences have been changing at a faster pace than 3 or 5 years ago.

4. The market is currently made up of heterogeneous, diverse customers.
5. Understanding customers' needs has become more difficult than ever before.

Foreign competition (Developed on the basis of Atuahene-Gima and Murray, 2004 (Cronbach's $\alpha = 0.76$)

1. In our market, we are experiencing an increased diversity of competition and globalization.
2. In our market, businesses cannot survive unless they actively pursue mergers, acquisitions, and partnerships with foreign companies.
3. Market entries from companies in foreign countries are expected to increase in number.

Competitive isomorphism (Adopted from Abrahamson and Rosenkopf, 1993) (Cronbach's $\alpha = 0.81$)

1. We consider it smart to model other organizations that are more successful in our industry.
2. We try to avoid the risk inherent in adopting new practices by pursuing the "follower" strategy.

VARIABLES IN CHAPTER 4

Measures, Items and Reliability

Cognition-based trust

(Adopted from Zaheer, McEvily and Perrone (1998) and McAllister (1995); Cronbach's $\alpha = 0.79$)

1. Our partner approaches its job with professionalism and dedication.
2. Given our partner's track records, we have no doubt about its competence and preparation for its job.
3. Our partner and we are generally skeptical of the information provided to each other (Reverse coded).
4. Our partner has always been fair during our cooperation.
5. We feel that we can negotiate with our partner on an equal footing about each other's responsibilities.
6. Our partner is knowledgeable about most things relevant to our cooperation.
7. The knowledge that we can turn to our partner when having business problems makes our cooperation with it easy.

Affect-based trust

(Developed on the basis of Sheppard and Tuchinsky (1995) and McAllister (1995); Cronbach's $\alpha = 0.81$)

1. Our partner and we share the same goals.
2. We expect to conduct business with our partner for a long time.
3. Our partner treats us like a member of its firm.
4. Our partner is generally flexible about our business decisions as long as they are beneficial to our cooperation.
5. Our partner and we have many shared interests and activities.
6. We can talk freely to our partner about difficulties we have at work and know that it will want to listen.

7. We like our partner we work with and they like us.

Critical resources acquisition from foreign MNCs

(Developed on the basis of Barney, 1991)

Out of 1-5 (1=very little assistance and 5=a great deal of assistance), please rate the degree of assistance your firm has received from the foreign MNC partners in terms of acquiring following resources that are rare and unique, hard to imitate by competitors, valuable to your firm, non-substitutable and generate sustained abnormal returns, respectively.

1. Product technologies
2. Process technologies

Critical resources acquisition from Overseas Chinese

(Developed on the basis of Barney, 1991)

Out of 1-5 (1=very little assistance and 5=a great deal of assistance), please rate the degree of assistance your firm has received from the Overseas Chinese partners in terms of acquiring following resources that are rare and unique, hard to imitate by competitors, valuable to your firm, non-substitutable and generate sustained abnormal returns, respectively.

1. Product technologies
2. Process technologies

VARIABLES IN CHAPTER 5

Measures, Items and Reliability

Social Capital

(Developed on the basis of Fombrun and Shanley, 1990; Hayton, 2005; Peng, et al., 2005)
(Cronbach's $\alpha = 0.81$)

1. Our cooperation with governmental agencies has created more business opportunities for our company.
2. Our relationships with government officials have become increasingly important in securing important resources for our business activities.
3. Our relationships with government officials have become increasingly important to take full advantage of special regulations and restrictions of the government.
4. Our relationship with government officials has become important to build our image.
5. Our relationship with government officials has become important to increase news coverage to build our corporate reputation.

Market Capital

(Adopted from Barney, 1991; Song et al., 2005) (Cronbach's $\alpha = 0.72$)

Our firm has received a great deal of assistance from the Chinese government in terms of acquiring the following resources that are valuable, rare, inimitable, non-substitutable and generate sustained abnormal returns.

1. Marketing resources: marketing research, communication, distribution, sales promotion, among others.
2. Product technologies.
3. Process technologies.

Guanxi

(Developed on the basis of Lovett et al., 1999; Park and Luo, 2001) (Cronbach's $\alpha=0.88$)

1. We have good relations with government officials and we care about each other wholeheartedly.
2. We have good relations with government officials and we benefit from caring for each other.
3. We will provide favors to government officials if they did one for us before.
4. The more respect we receive from government officials, the more face we have in public.
5. Our relationships with government officials have given us confidence in our business activities.

Market Risk (Developed on the basis of Atuahene-Gima and Murray, 2004) (Cronbach's $\alpha=0.77$)

1. The market has been growing at a satisfactory rate.
2. Forecasting the market potential for a new product/service has become more difficult than 3 or 5 years ago.
3. Customer needs and preferences have been changing at a faster pace than 3 or 5 years ago.
4. The market is currently made up of heterogeneous, diverse customers.
5. Understanding customers' needs has become more difficult than ever before.
6. In our market, we are experiencing an increased diversity of competition and globalization.
7. In our market, businesses cannot survive unless they actively pursue mergers, acquisitions, and partnerships with foreign companies.
8. Market entries from companies in foreign countries are expected to increase in number.

APPENDIX C

TOP 10 LARGEST SOURCES OF FOREIGN DIRECT INVESTMENT IN EMERGING ECONOMIES AND IN CHINA

(1) TOP 10 EMERGING ECONOMIES RECEIVING THE LARGEST FOREIGN DIRECT INVESTMENT IN 2006

Source country/region (US\$ billion)			
China	76.0	Poland	12.6
Russia	28.0	Hungary	9.0
Turkey	19.0	Chile	8.5
Mexico	18.9	India	8.0
Brazil	18.8	Romania	7.0

(2) TOP 10 LARGEST SOURCES OF FDI TO CHINA (1979-2003)

Source country/region	Value (US\$ billion)
Hong Kong	222.57*
U.S.	44.08
Japan	41.39
Taiwan	36.48**
Virgin Islands	30.16
Singapore	23.53
England	11.43
Germany	8.85
France	6.14
Total FDI	501.47

* Numerous overseas Chinese from Southeast Asia have invested in China through their trading companies in Hong Kong.

** Since Taiwan government does not encourage FDI in China, this value would have been underestimated by the Chinese government.

Source: Zhuang (2006)

APPENDIX D

FOREIGN DIRECT INVESTMENT FROM OVERSEAS CHINESE INTO CHINA (1990-2002, in millions*)

Year	Total	Hong Kong	Taiwan	Singapore	Macau	Philippines	Thailand	Malaysia	Indonesia
1990	3,487	1,880	222	50	33	2	7	1	1
1991	4,366	2,405	466	58	82	6	20	2	2
1992	11,008	7,507	1,051	122	202	16	83	25	20
1993	27,515	17,275	3,139	490	587	123	233	91	66
1994	33,767	19,665	3,391	1,180	509	140	235	201	116
1995	37,521	20,060	3,162	1,851	440	106	288	259	112
1996	41,726	20,677	3,475	2,244	580	56	323	460	94
1997	45,257	20,632	3,289	2,606	395	156	194	382	70
1998	45,463	18,508	2,915	3,404	422	179	205	340	69
1999	40,319	16,363	2,599	2,642	309	117	148	238	129
2000	40,715	15,500	2,296	2,172	347	111	204	203	147
2001	46,878	16,717	2,980	2,144	321	209	194	263	160
2002	52,743	17,861	3,971	2,337	468	186	188	368	122
Total	430,765	195,050	32,956	21,300	4,695	1,407	2,322	2,833	1,118

Source: Zhuang (2006)

APPENDIX E

**THE IMPACT OF THE TRANSFORMATION OF LEGAL INSTITUTIONS ON
FIRMS' TRUST-BUILDING RELATIONSHIPS**

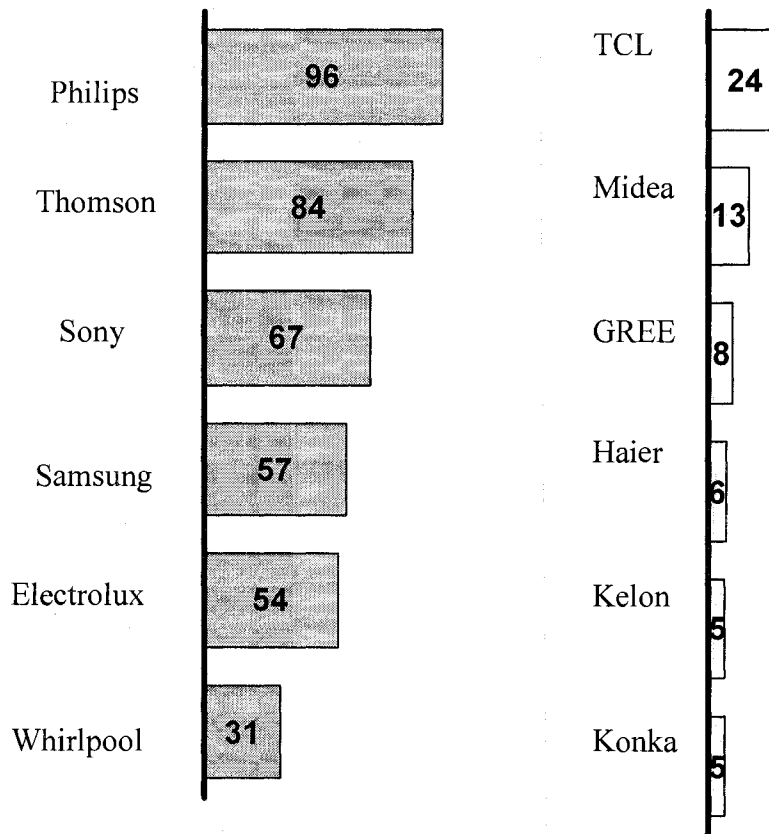
		Legal Institutions	
		Strong	Weak
Social Institutions	Strong	Hybrid (Coordination with confidence)	Informal (<i>affect-based trust</i> cooperation)
	Weak	Formal (<i>cognition-based trust</i> coordination)	Mutual (Mutual hostage)

Source: Model adopted from Mudambi and Helper (1998).

APPENDIX F

LEADING CHINESE FIRMS AS SMALL MARKET PLAYERS

(International sales as a percentage of foreign sales in consumer electronic industry)



Source: Compiled from company websites (2007)

APPENDIX G

BENEFITS AND COSTS OF GUANXI

Benefits of Guanxi	
Operational efficiency	Procurement, enhance negotiation, logistics, smooth payment collection, smooth production arrangement
Financial sustainability	Increase sales revenue, eliminate competition, secure loans, gain business opportunities
Relational opportunity	Build up reputation and image, access market trends and other connections, access information, lobbying preferential policies
Costs of Guanxi	
Micro perspective	Time-consuming, expensive, unethical
Macro perspective	Hinder legal system development, environmental unfriendly, perceived as being corrupt

Source: Summarized on the basis of Davies, et al.'s (1995) study.