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ENTRY MODES AND PERFORMANCE OF FOREIGN DIRECT INVESTMENT IN CHINA

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Doctor of Philosophy

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Thesis Summary

How does a firm choose a proper mode of foreign direct investment (FDI) for entering a foreign market? Which mode of entry performs better? What are the performance implications of joint venture (JV) ownership structure? These important questions face a multinational enterprise (MNE) that decides to enter a foreign market. However, few studies have been conducted on such issues, and no consistent or conclusive findings are generated, especially with respect to China. This thesis aims to study these issues empirically in the context of China. It's composed of five chapters, providing corresponding answers to the questions given above. Specifically, Chapter One is an overall introductory chapter. Chapter Two is about the choice of entry mode of FDI in China. Chapter Three examines the relationship between four main entry modes and performance. Chapter Four explores the performance implications of JV ownership structure. Chapter Five is an overall concluding chapter.

These empirical studies are based on the most recent and richest data that has never been explored in previous studies. It contains information on 11,765 foreign-invested enterprises in China in seven manufacturing industries in 2000, 10,757 in 1999, and 10,666 in 1998. The four FDI entry modes examined include wholly-owned enterprises (WOEs), equity joint ventures (EJVs), contractual joint ventures (CJVs), and joint stock companies (JSCs). In Chapter Two, a multinomial logit model is established, and techniques of multiple linear regression analysis are employed in Chapter Three and Four.

It was found that MNEs, under the conditions of a good investment environment, large capital commitment and small cultural distance, prefer the WOE strategy. If these conditions are not met, the EJV mode would be of greater use. The relative propensity to pursue the CJV mode increases with a good investment environment, small capital commitment, and small cultural distance. JSCs are not favoured by MNEs when the investment environment improves and when affiliates are located in the coastal areas. MNEs have been found to have a greater preference for an EJV as a mode of entry into the Chinese market in all industries. It is also found that in terms of return on assets (ROA) and asset turnover, WOE perform the best, followed by EJVs, CJVs, and JSCs. Finally, minority-owned EJVs or JSCs are found to outperform their majority-owned counterparts in terms of ROA and asset turnover.

Keywords: Entry Modes, Performance, Joint Ventures, Ownership, China.

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Chapter One

Overall Introduction

During the past few decades, the world economy has experienced a great transformation and increased global intergration. A significant sign is massive foreign direct investment (FDI) undertaken by multinational enterprises (MNEs) to create international production networks (P2-3). Having decided to enter a foreign market, a decision facing a MNE is to determine the appropriate entry mode for organizing its foreign business activities (Hill, et al, 1990; Agarwal & Ramaswam, 1992; Davis, et al, 2000), because which mode of entry a MNE chooses is a critical decision that impacts on its success in foreign markets (Anderson and Gatignon, 1986; Agarwal and Ramaswami, 1992; Erramilli and Rao, 1993). Although the topic of entry mode choice has been the focus of much recent theoretical and especially empirical research in international business (Tse, Pan and Au, 1997; Buckley and Casson, 1998; Hennart and Larimo 1998; Davis 2000; Brouthers, Brouthers and Werner 1999, 2000; Makino and Neupert 2000; Pan and Tse 2000; Meyer 2001), most of the studies only consider two most common types of FDI – WOE and EJV. Other FDI entry modes are also available to MNEs especially in China, namely contractual joint ventures (CJVs) and joint stock companies (JSCs). Thus, a systematic study of entry mode choice for investment in China should include all available forms of FDI, not only WOE and EJV, but CJVs and JSCs as well. Thus, the current research attempts to establish a multinomial logit model in which foreign-invested enterprises (FIEs) are allowed to choose among all available entry modes of FDI into China.

As mentioned above, entry mode choice is an important strategic decision that MNEs make and the question of which mode of entry leads to better performance must be of practical and theoretical importance (Lambkin, 1988; Li and Guisinger 1991; Woodcock et al 1994; Li 1995; Decastro and Chrismann, 1995; Ekeledo and Sivakumar, 1998; Pan, et al, 1999a). From the practical perspective, such results must help managers make good decisions on their entry mode selection. From the theoretical perspective, the results generated are expected to fill in some empirical gaps in the studies of international business. For examples, a number of firm, industry, and country-specific factors, which have been empirically tested and found to have significant implications on firm performance, failed to be considered and/or fully controlled for in these studies. Moreover, most of them restrict their examination of entry mode choices to equity-based modes, i.e. WOE and EJV. In addition, most of these studies are based on small sample sizes. The current research aims to reexamine

empirically the relationship between the entry modes that MNEs employed for entering China and their performance consequences. The study compares the relative performance of WOE, EJV, CJV and JSCs are examined.

Besides, one of the major FDI modes is IJV, and JVs have become an important element of many firms' international strategies. Previous studies indicate that ownership structure of an international joint venture, which has traditionally been defined by the percentage of equity held by the foreign parent, affects the subsequent achievement of the IJV's performance. In China, there are two types of equity-based JVs – EJV and JSCs. The current research examines the performance implications of JV ownership structures.

Since the Chinese government's dramatic shift in foreign and economic policy in 1978, China has been regarded as a lucrative target for MNEs and international business researchers alike. Moreover, China is emerging as one of the most important investment site around the world, second only to the US in terms of inward FDI flows since 1993. There were over 364,000 FIEs in China in the year of 2000 (Liu, 2001), and no country has seen the formation of more JVs with foreign firms than China. Besides, China has all available forms of FDI, not only WOE and EJV, but CJV and JSCs as well. Therefore, to study on the issue concerning FDI, China is a desirable research context.

Taken together, the current research aims to study three questions: Which factors affect the choice of FDI mode of firms entering a foreign market? Which mode of entry performs better? What are the performance implications of JV ownership structure? These issues are addressed empirically in the context of China, and four FDI modes (WOE, EJV, CJV, and JSC) are examined, in which EJV and JSCs are studied with respect to the third issue. Moreover, all these empirical studies are based on the most recent and richest data that has never been explored in previous studies. It contains information on 11,765 FIEs in China in seven manufacturing industries in 2000, 10,757 in 1999, and 10,666 in 1998.

The thesis is composed of five chapters.

This chapter (Chapter One) is an overall introductory chapter.

Chapter Two is about the choice of FDI entry mode into China, and consists of five sections. Section 2.1 is an introductory section. Section 2.2 reviews the relevant literature and develops hypotheses, which are summarized in a simple analytical framework. Section 2.3 discusses the empirical model, data, variable measurement and methodology. The empirical results are presented in Section 2.4, and finally Section 2.5 concludes and, where appropriate, policy implications are discussed.

Chapter Three examines the relationship between the four entry modes and performance. Specifically, Section 3.1 is an introductory section. Section 3.2 reviews the literature and develops the hypotheses. Section 3.3 details data specifications, the operational measures, and research methods. Section 3.4 presents research findings and discussions. The last Section 3.5 sets out the conclusions, implications, and limitations.

Chapter Four explores the performance implications of JV ownership structure. Section 4.1 is an introductory section. Section 4.2 presents literature and develops the hypotheses. Section 4.3 discusses methodological issues, in which, the database, variables and measurements, research model, and analytical approach are presented. Section 4.4 reports research findings, followed by discussions. Section 4.5 is the summary of the study. Possible practical implications, limitations of this study, as well as directions for future research are also suggested.

Chapter Five provides a summary of the conclusions of the studies.

Chapter Two

The Choice of Entry Modes: A Multinomial Logit Approach

Abstract

The choice of entry mode is an important part of a firm's FDI strategy. The existing empirical literature only allows a binary choice between WOE and EJV. The current study attempts to establish a multinomial logit model for the choice from all available FDI entry modes. A framework is developed based on transaction cost economics and Dunning's eclectic paradigm. The firm-, industry-, and country-specific factors are used to explain the choice among WOEs, EJVs, CJVs and JSCs. MNEs, under the conditions of a good investment environment, large capital commitment and small cultural distance, prefer the WOE strategy. If these conditions are not met, the EJV mode would be of greater use. The relative propensity to pursue the CJV mode increases with a good investment environment, small capital commitment, and small cultural distance. JSCs are not favoured by MNEs when the investment environment improves and when affiliates are located in the coastal areas. MNEs have been found to have a greater preference for an EJV as a mode of entry into the Chinese market in all industries.

Section 2.1 - Introduction

During the past few decades, the world economy experienced a great transformation. The United States is no longer the dominant economic power as it was in the three decades following World War II; China, South Korea, Mexico, and other nations are assuming leading economic roles as the old industrial countries lose their relative economic strength; traditional industries are migrating from the industrial countries of Europe, Japan, and the United States to the developing countries of Asia, Latin America, and Eastern Europe; the industrial countries are undergoing a painful reallocation of resources from traditional capital and labor intensive industries to new technology and skill-intensive industries (Root, 1994, P1-2). A new global economy is emerging.

One kind of the dynamic forces that builds the new global economy is accelerating globalization (Root, 1994, P2). "Globalization" refers to a process in which firms expand outside of their domestic market by selling products and/or service into international markets or to establish a production platform (Dotson, 2000). The signs of globalization are all around us. A more significant sign is massive FDI undertaken by MNEs to create international production networks (Root, 1994, P2-3).

According to the World Investment Report 2001 (UNCTAD, 2001, P9), since the early 1980s, FDI flows have risen four times faster than world output. As many as 65 countries experienced an annual average growth rate of 30 percent or more between 1986 and 2000; another 29 countries had FDI growth rates of 20-29 percent (UN, 2001, P9). Moreover, in 2000, FDI grew by 18 percent, faster than other economic aggregates like world production, capital formation and trade, reaching a record \$1.3 trillion. Such a global expansion of investment flows is driven by more than 60,000 MNEs with over 800,000 affiliates abroad (UNCTAD, 2001, P1). By expanding their operations internationally, MNEs are able to reduce product costs, improve quality, sustain rapid sales growth, generate additional profits, and remain competitive (Mansumittrchai, et al, 1999).

Having decided to enter a foreign market, the first thing facing a MNE is to determine the appropriate entry mode for organizing its foreign business activities (Hill, et al, 1990; Agarwal & Ramaswam, 1992; Davis, et al, 2000). An international market entry mode is an institutional arrangement that makes possible the entry of a company's products, technology, human skills, management, or other resources into a foreign country (Young, et al, 1989, p3; Root, 1994, p24). Among the vast array of alternatives a MNE can often choose between are non-equity-based modes, i.e. contractual arrangements (e.g. licensing and franchising) and exports, and equity-based modes, i.e. EJVs and WOE. Wholly owned modes are further split into greenfield investment and acquisitions.

Specifically, export entry is the mode in that a company's final or intermediate product is manufactured outside the target country and subsequently transferred to it. Contractual entry modes are long-term non-equity associations between an entity in a foreign target country that involve the transfer of technology of human skills from the former to the latter. EJV entry takes place when an international company shares in the ownership of an enterprise in a target country with local private or public interests. Most commonly, the international company agrees to share capital and other resources with a local company in a common endeavor. Finally, the entry mode of WOE is the mode in which the foreign subsidiary controls day-to-day operations and certain strategic decisions, but ultimate control always resides at the MNE's corporate office. However, the MNE has to bear the costs of opening up and serving the foreign market.

Which mode of entry a MNE chooses is a critical decision that impacts on its success in foreign market because it has far-reaching consequences for many aspects of the firm's foreign operations (Anderson and Gatignon, 1986; Agarwal and Ramaswami, 1992; Erramilli and Rao, 1993). Entry into new markets often requires significant investment in new resources and capabilities. Multi-million dollar investments in new physical equipment, research and development, advertising, and distribution capabilities, or in firms that already possess these resources and capabilities are not uncommon when a MNE enters a new market (Marsh 1997; Mansumittrchai et al, 1999). Most of these resource commitments are unique and long-term. It means that a firm's initial choice of a particular mode is difficult to change without considerable loss of time and money (Root, 1987). Some of these commitments are nearly irreversible, at least in the short

run (Hennart and Larimo, 1998). For example, the time and resources a firm spends in locating a partner and then negotiating a joint venture arrangement may be lost if the firm has to begin again and set up a different organizational form. In a word, if an appropriate form is not chosen initially, firms may incur considerable opportunity losses (Killing, 1982; Root, 1987; Gomes-Casseres, 1989).

Previous studies indicate that each entry mode has different implications for the degree of control that a MNE can exercise over its foreign operations, the resources it must commit to the foreign operations, and the risks that it must bear to expand into a foreign country (Caves, 1982; Davidson, 1982; Vernon, 1983; Root, 1987; Hill, et al, 1990; Agarwal & Ramaswam, 1992). This in turn has strong implications for sourcing strategies, standardization of corporate, marketing strategies, transfer pricing, integration of the MNC's worldwide activities and ultimately its performance (Franko, 1971; Stopford and Wells, 1972; Davidson, 1982; Kobrin, 1991; Erramilli, 1996). An appropriate entry mode strategy should result in superior market and financial performance (e.g., Isobe, et al, 2000). Entry mode choice is thus an important strategic decision that a MNE has to make when conducting international business.

Given the above, the choice of foreign entry modes has been the focus of much recent theoretical and especially empirical research in international business (Tse, Pan and Au, 1997; Buckley and Casson, 1998; Hennart and Larimo 1998; Davis 2000; Brouthers, Brouthers and Werner 1999, 2000; Makino and Neupert 2000; Pan and Tse 2000; Meyer 2001). The existing empirical studies can be classified into two groups according to their research objects: (1) the binary or multinomial choice between broad international market entry modes such as exporting, licensing, and direct investment (e.g. Agarwal and Ramaswami, 1992; Kim and Hwang 1992; Tse, Pan and Au, 1997; Arora and Fosfuri, 2000), and (2) the binary choice between a WOE and an EJV (e.g. Gomes-Caseres, 1989; Hennart and Reddy, 1997; Hennart and Larimo 1998; Markino and Neupert 2000) or between greenfield investment and acquisition (e.g. Hennart and Park, 1993; Brouthrs and Brouthers, 2000; Chang and Rosenzweig 2001).

Although WOE and EJVs are the two popular types of FDI, other FDI entry modes are also available to MNEs. For instance, around 11% of FIEs in China in 1999 were CJVs and JSCs (State Statistical Bureau, 2000a). Although this percentage was relatively

small compared with WOE and EJV, the absolute numbers of CJVs and JSCs were reasonably large, bearing in mind that there were over 364,000 foreign invested firms in China in the year of 2000 (Liu, Wang and Wei, 2001). Thus, a systematic study of entry mode choice should include all available forms of FDI, not only WOE and EJV, but CJVs and JSCs as well, and the Chinese experience provides a unique data source for such a study.

The four entry modes of FDI in China are different in legal form, the degree of control, resource and risk involvement, and management structure. According to China's Company Law promulgated in April 1986, a WOE is a limited liability entity solely owned and operated by a foreign investor who receives all profits and bears all costs and risks. An EJV is defined as a limited liability company where resource commitment, profit distribution, risk sharing, and the control and management are based on equity shares between foreign and Chinese partners. A CJV refers to a variety of arrangements and is a looser association of partners that agree to pursue a joint undertaking. It is a contract based independent operation. The Chinese and foreign partners co-operate in joint projects or other business activities according to the terms and conditions stipulated in the venture's agreement. Resources committed by partners can be anything useful for the firm, e.g. management skills and technology, and they need not be translated into equity shares.

With respect to the last mode - JSCs, in January 1995, the Ministry of Foreign Trade and Economic Cooperation (MOFTEC) supplemented the 1994 Company Law by promulgating "the Provisional Regulations on Several Issues Concerning the Establishment of Joint Stock Limited Companies with Foreign Investors". As a result, a new foreign investment vehicle: the Sino-foreign joint stock limited company (JSC) was created. According to this regulation, a JSC is defined as any enterprise with the status of a legal person that divides its share capital into equal shares with a par value, usually Rmb1.00. It is equity based, with the minimum registered capital requirement for the establishment of US\$3.6 million, and the amount of foreign ownership of the company should exceed 25 percent. Moreover, the establishment of all JSCs must be approved by MOFTEC regardless of the size of the total investment. Instead of establishing a FIE to acquire the assets of a PRC target, it is now possible to establish a JSC as the acquiring entity. According to press reports (Foreign Investment in China,

2000), Eastman Kodak Co.'s recent \$1 billion investment in China is effected in part through the use of a JSC, the shares of which are owned by Kodak and two state-owned enterprises (SOEs) whose assets have been acquired by the new entity.

Obviously, a common feature of EJVs, CJVs or JSCs is that they are all JVs as foreign investors only partially own the enterprises. However, these different types of JVs are involved in different entry strategies. EJVs and JSCs are equity based, but CJVs are not. Moreover, an EJV normally involves very limited number of partners, while a JSC may be owned by a number of people although the equity share of the foreign partner must be higher than 25%.

Among the few studies on foreign entry modes in China, Luo (2001) focuses on the conditions under which EJVs are chosen as an entry mode, as opposed to WOE, at four levels: country, industry, firm and project. Sun (1999) investigates the socio-economic factors which influence the choice of foreign invested firms between partial and full ownership of their subsidiaries in China. Shan (1991), Pan (1996) and Zhao and Zhu (1998) study the determinants of foreign equity share of JVs in China. Tse, Pan and Au (1997) examine how host country-, home country- and industry-specific factors affect foreign invested firms' choices among export, licensing, JVs and WOE. With the exception of the study given by Luo (2001), it is not clear whether JVs are just EJVs or include both EJVs and CJVs in these studies. Moreover, JSCs, the new modes of entry, haven't been given any attention yet.

Different from the existing studies, the current research attempts to establish a multinomial logit model in which FIEs are allowed to choose among all available entry modes of FDI. In this study, no order or hierarchy is imposed among WOE, EJVs, CJVs and JSCs. Different foreign investors have varying firm-specific advantages and perspectives on a given investment environment. Given the decision on entry into the Chinese market, they would decide which of the four entry modes would lead to the best combination of firm-, industry- and country-specific advantages and as a result generate high rates of return.

The next Section 2.2 reviews the relevant literature and develops hypotheses, which are summarised into a simple analytical framework. Section 2.3 discusses the empirical

model, data, variable measurement and methodology. The empirical results are presented in Section 2.4, and finally Section 2.5 concludes and, where appropriate, policy implications are discussed.

Section 2.2

Literature Review and Hypotheses

Most past studies on the foreign market entry strategies of MNEs have adopted one of two theoretical approaches. One is the transaction cost approach (Caves, 1982; Anderson and Gatignon, 1986; Williamson, 1986; Beamish and Banks, 1987; Erramilli and Rao, 1993), which prescribes cross-border activities according to the economic rationale that firms will minimize all costs associated with the entire value-added chain. The basic premise is that firms will internalize those activities that they can perform at a lower cost, but will subcontract those activities externally if other providers have a cost advantage. When firms subcontract part of their operation to other firms, they inevitably face transaction-related costs. In the broadest sense, these transaction costs include all costs, as well as outputs and inputs, associated with various aspects of the value-added chain from the production to the consumption of goods and services (Dunning, 1988). Thus, in selecting entry modes, it is assumed that managers compare the costs and benefits of different entry modes that are underlain by transaction cost factors, and select the mode that incurs the least transaction costs. The approach stresses the importance of firm-specific factors and has been used to explain how U.S. firms enter and operate in foreign markets (Gatignon and Anderson, 1988; Kogut and Singh, 1988; Agarwal and Ramaswami, 1992; Erramilli and Rao, 1993).

The second approach is proposed by Dunning (1980, 1981, 1988). He develops an eclectic framework for the choice among export, licensing, JV and WOE modes. The framework integrates several strands of international business theories on cross-border business activities. It proposes that cross-border business activities of MNEs are influenced by three types of factors: ownership advantages, location advantages, and internalization advantages. Ownership advantages refer to firm-specific factors, such as firm size, multinational experience, or ability to develop and market a differentiated product. Location-specific factors refer to host country-specific factors, and reflect the attractiveness of a foreign market. Internalization advantages focus on industry-specific variables. They refer to the benefits of retaining assets and skills within the firm when market fails or there is potential for opportunistic behavior by a partner. Apart from

ownership factors and internalization factors, Dunning emphasizes that location-specific factors are becoming more significant in affecting firm's international operations, and that these factors have an increasing impact on the non-production related costs (i.e., the transaction costs). The eclectic framework is widely used in entry mode studies and is empirically supported by past studies (e.g. Hill, et al, 1990; Ararwal and Ramaswami, 1992; Brouthers, et al, 1996; Hennart and Reddy, 1997; Brouthers and Brouthers, 2000).

These two approaches are generally consistent with each other, as they both emphasise the importance of internalising costly market transactions by combining firm-specific advantages of a MNE with location-specific advantages in the host country. They are still applicable to the analysis of FDI entry modes when the range of choice is extended from EJV's and WOE's only to including CJVs and JSCs in the current study. In the following sections, several firm-, industry-, and country-specific factors are identified to explain the choice among these four modes of entry.

Country-specific Factors

Investment Environment Improvement or Familiarity

Firms interested in serving a foreign country are expected to use a selective strategy and favour entry into an attractive country. This is because their chances of obtaining higher returns are better in such a country. Country-specific factors can be examined at different levels. At the national level, a host country's overall investment environment is very important for multinational firms to decide their entry modes.

Agarwal and Ramaswami (1992) characterize the attractiveness of a foreign market in terms of its market potential and investment risk. Market potential, the size or growth of the foreign market can actually influence the profitability of the investment and therefore the mode of entry in the foreign country (Gomes-Casseres, 1989; Zejan, 1990; Agarwal and Ramaswami, 1992). The investment risk in a host country reflects the uncertainty over the continuation of present economics and political conditions and government policies which are critical to the survival and profitability of a firm's operations in that country (Agarwal and Ramaswami, 1992). When these risks are high, joint ownership will be favoured over WOE's (Hill, et al, 1990).

Agarwal and Ramaswami (1992) assess the combined impact of market potential and investment risk. They argue that the ideal scenario is a combination of high market potential and low investment risk. When investment risk is high, firms may still be willing to penetrate the host country market because high risk is generally associated with high rates of return. In this case, the need to establish presence in countries with high market potential may be traded in the need to minimise investment risks. Joint ownership makes it possible to spread some of the costs associated with indivisibility of scale and scope economies. In other words, potential low risk encourages WOE. In contrast, potential high risk leads to the formation of JVs as part of the risk is shifted to a partner in the host country who can help in negotiations with the host government and thus help reduce the investment risk for the firm.

Davidson (1982), Anderson and Coughlan (1987) and Kim and Hwang (1992) among others discuss the effect of location unfamiliarity on the choice between WOEs, JVs and licensing. Their conclusion is that, the more unfamiliar the MNEs with the investment environment of the host country, the more likely MNEs will shy away from WOE in favour of JV agreements. As indicated in Kim and Hwang (1992), such institutional modes as JVs provide MNEs with flexibility to withdraw from the host market should they be unable to comfortably acclimatise themselves to the unfamiliar setting. Hennart and Larimo (1998) also find that the longer a given firm has been operating manufacturing plants in the U.S., the more knowledgeable and familiar they should be about U.S. conditions, and the lower their need would be for sharing equity with a local partner.

Tse, Pan and Au (1997) suggest that a host country's experience in attracting FDI facilitates MNEs' adoption of more equity-based entry modes (WOEs and EJVs) versus export or licensing. On the one hand, by gaining experience in working with foreign investors, the host country (China) learns how to create an attractive and stable investment environment (Zhan, 1993) and raises the level of confidence of foreign invested firms in operating in China. On the other hand, FDI inflows promote rapid economic growth and expand market size. This will lead more foreign invested firms to invest in production capabilities within China (Shenkar, 1990).

In summary, the above discussion suggests that high market potential, low investment risk, the host country's experience in working with foreign investors and the familiarity of foreign investors with the host country's business climate promote foreign investors to choose WOE relative to EJV and especially to contract-based entry modes. It is not difficult to find that the above arguments are perfectly consistent, although different elements of country-specific factors seem to be emphasised. For instance, if the host country government gains experience in working with foreign investors and therefore improves its business environment, investment risk will be reduced. Furthermore, one important criterion for a good investment environment is transparency. If this is improved, foreign investors will find it easier to familiarise themselves with the environment.

In the case of China, it follows that, with an improvement in China's investment climate, WOE would be most preferred, followed by EJV and JSC, and finally the contract-based CJV. Thus, the following hypothesis is developed:

H1. The more the host country improves its investment environment and the more the foreign investors are familiar with this environment, the more likely it is that foreign investors will adopt WOE relative to EJV and JSC, and the least likely that they will choose CJV.

Specific Locations

In some cases a host country and a specific location within this country are simultaneously chosen, while on other occasions a specific location is selected after the host country is chosen. In either case, location-specific advantages at the regional level within a host country are also expected to affect the choice of foreign entry modes.

In many countries, political, economic and social conditions vary substantially across regions. In addition, a number of countries provide preferential policies to provide incentives for FDI in such areas as special economic zones and open cities (Shenkar, 1990; Beamish, 1993; Zhang, 1994; Tse, Pan and Au, 1997). As foreign invested firms find it easier and less risky to operate in these zones or areas, they are more likely to launch equity-based projects there (Zhang, 1994). In other words, equity-based

investments are more likely to be pursued than contract-based businesses in these prioritised zones. Pan and Tse (2000) support the view.

In the case of China on which Pan and Tse's (2000) study is based, these zones or regions (normally on the coast) are preferred not only because they are prioritised, but also more importantly most of them have traditionally been commercial and industrial centres. They have much better infrastructure and higher market demand than the inner areas. These zones or areas also have a long history of international trade and contacts with the outside world. Therefore, foreign invested firms are more familiar with the investment environments in the coastal than in inner areas. To be consistent with the previous discussion that leads to the development of H1, it is proposed that a preferred specific location enhances foreign investors' confidence and facilitates them to choose WOE, EJV and JSC rather than CJV. The following hypothesis is then formed:

H2. A preferable specific location encourages foreign investors to choose WOE, EJV and JSC rather than CJV.

Firm-specific Factors

Amount of Investment

According to transaction cost theory (Buckley and Casson, 1976; Dunning, 1981; Rugman 1981; Hennart 1982; Teece, 1983), the firm-specific advantages MNEs enjoy relative to host country firms play an important role in the choice of foreign entry modes. A traditional view is that the greater the quasi-rent stream generated by an MNE's proprietary know-how, the greater the probability that the MNE will favour an entry mode with high control such as a WOE (Kim and Hwang 1992). More recently, transaction cost economics tends to pay more attention to the possible combination of firm-specific advantages of MNEs with not only location-specific but also firm-specific advantages in the host country. For instance, Buckley and Casson (1988, 1996 and 1998) summarise the conditions conducive to international JVs (instead of WOE) as (i) the possession of complementary assets; (ii) opportunities for collusion, and (iii) barriers to full integration - economic, financial, legal or political.

One important firm-specific factor is the size of an MNE itself. Firms need substantial financial and human resources to be able to engage in FDI. Such resources enable firms to absorb marketing costs, enforce patents and contracts, and achieve economies of scale (Hood and Young, 1979). The size of the firm is usually an indicator of the firm's ability to absorb such costs (Buckley and Casson, 1976; Kumar, 1984; Yu and Ito, 1988)

The traditional argument is that small firms do not have the necessary resources to put up the whole capital for a greenfield plant, or to make a full acquisition of an existing firm. Large firms, in contrast, have a greater ability to expend resources and absorb risks than smaller ones. They are often globally integrated firms. They prefer complete control of their foreign operations because overall profit maximisation requires that their foreign affiliates are tightly co-ordinated by the parents (Agarwal and Ramaswami, 1992). When contributing significantly to the capital formation of its affiliates, they may have greater bargaining power to negotiate for greater ownership and control in countries with restrictive investment policies (Lecraw, 1984).

Therefore, the larger the resources committed to the local affiliates, the smaller the probability that a firm will share the equity (Larimo, 1993; Hennart and Larimo, 1998). This suggests that large investing firms prefer equity-based operations and shy from contract-based. Within equity-based operations, there is a greater preference for WOE. Thus the MNE is expected to favour a WOE over a JV. Empirical evidence indicates that the size of the firm is positively correlated with its propensity to choose WOE and JVs in particular (Caves and Mehra, 1986; Yu and Ito, 1988; Terpstra and Yu, 1988; Kimura, 1989). Applying the above arguments to the context of the current study, it seems that:

H3. Multinational firms making a large amount of investment tend to prefer WOE to EJVs, JSCs or CJVs.

Cultural Distance

The impact of national culture on entry mode choice is widely recognised in the literature. Hennart and Larimo (1998) discuss two schools of thought. First is the "national character" (Hofstede, 1980) theory. It suggests that countries vary

systematically in psychological characteristics, and an MNE's decision on the ownership structure of its subsidiary will reflect characteristics of the countries in which these MNEs are domiciled (Shetty 1979). A country's national cultural characteristics, such as its average level of power distance and uncertainty avoidance, can affect the preference of its MNEs for full subsidiary ownership, with firms based in countries characterized by high power distance and uncertainty avoidance opting for higher levels of ownership. Erramilli (1996) also argues that MNEs based in countries where the dominant cultural traits are high power distance and high uncertainty avoidance will have a higher preference, everything else constant, for majority ownership or WOE.

A second school considers the impact of *differences* between national characteristics (e.g. Kogut and Singh, 1988). It focuses on cultural distance, and argues that the cultural distance between the home base of the MNE and the target market can influence the choice between taking full or partial equity in a foreign affiliate. This argument is believed to fit comfortably within transaction costs theory (Hennart and Larimo, 1998). The rationale is that the choice between full and partial ownership of a subsidiary depends on the costs and benefits of sharing its equity relative to those of retaining full ownership (Beamish and Banks, 1987; Hennart, 1988; Hennart and Larimo, 1998). Cultural distance increases information costs and difficulty in transferring management skills (Anderson and Gatignon, 1986). When market transactions are subject to high transaction costs, sharing equity is efficient as it makes local partners co-owners in the venture. For instance, the knowledge of local conditions is very important for successful operations. An MNE with great cultural distance is supposed to know very little about local conditions, and may find it desirable to leave part of the equity with the local firm in order to enhance incentives. Thus, the larger the cultural distance, the more likely that the MNE will adopt the EJV entry mode (Hennart and Larimo, 1998).

The unique feature of FDI in China is that the majority of China's inward investment has been contributed by ethnic Chinese from Hong Kong, Macao and Taiwan (Wei and Liu, 2001). Overseas Chinese usually share language, cultural traits and ethnic links with people in mainland China and have strong affection for their original home and a strong feeling of commitment to their family. This kind of affection or feeling reflects

the Confucian culture. Because of the shared culture and family relations, there is less uncertainty and more mutual trust between local and ethnic Chinese than between local Chinese and other foreign investors. This cultural advantage substantially reduces contractual risks, and makes overseas Chinese investors prefer the CJV entry mode (Wei and Liu, 2001).

For the same reason, overseas Chinese investors may also favour WOE over EJV, as they are much more knowledgeable about local conditions than other foreign investors, which allows them to be less reliant on local firms. On the other hand, as the equity of a JSC is normally widely spread among shareholders, cultural factors may not have significant impact on the choice of this entry mode. Following the above discussion, the following hypothesis can be developed:

H4. Cultural distance leads overseas Chinese investors to prefer CJVs and WOE, and other foreign investors to favour EJV. The choice of the JSC entry mode may not be influenced by cultural factors.

Industry-specific Factors

Technology Level

One explanation for the country pattern is that countries differ in their industrial structures and the choice of entry modes will be influenced by the characteristics of the industry (Kogut and Singh, 1988). In previous studies, a number of industry variables, such as industry R&D expenditures to sales and industry media and advertising expenditure to sales, have been tested and shown to be significant in explaining the mode of entry choice. Conventionally, the relationship of these variables to entry mode choice is said to discourage joint ventures in order to preserve proprietary assets, given the transaction cost argument that firms craft governance structures designed to promote asset utilization while safeguarding against hazards (Gatignon & Anderson, 1988).

Specifically, Stopford and Wells (1972) find a negative correlation between research and development expenditures and the proportion of subsidiaries organized as joint ventures rather than wholly owned subsidiaries. Anderson and Coughlan (1987) study

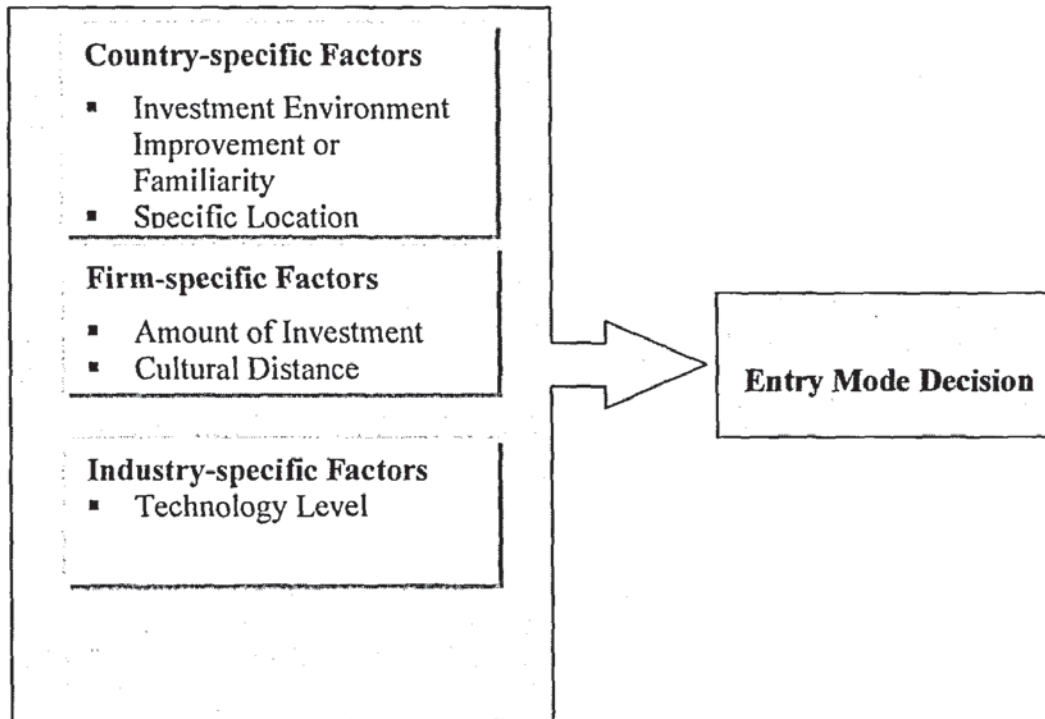
the use of WOE (high control) versus independent distribution (low control) by U.S. semiconductor manufacturers operating in foreign markets. They find that high control is more often employed for technically sophisticated products, which tend to have higher proprietary content, than unsophisticated products. Gatignon and Anderson (1988) and Gomes-Casseres (1989) state that in industries involving products with high levels of proprietary knowledge, firms are noted to prefer 100 percent control to the subsidiary. The higher the investors' R&D intensity, the lower the probability that they will enter through shared-equity ventures. Hennart and Larimo (1998) argue that an investor that possesses the full complement of know-how to operate internationally has strong incentives to keep complete control and to enter through wholly owned subsidiaries.

In summary, the above studies examine the impact of R&D expenditure or proprietary knowledge on the choice of entry modes. They suggest that a firm will have a higher propensity to use WOE as the mode of entry if its technology is advanced. Following the same logic, it is suggested that low control modes are preferred for firms in low-tech sectors with low levels of proprietary knowledge, and lower expenditure on R&D. As EJVs, CJVs and JSCs are lower control modes compared with WOE, it is hypothesised:

H5. Foreign investors prefer WOE in high-tech industries, but EJVs, CJVs, and JSCs in low-tech industries.

The above hypotheses can be incorporated into a simple analytical framework as indicated by Figure 2.1.

Figure 2.1: The Entry Mode Decision Framework



Section 2.3

Research Methodology

Data

Lack of good data on foreign operations especially at the firm level is a notorious problem in international business research (Kim and Hwang, 1992). Previous studies indicate that one of the difficulties in conducting research on business in centrally planned economies is the scarcity of reliable data (Beamish and Wang, 1989). It is only in recent years that China has begun to publish data on foreign investment activities (Shan, 1991).

The source of the data used in the thesis is China Annual Industrial Statistics, which is provided by State Statistical Bureau of China (SSB). China Annual Industrial Statistics is an official statistical data base that is maintained by SSB. It is preceded by sampling domestic firms and FIEs in manufacturing sectors across China every year. The sample is drawn on a random basis with regard to sector, location, and size, and other factors. Once included, these firms are required to complete the questionnaire. China has the State Statistics Law, demanding entities (business or non-business) to objectively and truly record and report the data. Moreover, the information collection is conducted by a nation-wide network consisting of statistician teams at the county, city, provincial and central levels. This systematic organisation helps in collecting as complete information as possible. In addition, the Statistics Bureau has the principle of using simpler and reasonable indicators to collect the information from the enterprises. All the indicators have very clear and detailed definition to avoid confusion and vagueness. Besides, the process and quality of information collection are monitored and controlled. All these methods build a good base for response rates and reliable information.

The information provided by the SSB has been used by the academic community in the West. According to Chow (1993, p810), the official statistical reporting in China is by and large honest, and internally consistent and accurate enough for empirical work. The Bureau pays special attention to ensure the quality of the data. It uses a logic-

testing method, which links related variables together to identify illogical data, and a historical method, which tracks a firm's historical data. For example, in its survey and report system manual, it specifies more than 120 logic tests for major project surveys and more than thirty logic tests for industrial surveys (State Statistical Survey and Report System of China, 1994, pp. 202-203 and p241).

Specifically, three data sets that contain information on FIEs in China in seven industries in 2000, 1999, and 1998 have been used. Data sets for 1998 and 1999 are used in Chapter Two, and data for 1998 – 2000 are analyzed in Chapter Three and Chapter Four. The sample size is 11,765 for 2000, 10,757 for 1999, and 10,666 for 1998. It covers the most important part of the industrial output. On the aggregate level, it is a good reflection of the industrial development and operation in the national economy. It gathers firm-level data, and involves both FIEs and domestic enterprises. As this study focuses on FIEs, the sample profile to be introduced will focus on the FIE part of the database which accounts for about 5% of the total population. But the output account for about 60% of the total industrial output produced by FIEs. The samples are all those FIEs whose annual sales revenue is above RMB 5 million.

Moreover, all these firms are in manufacturing industries. For each firm, the database contains many indicators. It provides not only basic information, e.g., identity code, geographic location, telephone number, major product ranges, entry mode, start date of operations, the number of employees, product sector, but also detailed financial information, e.g., capital contributions by different partners, fixed and working capital, output, sales, tax and profits. According to the New Edition of Directory of Industrial Statistics (SSB, 2000b, p280-306), the annual industrial statistics covers 35 manufacturing product sectors, which are coded by two-digit standard industrial classification (SIC). In this study, we only select 7 product sectors, i.e. garment, food manufacturing, pharmaceuticals, general machinery, transport equipment, electrical goods and electronic products. The selection of these 7 product sectors for this study is for several reasons.

First, the choice of a small number of specific industries avoids the limitation generated by cross sectional studies. It allows us to control extensively for many sources of heterogeneity in the data and to enable more robust testing (Arora and Fosfuri, 2000).

Particularly, it can rule out the cross-sector effect that is profound in relation to firm performance in China (Luo and Tan, 1997). As a result, greater confidence is possible in applying the result. Second, these product sectors are the most popular fields in which FIEs have been established. They are also the key product sectors for the economy according to the Chinese government.

Second, these product sectors are the most popular fields in which FIEs have been established. They are also the key product sectors for the economy according to the Chinese government.

Finally, all the industries in China can be grouped as labor-intensive, capital-intensive, and technology-intensive industries (to be discussed in Chapter Three). Among these 7 product sectors, food and beverage, and textile and clothing are categorized as labor-intensive; machinery and transportation equipment as capital-intensive; and pharmaceuticals, electrical machinery, and electronics and telecom equipment as technology-intensive. Therefore, these 7 product sectors constitute a natural test-bed for analyzing the impact of industry characteristics on performance.

It must be noted that in Chinese statistics all investment from outside Mainland China is regarded as being "foreign". For instance, direct investment from Hong Kong, Macao and Taiwan is recorded as FDI. When there is a need to differentiate between investors from the above regions and those from other countries, the former is usually defined as overseas Chinese investors and the later as other foreign investors.

As data 1998 and 1999, which are used in this chapter, provide the same profile, a brief introduction to the more recent data 1999 is given in the following section. Table 2.1 presents the sectoral distribution of FIEs in the seven industries in China for 1999. Due to missing values, finally 10,606 observations are used. There were 2839 firms in the garment industry, accounting for 27% of the total FIEs in the sample, followed by food manufacturing (22%), electronics (18%) and electricals (15%). The number of FIEs in the capital- and technology-intensive industries such as pharmaceuticals (9%), transport equipment (5%) and general machinery (5%), were small. From Table 2.1, it can be seen that one important limitation of the data set is that the share of JSCs was very small. The proportions of WOE in each industry are: food manufacturing (5.26%),

garment manufacturing (9.52%), pharmaceutical industry (0.58%), general machinery manufacturing (2.45%), transport equipment manufacturing (1.35%), electrical industry (4.96%), electronic and communication equipment manufacturing (7.18%).

Variables and Measurement

Entry Modes

The dependent variable is entry mode. As mentioned earlier, there are four main types of organisational forms of FDI in China. WOE is defined as the base category, and assign a value of 0 to it. CJVs, EJs and JSCs are assigned the values of 1, 2 and 3 respectively.

No ranking or order is imposed on these entry modes for three reasons. Firstly, it is impossible to tell which of CJVs, EJs or JSCs will lead to more resource commitment and control by foreign investors. Secondly, in many cases control may not always be that important. Dunning's eclectic paradigm (1981) suggests that, MNEs tend to make the best combination of its firm-specific advantages with the location-specific advantages of the host country, no matter whether FDI is motivated for the host-country market, export or efficiency improvement. WOE is not necessarily better than CJVs, EJs or JSCs for these purposes. Finally, it is often assumed that managers perform rational analytic decision making: they are assumed to consider all the modes of entry at the same point of time instead of a sequential process, and they are assumed to consider all the factors at the same point of time instead of some factors at different stages (Pan and Tse, 2000). Therefore, entry modes have been modelled in the way that setting a mode as a baseline against which other modes are compared (Agarwal and Ramaswami, 1992; Buckley and Casson, 1998).

Table 2.1: Sectoral Distribution of FIEs by Types of Entry Modes

Industries	WOE	EJV	CJV	JSE	Total
<i>Food</i> (food manufacturing) (%)	558 (5.26)	1499 (14.13)	232 (2.19)	19 (0.18)	2308 (21.76)
<i>Garm</i> (garment manufacturing)	1010 (9.52)	1396 (13.16)	407 (3.84)	26 (0.25)	2839 (26.77)
<i>Pharm</i> (pharmaceutical industry) (%)	402 (0.58)	35 (3.79)	11 (0.33)	510 (0.10)	510 (4.81)
<i>Mach</i> (general machinery manufacturing) (%)	260 (2.45)	590 (5.56)	76 (0.72)	8 (0.08)	934 (8.81)
<i>Trans</i> (transport equipment manufacturing) (%)	143 (1.35)	366 (3.45)	24 (0.23)	4 (0.04)	537 (5.06)
<i>Elec</i> (electrical industry) (%)	526 (4.96)	852 (8.03)	158 (1.49)	14 (0.13)	1550 (14.61)
<i>Elect</i> (electronic and communication equipment manufacturing) (%)	761 (7.18)	973 (9.17)	170 (1.60)	24 (0.23)	1928 (18.18)
<i>Total</i> (%)	3320 (31.30)	6078 (57.31)	1102 (10.39)	106 (1.00)	10606 (100)

The choice of explanatory variables is governed by the theoretical issues and data availability. The explanatory variables used in this study are defined below.

Investment Environment Improvement or Familiarity (TIMING)

The investment environment covers various aspects, including social, economic, political and legal elements. China since 1978 has continued to improve its environment by reforming its economic system, opening up more and more areas and industries to FDI, providing a legal system to protect foreign investors' operations and property rights, and enhancing economic and social infrastructure. Its high rates of economic growth have been sustained for many years so that its market size has expanded steadily over time. With its efforts to gain the membership of WTO, China has moved towards an establishment of a business climate in international standards. During this process, foreign businesses have become more and more familiar with Chinese business practices. In this sense, an appropriate proxy for the investment environment or familiarity is the timing of the formation of an affiliate. Thus, the year 1978 is used as the base year, and it is assumed that China's investment environment

has improved over the years. Therefore, the larger the number, the more recent is the formation of the affiliate, and the better the business environment and familiarity.

Specific Locations (REGION)

A dummy variable called "Region" is introduced with 0 indicating the inner areas and 1 the coastal areas. As discussed earlier, in the case of China, the coastal areas can be identified as the low information cost regions (Wei and Liu, 2001) and therefore can be assumed to have a good investment environment. On the other hand, the inland regions are often perceived as less economically liberalised, with poor infrastructure and low efficiency.

One issue with respect to the location dummy variable needs to be pointed out. Since the FDI environment in China has been liberalised over the past 25 years, such a variable, which is categorised into coastal areas and inland areas, does not seem to capture the way in which preferential treatment has gradually been extended to more and more areas over the 25 years. Some new measures accordingly might have an impact upon the FIEs' choices of entry mode and performance consequences. As the data used in this study are cross-sectional it has not been possible to examine changes over time. Nevertheless, relevant information on opening up, which could be relevant for future research, has been provided below.

In China, the opening up process has been a gradual one. This could be further explained from the aspects of the region, sector, and the mode of FDI. Regionally, 4 special economic zones in Guangdong and Fujian Provinces have been established first since 1979, where preferential economic policies were pursued, because these areas are close to Hong Kong and Macao, and have natural links with the outside world. Based on the successful experience of the 4 special economic zones, 14 coastal cities, such as Qingdao, Tianjin, Dalian, were opened to foreign investment in 1984, which resulted in the spread of FDI from the special economic zones to other coastal regions and led to the first FDI boom in 1984-85. Then, the opening up expanded to provincial capital cities in inland areas like Taiyuan and Xian, followed by the coming up of the development program of western regions.

From the aspect of sector/products, there are four categories of FDI in China: encouraged sectors, allowed sectors, restricted sectors, and forbidden sectors. In the past 20 years, Chinese government took the gradual approach to open up the sectors in the way of gradually moving more and more sectors/products types from “the restricted” to “the allowed” and from “the allowed” to “the encouraged”. Specifically, in manufacturing sectors, foreign investment in auto components was not allowed to exceed 50% by 2001. Now this sector allows the mode of WOE. However, bus manufacturers still have the limitation of up to 50% of ownership cap. In the sector of power generation equipment, foreign companies have been allowed to form majority JVs and even WOE in China, which was not allowed in the past. This gradual open process is also reflected in the service areas like banking and insurance.

With respect to the mode of FDI, at the beginning only CJVs were allowed. Lately EJVs and WOE were also allowed, followed by JSCs, franchising and other forms. Currently, foreign investors can choose entry modes more freely than even before. The existing minority JVs may upgrade to majority JVs, and majority JVs may upgrade to WOE. Moreover, in the past, WOE were usually established in coastal areas, but now more and more WOE are located in inland areas.

Amount of Investment (FORINV)

One important limitation of the current data set is that it does not have information on foreign parent firms. Thus, data on the parent firm sizes, R&D and technological capabilities and their experiences in international business are not available. However, the amounts of investment into their subsidiaries may indirectly reflect the overall business position(s) of the parent(s). As discussed earlier, large firms have a greater ability to expend resources and absorb risks than smaller ones, and therefore are able to make larger investments. Given the lack of the information on foreign parent companies, the size of the investment is used as a proxy for the size of the parent company. This may be a reasonable proxy because the two sizes are expected to be highly correlated. However, caution must be exercised when interpreting the result as the two sizes are not the same.

Cultural Distance (FOR)

One important limitation of the current data set is that it does not have information on foreign parent firms. Thus, data on the parent firm sizes, R&D and technological capabilities and their experiences in international business are not available. However, the amounts of investment into their subsidiaries may indirectly reflect the overall business position(s) of the parent(s). As discussed earlier, large firms have a greater ability to expend resources and absorb risks than smaller ones, and therefore are able to make larger investments. Given the lack of the information on foreign parent companies, the size of the investment is used as a proxy for the size of the parent company. This may be a reasonable proxy because the two sizes are expected to be highly correlated. However, caution must be exercised when interpreting the result as the two sizes are not the same.

Technology Level

Dummy variables are introduced for the seven industries as mentioned earlier. The base category is the garment industry. It is assumed that pharmaceuticals, electronics and transport equipment are the relatively high-tech industries while the remaining are relatively mature and stable industries. These dummies are also expected to capture other exogenous effects associated with these individual industries.

Model Specification

For the econometric analysis, the different entry modes are analysed as alternatives without any implicit order. There are four entry modes: WOE(0), EJV(1), CJV(2) and JSC(3). They depend on a set of characteristics X . Because of the nature of the dependent variable, a multinomial logit model is used. Many recent studies related to entry-mode choice have employed logistic regression models (Gatignon and Anderson, 1988; Kogut and Singh, 1988; Agarwal and Ramaswami, 1992; Kim and Hwang, 1992). Multinomial logit analysis is an appropriate modelling procedure for qualitative dependent variables with more than two levels. In this study, it is specified to estimate the effect of the explanatory factors on the probability that each of the four alternatives would be chosen. The probability that the i th firm will choose the j th entry mode (P_{ij}) is given by

$$P_{ij} = \Pr (R_{ij} > R_{ik}), \text{ for } k \neq j, j = 0, 1, 2, 3.$$

with R_{ij} being the maximum utility (return) attainable for firm i if it chooses the j th entry mode and

$$R_{ij} = \beta_j' X_{ij} + \varepsilon_{ij}.$$

where β_j is a vector of coefficients of each of the explanatory variables. If the stochastic terms ε s have the independent and Weibull distribution, the multinomial logit model can be expressed as

$$P_{ij} = \exp(\beta_j' X_{ij}) / \sum \exp(\beta_j' X_{ij})$$

The parameters (β s) are estimated by maximising a log likelihood function.

Before applying the logistic regression, means, standard deviations, and correlation between independent variables are checked. There are no unexpected multicollinearity problems in the data with respect to the use of multivariate analysis.

Section 2.4

Results and Discussions

The multinomial logit model is a special case of a general model of utility (return) maximisation: an individual firm is assumed to have preferences defined over a set of alternative entry modes: WOE, EJV, CJV and JSC. The coefficients show the effect of the explanatory variables on the marginal utility of the entry mode under consideration, relative to the reference – the WOE. The results of the multinomial logit regression analysis are presented in Table 2.2. Estimates with the negative sign imply the preference for the WOE. For instance, the estimated slope coefficient of -0.153 suggests that for a unit increase in timing (1 year), the log of the odds in favour of choosing EJV goes down by 0.15 units. The interpretation of all other coefficients in Table 2.2 can be made in the same way. The statistical significance of a coefficient indicates whether the corresponding explanatory variable significantly affects the marginal utility of the entry mode to which it applies relative to the WOE. Further, the overall efficacy of the model is assessed using the likelihood ratio χ^2 , which is twice the difference in log likelihoods for the current model and the intercept-only model. Large χ^2 values and small p values indicate statistical significance.

The marginal effects in the logit model presented in Table 2.3 are the partial derivatives of the slope coefficients of the model (the probabilities) provided in Table 2.2. The marginal effect of a unit change in the value of a regressor in the logit model is different from that in the linear regression model. In the latter model, the slope coefficient of a variable gives the change in that variable, holding all other variables constant. But for the logit model the rate of change in the probability of an event happening is given by $\beta_j P_i (1 - P_i)$, where β_j is the (partial regression) coefficient of the j th regressor. But in evaluating P_i , all the variables included in the analysis are involved. In the latter model, the slope coefficient measures the change in the average value of the regressand for a unit change in the value of a regressor, with all other variables held

constant. Therefore, to assess the simultaneous effect of the explanatory variables on the probabilities of the four distinct entry modes, one should turn to the marginal effects, which are presented in Table 2.3. The estimated parameters show the effect of the explanatory variables on the probability of undertaking the entry mode under consideration. .

The negative and highly significant coefficients on TIMING suggest the preference for the WOE over all other entry modes. This implies, *ceteris paribus*, the better and the more transparent the investment environment, the more likely the foreign invested firms will be to choose WOE. The marginal effects bring out some interesting points (Table 2.3). TIMING is positively and significantly associated with WOE, negatively and significantly with EJV and JSC, and negatively and not significantly with CJV. As the investment environment improves, *ceteris paribus*, the probability of undertaking the WOE mode increases by 3.1%, but of pursuing the EJV, JSC and CJV decreases by 2.9%, 0.1% and 0.1% respectively. H1 is supported.

Similarly, the coefficients on REGION are highly significant, and the negative signs suggest a greater preference for the WOE, as opposed to other entry modes. Turning to the marginal effects, the probability of undertaking the WOE and CJV modes is positively and significantly affected by REGION, while the opposite is the case with the EJV and JSC strategies. It suggests the importance of specific location on the choice of entry mode, and foreign invested enterprises in China located in coastal areas prefer WOE. H2 is supported.

Table 2.2: Multinomial Logit Regression Estimates: Comparison with WOE

	EJV	CJV	JSC
<i>Constant</i>	3.6409*** (0.1711)	1.4009*** (0.2551)	0.9557* (0.5339)
<i>TIMING</i>	-0.1530*** (0.0084)	-0.1157*** (0.0124)	-0.2074*** (0.0287)
<i>REGION</i>	-1.1573*** (0.0996)	-0.4401*** (0.1588)	-1.6176*** (0.2839)
<i>FORINV</i>	-1.4253*** (0.3204)	-5.7288*** (1.1877)	-0.0451 (0.9453)
<i>FOR</i>	0.3549*** (0.0463)	-0.1964*** (0.0744)	0.1192 (0.2052)
<i>FOOD</i>	0.6304*** (0.0675)	0.1905* (0.1008)	0.1972 (0.3146)
<i>PHARM</i>	1.3843*** (0.1467)	0.4311** (0.2228)	1.6571*** (0.3989)
<i>MACH</i>	0.5215*** (0.0880)	-0.1468 (0.1449)	0.2214 (0.4141)
<i>TRANS</i>	0.6813*** (0.1121)	-0.5856*** (0.2313)	0.1058 (0.5599)
<i>ELEC</i>	0.2402*** (0.0713)	-0.1588 (0.1095)	0.1126 (0.3377)
<i>ELECT</i>	0.0283 (0.0659)	-0.4278*** (0.1051)	0.2900 (0.2898)
<i>Log likelihood function</i>	-9693.306		
χ^2	1060.15***		

Notes:

1. Standard errors are in parentheses.
2. ***, **, and * indicate that the coefficient is significantly different from zero at the 1%, 5% and 10% levels respectively.

The coefficients of FORINV are all negative in Table 2.2, suggesting the preference for the WOE. Ceteris paribus, foreign invested firms which commit more resources in China are more likely to choose WOEs. H3 is thus supported. From Table 2.3, it can be seen that FORINV significantly improves the probabilities of being WOEs and CJVs. The amount of capital investment is positively related to the choice of the WOE and negatively associates with the CJV mode. It has no significant effect on the probability of being EJVs and JSCs. This reflects the foreign investors' ownership advantage and the

need for tight control over the subsidiary's operations if large resources are committed to its affiliates.

The cultural effects are captured by dummy variable FOR. The results show that other foreign invested firms are more likely to choose EJV over WOE than those from Hong Kong, Macao and Taiwan. CJVs are the least favoured by other foreign invested firms. The coefficients on JSC are insignificant in Tables 2.2 and 2.3, indicating that there is no preference for JSCs over WOE and that the variable can not help explain the probability of foreign invested firms to undertake the JSE mode. H4 is supported.

As explained earlier, compared with other foreign invested firms, overseas Chinese investors are geographically and culturally closer to China. They benefit from personal relationships and good local knowledge. On the other hand, other foreign invested firms are relatively unfamiliar with local customs and have relatively large cultural distance. This necessitates heavy reliance of other foreign investors on local Chinese partners. Therefore, EJV is preferred over WOE by other foreign invested firms. A CJV is a contract based enterprise, and the familiarity and trust between the partners are essential for its success. As they generally lack the local knowledge advantages, other foreign investors do not favour CJVs. In the sample, 7.85% of other foreign invested firms chose CJVs, compared with 12.62% of Hong Kong, Macao and Taiwan firms. Overall, the results lend support to H1, H2, H3, and H4.

Turning now to the industry-specific factors, among several industries, it is interesting to see that in all seven industries, foreign invested enterprises are more likely to enter the Chinese market through EJV over WOE, *ceteris paribus*. Furthermore, in the machinery, transport equipment, electrical and electronics industries, the CJV mode is the least favourable option. Only in the pharmaceutical industry, the JSC is a more favourable mode of entry, as opposed to the WOE. This is probably because EJV was still the dominant entry mode up to 1999, though the growth rate of foreign invested firms undertaking WOE outpaced that of EJV in recent years (China Statistical Yearbook, 2000).

**Table 2.3: Marginal Effects of Explanatory Variables on Entry Modes
– Estimated from a Multinomial Logit Model**

	WOE	EJV	CJV	JSC
<i>Constant</i>	-0.6881*** (0.0336)	0.7913*** (0.0345)	-0.0904*** (0.0195)	-0.0128*** (0.0052)
<i>TIMING</i>	0.0311*** (0.0017)	-0.0289*** (0.0018)	-0.0012 (0.0010)	-0.0010*** (0.0003)
<i>REGION</i>	0.2223*** (0.0205)	-0.2445*** (0.0203)	0.0304*** (0.0122)	-0.0083*** (0.0025)
<i>FORINV</i>	0.4234*** (0.0717)	-0.0047 (0.0940)	-0.4317*** (0.1029)	0.0130 (0.0089)
<i>FOR</i>	-0.0572*** (0.0094)	0.0967*** (0.0102)	-0.0388*** (0.0061)	-0.0007 (0.0019)
<i>FOOD</i>	-0.1177*** (0.0137)	0.1399*** (0.0145)	-0.0204*** (0.0081)	-0.0019 (0.0029)
<i>PHARM</i>	-0.2623*** (0.0302)	0.2996*** (0.0297)	-0.0447*** (0.0169)	0.0074** (0.0036)
<i>MACH</i>	-0.0884*** (0.0179)	0.1335*** (0.0193)	-0.0443*** (0.0119)	-0.0007 (0.0039)
<i>TRANS</i>	-0.1032*** (0.0233)	0.1987*** (0.0257)	-0.0932*** (0.0194)	-0.0023 (0.0052)
<i>ELEC</i>	-0.0380*** (0.0144)	0.0668*** (0.0157)	-0.0286*** (0.0091)	-0.0001 (0.0031)
<i>ELECT</i>	0.0070 (0.0133)	0.0305** (0.0148)	-0.0405*** (0.0088)	0.0030 (0.0027)

Notes:

1. Standard errors are in parentheses.
2. ***, **, and * indicate that the coefficient is significantly different from zero at the 1%, 5% and 10% levels respectively.

Moreover, there is no clear pattern for the industry-specific factors to affect the entry mode choice. Thus, H5 does not seem to be supported by the Chinese experience. However, the apparent loss of explanatory power of the industry-specific factors may be caused by the fact that the classification of industry is highly aggregate. For instance, the electronics industry is regarded as a relatively high-tech sector in this study. However, if we examine the industry at a less aggregate level, we can find that the industry covers a very wide range of products, including simple calculators, household electronic appliances, computers and complete radar systems (Wei and Liu, 2001). This is actually a mixture of low-tech standard goods and capital- and knowledge-intensive products.

Given this aggregation, the industry-specific factors in the individual sub-sectors are blurred, and it is difficult to establish the real relationship between the industry-specific factors and the choice of entry modes.

Section 2.5 - Conclusions

As mentioned earlier, the choice of entry mode is a strategic decision. Ownership structure not only affects the share of profits, costs and risks from an affiliate, but also has a crucial impact on a firm's competitive advantage. Therefore, it influences the success of a firm's long-term international operations. The purpose of this chapter is to investigate, using a multinomial logit model, the determinants of alternative FDI strategies to penetrate the Chinese market, i.e. CJVs, EJV, JSCs and WOE.

A framework, which consists of five hypotheses, is developed based on the recent theoretical and empirical literature. These hypotheses are tested on a data set covering over 10,000 foreign subsidiaries in China in 1999. The same model is also applied on data 1998. The results are robust, and they tell a consistent story (results not reported). The major predictions of theory are borne out. MNEs may prefer the WOE strategy under the conditions of a good investment environment, large capital commitment, and small cultural distance. If these conditions are not met, EJV would be of greater use. The relative propensity to pursue CJVs increases with a good investment environment, small capital commitment, and small cultural distance. JSEs are not favoured by MNEs when the investment environment improves and when affiliates are located in the coastal areas. Foreign invested firms have been found to have a greater preference for EJV as a mode of entry into the Chinese market in all industries.

This research has implications for managers. The results of this study lend credence to the proposition that the choice of entry mode is influenced by location-, firm-, and culture-specific factors. Managers can be provided with a better understanding of the importance of each variable in influencing the entry mode decision; hence they can better prioritize the relevant variables in evaluating their entry mode alternatives. This appears valuable because it will allow managers, who often confront time and resource

constrains, to focus on the variables most relevant to their entry mode decision without going through an exhaustive entry mode analysis.

The study has its limitations. There are some aspects not considered in the paper, e.g. factors associated with parent firms. Only three variables are significant in explaining the probability of undertaking JSCs as an entry mode. This may be because JSCs are relatively new, and not many MNEs have chosen this entry mode. In addition, as the equity of a JSC is likely to be spread more widely than an EJV or a CJV. In this sense, an investment into a JSC resembles a portfolio investment, although this kind of investment is clearly defined as a direct one in China as the foreign investor's equity share must be greater than 25%. Moreover, a case study could provide further insights into the factors responsible for entry mode decisions.

Notwithstanding the limitations, this study, compared with other studies in the area, has several advantages. The data set is the most comprehensive one regarding foreign invested firms' activities in China. In addition, it is the first attempt to examine all available FDI entry strategies.

Chapter Three

Entry Modes and Performance

Abstract

A firm's entry mode choice impacts its overseas business performance and survival. Answers to this question that which mode of entry perform better is of practical and theoretical importance in today's global economy. This study empirically examines the relationship between the entry mode that a MNE employed for entering a foreign market and its performance consequences in the context of China. WOE, EJV, CJV, and JSC are examined, and 4 hypotheses are developed based on the transaction cost theory. 8 determinants of performance are also theoretically analyzed and empirically tested. It is found that in terms of Return on Assets and Asset Turnover, WOE performs the best, followed by EJV, CJV, and finally JSC. Some new findings are also generated with respect to the determinants of performance.

Section 3.1 – Introduction

As noted in Chapter Two, entry mode choice is an important strategic decision that MNEs make when conducting international business, because it impacts a firm's overseas business performance and survival (Davidson, 1982; Killing, 1982; Anderson & Gatignon, 1986; Root, 1987; Porter, 1987; Hill, et al, 1990; Kim and Lyn, 1990; Li and Guisinger 1991; Kim & Hwang, 1992; Woodcock, et al, 1994; Li, 1995; Delios & Ensign, 2000; Makino & Neupert, 2000; Isobe, et al, 2000). Thus, a good knowledge of relative efficiency of entry strategies must help MNEs select their optimum ownership mode, formulate appropriate investment strategies, work out proper financial strategies such as financing, budgeting, transfer pricing, and dividend policy (Luo, 1997, p211), and produce the maximum risk-adjusted "return on investment" for them (Anderson and Gatignon, 1986).

Specifically, answers to the question that what mode of entry performs better must be of practical and theoretical importance in today's global economy (Lambkin, 1988; Li and Guisinger 1991; Woodcock et al 1994; Li 1995; Decastro and Chrismann, 1995; Ekeledo and Sivakumar, 1998; Pan, et al, 1999a). From the practical perspective, identifying the appropriate entry mode in a given context is necessarily a difficult and complex task (Hill, et al, 1990). Managers may find it hard to identify some of the advantages or disadvantages of a particular entry mode, because it is too arduous and time-consuming in the "real world" (Root, 1994 p183). The equity-based entry decision process, for instance, even involves several sub-decisions taken over a long period of time, with multiple feedback that stimulates the reconsideration of earlier decisions. Even a decision to investigate requires substantial management time and money (p147-148). Moreover, managers usually have a limited analytical capacity (Simon, 1995). They often decompose a complex decision into a hierarchical process and adopt a small set of critical variables to monitor at each level (Steinbruner, 1974). As a result, when making an entry

mode decision in the “real world”, a firm is expected to choose the entry mode that offers the highest risk-adjusted return on investment (Agarwal and Ramaswami, 1992).

From the theoretical perspective, the subject of entry mode and performance does not seem to have been given adequate academic attention (Woodcock, 1994; Chan 1995; Li, 1995; Osland and Cavusgil, 1996; Chen, 1999). In contrast, there have been a number of studies on how MNEs select specific international entry modes (Woodcock, et al, 1994; Nitsch, et al, 1996). Not having included firm performance measures in empirical analyses, these studies provide no normative implications regarding the performance consequences of entry mode choice (Woodcock, et al, 1994; Brouthers, et al, 1999; Makino & Neupert, 2000).

Very few studies have linked entry modes to performance, and empirically tested the performance results of the implementation of the various entry strategies (Woodcock, et al, 1994). Among these studies, many of them examined entry mode performance from an absolute perspective (Chowdhury, 1992; Woodcock, et al, 1994). Obviously, examining performance of entry strategies from an absolute perspective fails to take into account a critical element of the context within which most entry mode choices are being made (Chowdhury, 1992). An entry mode is usually selected after being compared with a range of other available options (Hill, et al, 1990). The final decision is often influenced by the firm’s overall assessment of the potential costs and benefits of the available options (Contractor, 1990; Root, 1994). Without comparison, the results generated do not have strong practical and instructive meaning for managers, facing numerous options, who have to make entry strategy decisions before entering a new foreign market (Brouthers, et al, 1999). Thus, more intensive research on the entry mode performance from a comparative perspective is demanded (Kim and Lyn, 1990; Chowdhury, 1992; Woodcock, et al, 1994; Chan, 1995; Nitsch, et al, 1996; Makino & Neupert, 2000).

Owing to the difficulty associated with collecting valid and reliable data for a firm’s international joint venture (IJV) and / or subsidiary performance, empirical research that

explicitly measured and compared the performance of the various international entry modes has been even less (Woodcock, et al, 1994; Nitsch, et al, 1996; Osland and Cavusgil, 1996; Arora & Fosfuri, 2000). These studies could be further classified into two groups according to the measure of performance: studies employing firm survival or exit rate as performance measures, and studies based on a firm's financial results.

In the former group, Li and Guisinger (1991) explore performance differences between greenfield, acquisition, and joint venture (JV) modes, using a sample of 85 foreign-controlled non-financial firms in the United States that either filed for bankruptcy protection or were involuntarily liquidated or ceased operations mainly due to poor financial performance during 1978-1988. Chowdhury (1992) compares performance between WOE and EJV, based on data of 8,741 manufacturing subsidiaries, which were drawn from the Harvard Multinational Enterprise Project. Li (1995) also investigates the effects of strategic choices on performance by examining the entry and survival of 1235 foreign subsidiaries in the U.S. computer and pharmaceutical industries over the 1974-89 period. Like Li and Guisinger (1991), three modes of entry are examined in his study: acquisitions, JVs, and greenfield investments. Additionally, Shaver (1998) examines the effect of entry mode choice (greenfield and acquisition) on performance in the context of the United States by using a sample consisting of 213 entries by 177 firms in 1987.

In studies based on firms' financial results, Dang (1977) examines the relationship between ownership and performance of subsidiaries, using a survey conducted for a sample of 16 WOEs and 11 EJVs of U.S.-based MNEs in the Philippines and Taiwan. Using a sample of 321 Japanese firms investing in North America in 1991, Woodcock et al (1994) examine acquisitions, greenfields, EJVs and their performance implications. The key point to this study is that it seeks to "bridge the gap" and develop a more theoretical logic for performance differences between the three international ownership-based entry modes. Moreover, it empirically tests the differences using financial performance measures rather than proxies, while at the same time controlling for location factors. Similarly, Nitsch et al(1996) examine the mode/performance activity for 124

(1992) and 173 (1994) Japanese entries into Western Europe, using the same data source as Woodcock's. Besides, based on the information of the 293 largest firms in European Community nations, Brouthers, et al (2000) examine the relationship between the choice of WOE, EJV and CJV and managerial satisfaction with firm performance.

These empirical studies make significant contributions to our understanding of the performance differences between various entry strategies. It also has managerial implications for managers who are facing various options for entry mode choices. Most importantly, these studies help to highlight the importance of studying entry mode performance by providing evidence that different entry modes may have different performance levels.

Meanwhile, some limitations need to be pointed out. First, most of the research findings in these studies are either inconsistent, contradictory, or inconclusive. There is considerable disagreement over which mode tends to yield a higher profitability. For instance, Li (1995) finds that greenfields might outperform JVs and acquisitions, and there was no significant difference between acquisitions and JVs. However, in another study, Nitsch et al (1996) find that JVs and greenfields outperformed acquisitions, and there was no significant difference between greenfield and JV. Dang (1977) points out that there is no relationship between performance of subsidiary and entry mode choice. In contrast, Brouthers et al (2000) find that entry mode choice had a significant influence on firm performance. With respect to inconclusive results, Shaver (1998) indicates that greenfields may have performance advantages over acquisitions, and acquisitions may also have performance advantages over greenfields.

Second, a number of firm-, industry-, and country-specific factors, which have been empirically tested and found to have significant implications on firm performance, failed to be considered and/or fully controlled for. Previous studies indicate that performance advantages from entry mode choice are not universal but depend on firm attributes and industry conditions (Shave, 1998). By incorporating these factors, a more complete explanation of entry mode performance is expected (Brouthers, et al, 1999; Lawrence,

2000).

Given the importance of the effects of these factors, some of these studies have tried to incorporate them, but others have failed to do so. For example, Woodcock et al (1994) do not control for a number of firm, industry and country-specific contingency variables such as strategic intent, firm size, and organizational characteristics. They use a data set comprised of only Japanese firms, yet Japanese firms are known to have strong organizational cultures. Moreover, they partially control for industry-specific factors by only using manufacturing firms, and controlled for country-specific factors by only examining entries into Northern America. Other two examples are studies by Dang (1977) and Brouthers et al (2000). Dang controls for none, and Brouthers et al control for only one dummy variable - manufacturing or service industry.

Thirdly, with the exception of Brouthers et al(2000) who examine both equity-based modes, i.e. WOE and EJV, and non-equity-based modes, i.e. CJV, all the other studies have restricted their examination of entry mode choices to equity-based modes. As a result, only the performance difference between equity-based modes (WOEs and EJVs) is known. Performance results of other modes of entry still need to be found out.

Fourthly, most of the above studies are based on a small sample size for only a few industries. For instance, Dang's study (1977) based on 27 firms only. Even the study conducted by Brouthers et al (2000), which has a larger sample size than that of Dang, is based on 293 firms only. Compared with these two survey studies, others, which use secondary data, could only be said that to use relatively larger sample sizes. For instance, Li and Guisinger's study (1991) is based on 85 firms, and Shaver's (1998) is based on 177 firms.

For any empirical studies, however, the issue of sample size must be considered by the researcher (Hair, et al, 1998, p164). The effects of sample size are seen most directly in the statistical power of the significance testing and the generalisability of the result. It is suggested that a small sample size may easily result in either too little statistical power

for the test to realistically identify significant results, or an “overfitting” of the data such that the results are artificially good because they fit the sample very well, yet have no generalizability (p23).

Fifthly, most of these studies use dated data. In the contemporary global economy, business environments differ radically from those in the past. It is thus questionable, for example, whether Dang’s research (1977) conducted almost 25 years ago in the Philippines and Taiwan, is useful in the contemporary global economy (Lawrence, 2000). Besides, all the other 7 studies employ dated data that were gathered by 1994.

Sixthly, half of these studies (Dang, 1977; Woodcock, et al, 1994; Nitsch, et al, 1996; Brouthers, et al, 2000) only consider firms that are still operating, which may produce a potential bias in favor of the surviving firms (Pan, et al, 1999a; Makino and Neupert, 2000). This in turn may reduce the generalisability of the studies. Past studies indicate that, by addressing only those firms that have enjoyed enough success to sustain their international operations, the quantitative research on MNEs may show some degree of “survivor bias” (Caves, 1998). It is suggested, therefore, in the sample selection, it is important to recognize and try to avoid survivor biases (Caves, 1998), especially for studies regarding entry mode performance in the context of emerging economic regions (Isobe, et al, 2000).

Finally, 5 of these 8 studies use the U.S. as the context of studies. This immediately suggests some limitations to generalisability. To extend the generalisability of the previous findings, additional studies using different home and host countries should be undertaken (Nitsch, et al, 1996; Brouthers, et al, 1999; Isobe, et al, 2000). Additionally, except for one study by Dang (1977) that examines entry mode performance in developing countries - Philippines and Taiwan, all the others focus on developed countries. It is questionable whether the research findings generated from the studies on developed countries are meaningful for the developing world.

As noted in Chapter Two, there are four FDI entry modes in China: WOE, EJV, CJV and JSC, and in the year of 2000, there were over 364,000 foreign invested enterprises in China (Liu, Wang and Wei, 2001). Despite the increased frequency of these entries in China, however, little is known about the performance of firms using different entry strategies into China (Pan, et al, 1999; Luo and Peng, 1999). Pan, et al (1999) examine the impact of three modes of entry: EJV, WOE, and CJV on profitability and market share, using a sample of 14,466 FIEs in China in 1995. Similarly, Luo (1996) gives another test on the difference of financial performance between EJV, WOE, and CJV by employing a time-series sample from 1988 to 1992.

By testing evidence on the effect of entry mode decisions on the financial performance of MNEs in China, these two major studies make some contributions to our understanding of the relationship between entry modes and performance in the context of China. Most importantly, the two studies fill in some empirical gaps pointed out earlier. For instance, some determinants of performance are controlled for in the study by Pan, et al (1999). Moreover, both equity-based and non-equity-based modes are examined in the two studies. Nevertheless, they also suffer from several limitations that are similar to those noted earlier.

First, although the three modes of entry are examined in both studies, there are no clear findings on which mode performs better. For example, Pan et al (1999a) find that EJV has significantly higher profitability than CJV, while WOE did not differ significantly from CJV. However, Luo (1996) finds that there is no significant difference in the dimensions of profitability and asset efficiency between EJV, CJV and WOE.

Second, although the two studies examine more types of entry mode than ever before, the most recent type of entry mode in China, JSC, has not been studied yet.

Third, although as noted earlier that a number of firm-, industry-, and country-specific factors have been empirically tested and found to have significant implications for foreign firm performance, the study by Luo (1996) still fails to incorporate even one of

them. Even the study by Pan et al (1999a), which incorporates more variables than ever before, has still not considered one of the most important factors - cultural distance between the MNE's home and host countries (Johanson and Vahlne, 1977; Kogut and Singh, 1988; Hennart and Larimo, 1998), which is empirically tested to have an effect on MNEs' performance (Kim and Lyn, 1990; Woodcock, et al, 1994; Nitsch, et al, 1996). They themselves also indicate that they fail to incorporate marketing mix variables.

Fourth, as the research setting is China, the specific characteristics of FDI in China would be expected to be relevant (Beamish, 1993). There are a number of China-specific variables expected to have significant effect on FIEs' performance in China (Luo, 1997a). For example, Tse, et al (1997) indicate that the level of government a FIE is working with in China may impact performance of the venture. Such a China-specific factor has not been considered in both studies. This may influence the results generated.

Finally, they all suffer from self-identified problems with the data. As they point out, the data sets for their studies only include firms that are still operating. Thus a potential bias in favor of the surviving firms may be produced. Luo (1995a; 1996) also indicates that a database created from the financial results of a small sample operating in one Chinese province, Jiangsu, may cause problems in terms of validity and reliability of such data.

In an effort to address all the deficiencies given above, the current research aims to reexamine empirically the relationship between the entry mode that a MNE employed for entering an international market and its performance consequences in the context of China. WOE, EJV, CJV and JSC are examined, and which mode of entry performs better will be clearly pointed out. In order to do so, the theoretical relationship of entry mode performance is built from the perspectives of resource commitment and managerial control, based on the transaction cost approach. Meanwhile, a large number of determinants of a foreign firm's performance are incorporated. Their impacts on performance are also theoretically hypothesized and empirically tested.

The remainder of the paper is organized in four sections. Section 3.2 reviews the literature and develops the hypotheses. Section 3.3 details data specifications, the operational measures, and research methods. Section 3.4 presents research findings and discussions. The last Section 3.5 generates conclusions, implications, and limitations.

Section 3.2

Literature Review and Hypotheses

As discussed in Chapter Two, the transaction cost approach (TCA) (Caves, 1982; Anderson and Gatignon, 1986; Williamson, 1986; Beamish and Banks, 1987; Erramilli and Rao, 1993) prescribes cross-border activities according to the economic rationale that firms will minimise all costs associated with the entire value-added chain. It has been fairly commonly applied in the general marketing literature (Anderson and Weitz, 1986; Heide and John, 1988), especially in entry-mode investigations (Anderson and Gatignon, 1986; Anderson and Coughlan, 1987; Gatignon and Anderson, 1988; Klein, 1989). According to TCA, the basic criterion used to evaluate entry modes is the level of control or resource commitment each mode affords the entrant, and the most appropriate (i.e. most efficient) entry mode is a function of the tradeoff between control and the cost of resource commitment (Anderson and Gatignon, 1986; Erramilli and Rao, 1993). As its least cost premise is intuitively linked to improved performance, TCA offers the most promising theoretical foundation for the study of entry mode performance (Woodcock, et al, 1994; Brouthers, et al, 1999).

Accordingly, prior studies on entry mode performance usually explain such a relationship from the perspectives of resource commitment and managerial control (Contractor, 1990; Hennart, 1991; Chowdhury, 1992; Kim and Hwang, 1992; Madhok, 1997). From both perspectives, Pan et al (1999) also empirically examine the relationship between the choice of WOE, EJV, and CJV and performance consequence in the context of China. It is reasonable to discuss the same issue in the same way in the current study when the range of entry mode choice is extended from the above three only to including JSCs.

WOEs and EJVs

Resource commitment means dedicated assets that cannot be reduplicated to alternative uses without loss of value (Hill, et al, 1990). It further refers to the financial and managerial capacity of a firm for serving a particular foreign market (Anderson and Gatignon, 1986; Erramilli and Rao, 1993). These assets may be tangible (e.g. physical plant) or intangible (e.g. management know-how). By its very nature, most foreign production involves some degree of investment in dedicated assets. Hence the cost is incurred. The higher the resource commitment of one particular mode of entry, the higher the cost, and the harder it is for a firm to recoup its investment and make a profit (Teece, 1982; Chowdhury, 1992).

In the case of a WOE, the MNE has to bear all the costs of opening up and serving the foreign market. Thus, the MNE owns all of the assets, and the level of resource commitment is correspondingly high (Hill, et al, 1990). Moreover, it is important to note that resource commitments constitute an exit barrier and serve to limit the strategic flexibility of the firm (Harrigan, 1981). When resource commitments are extensive the MNE cannot exit from a foreign market without incurring substantial sunk cost. Of course, from a purely economic perspective sunk costs are an 'irrational' exit barrier and cannot be recovered (Hill, et al, 1990). The implication is that the cost of resource commitment is high, and the profit is low if the mode of entry is a WOE.

With respect to an EJV, a firm's resource commitment is little relative to a WOE entry mode because of the shared resource commitment between firms (Anderson and Gatignon 1986; Hill, et al, 1990). Empirical studies have shown that MNEs in fact contribute less complete technological packages to EJVs than they do to their WOEs (Davies, 1977). Moreover, there exists a school of thought that recognises the value of local partnership (Beamish and Banks, 1987; Hennart, 1991). Local firms are likely to have more experience in their home markets than MNEs. Not only will they be more familiar with local customs, but exclusive economic elites and business groups may provide them with a network of connections that MNEs would find hard to penetrate.

Formation of an EJV has thus often been considered an effective means of acquiring local knowledge and, hence, of overcoming location-based disadvantages (Hymer, 1976). These provide EJVs with more effectiveness and less resource needed compared with WOE. Several studies find that EJVs perform better when ownership is shared with local partners (Beamish, 1985; Beamish and Banks, 1987; Makino & Delios, 1996). As a result, there are reasons to believe that EJVs would perform well financially.

This argument could be illustrated well by using the case of China. In a semi-closed and semi-planned economy like China, various government regulations, local market protectionism, and business networks are daunting barriers to foreign MNEs. In addition, unique local cultural and consumption behaviors are new challenges to get to local customers. All this points to the need of partnership from appropriate local businesses (Osland and Cavusgil, 1996). For MNEs, choosing EJVs as the mode of entry in China means gaining faster approval and entry into the local market, wider and quicker market access, favorable investment incentives, and various kinds of support from the local government (Child, 1994; Yan and Gray, 1994). Moreover, many government officials are concerned about not allowing foreigners to exploit China and thus are more trusting of Chinese representatives. From this point of view, EJVs in China may use less resource for communication, and therefore, may have more competitive advantage than WOE (Osland and Cavusgil, 1996). Given the above, it is hypothesised:

H1. EJVs should outperform WOE.

However, from the perspective of managerial control, there is another story. Control here means authority over operational and strategic decision-making. It refers to the ability of a firm to influence systems, methods, and decisions in that foreign market (Anderson and Gatignon, 1986). It has a critical impact on the future of a foreign enterprise. Without control, a firm finds it more difficult to coordinate actions, carry out strategies, revise strategies, and resolve the disputes that invariably arise when two parties to a contract pursue their own interests (Davidson, 1982). With control, however, the entrant can use it to obtain a larger share of the foreign enterprise's profit (Anderson and Gatignon,

1986). In short, different entry modes have frequently been associated with managerial control (Caves, 1982; Davidson, 1982; Calvet, 1984; Anderson and Gatignon, 1986; Root, 1987; Gatignon and Anderson, 1988), and more managerial control should contribute to better performance (Woodcock, et al, 1994).

In the case of a WOE, control over day-to-day operations and certain strategic decisions are delegated to the foreign subsidiaries, and this allows foreign subsidiaries complete responsibility and control from inception to demise (Hill, et al, 1990; Madhok, 1997). Foreign subsidiaries, in turn, have few reservations about extending their competitive and proprietary assets using wholly owned operations abroad (Davidson and McFetridge, 1984). They are more likely to launch their newest products in the local market, which are often the most profitable products. Most importantly, foreign subsidiaries avoid the conflicts of interest, objectives, and management styles that occur in EJVs (Tse, et al, 1997; Vanhonacker, 1997). They can pursue wholeheartedly their own goals and objectives. This will ultimately result in better performance.

In contrast, in an EJV, the level of control depends on the ownership split and the number of parties involved. In any event, control must be shared with venture partners (Hill, et al, 1994). The multiple ownership arrangement, however, incurs costs associated with managing organizational control mechanisms. These costs stem from conflicts of interest between the partners and managing the relationship between partners (Killing, 1983; Beamish and Banks, 1987; Gomes-Casseres, 1989; Woodcock, et al, 1994; Nitsch, et al, 1996). These costs must impact on performance.

In China, foreign partners in EJVs today are faced with perceptions and expectations on the part of the Chinese that have changed in recent years, and many conflicts are found between them (Vanhonacker, 1997). For instance, many foreign partners have found it hard to keep their Chinese partners motivated for a change, particularly when the firm has attained a comfortable market position and a comfortable level of operational profits. Also, Chinese partners, naturally, want as much technological information as possible. Foreign partners, however, are reluctant to give away advanced, proprietary technology

for fear that it will be copied – especially in light of China’s spotty enforcement of intellectual property rights. Besides, it is now widely acknowledged that most Chinese partners seek profits on a much shorter time horizon than foreign partners. Meanwhile, foreign partners are sometimes willing to sustain losses for growth, more typically, they desire to reinvest their profits for further expansion. Thus, differences of opinion about profit taking have led to tensions in many EJVs. In contrast, without the burden of an uncooperative partner, WOE in China allow foreign investors to set up, manage, and protect their own processes and procedures, and deliver efficiency and effectiveness to Chinese economic system (Wanhonakcer, 1997). Given the above reasoning from the perspective of managerial control, it is hypothesised:

H2. WOEs should outperform EJVs.

CJVs, WOEs and EJVs

The above discussions result in two competing hypotheses about performance difference between EJVs and WOEs. Comparing with WOEs and EJVs, CJVs are non-equity type of partnership between a foreign and a local firm. The two parties are bound by contracts rather than equity-based investments. As a foreign partner, an MNE only needs to sign a contract with the local partner. There are no compulsory requirements of any types of revenue-generating assets for the implementation of the contract. In short, CJVs tend to be short-term and contract based (Hill, et al, 1990).

Because of the absence of equity-based investment, and relatively short-term existence, one would expect that it is hard to forge and maintain a contractual relationship (Pan, et al, 1999). To switch from one firm to another, the switching cost is incurred, hence adds costs of doing business. Once a new contractual partnership is set up, the costs of maintaining it may also be substantial. It is possible that a CJV is the most costly mode of operation, compared with an EJV and WOS (Pan, et al, 1999). It is also suggested that managers should anticipate the high levels of failure associated with CJVs given their

complex cost structures and complicated reasons for initiation (Beamish 1985). Thus, from the perspective of resource commitment, EJVs and WOE's should outperform CJVs.

From the perspective of managerial control, foreign firms entering through CJVs are also at a disadvantage compared with EJVs and WOE's (Pan, et al, 1999). Usually, they do not have effective direct control over promotion of their product in the local market, and local contractors may not devote adequate resources to support their product sales. Thus, the overall effectiveness of the market penetration strategy can be compromised without an adequate level of managerial control. As a result, many CJVs have a very slim profit margin (Pan and Chi, 1999). Taken together, it is hypothesized:

H3. WOE's and EJVs should outperform CJVs.

JSCs , WOE's, EJVs and CJVs

With respect to the last mode of entry – JSCs, there has not been any systematic study on the performance of JSCs in China so far (Tse and Lau, 1999). As a result, whether JSCs would perform better than other modes of entry has not yet been resolved theoretically and empirically. The current study is the first one to compare the performance of JSCs with EJVs, WFOEs, and CJVs in the context of China. Meanwhile, as a pioneer study, it is difficult to develop hypotheses properly.

In term of finding a theoretical foundation of performance of JSCs, TCA, as noted earlier, is still applicable (Williamson, 1985; Barney & Ouchi, 1986). The rationale is that, in JSCs, workers see their future tied with the company. This motivation cuts across the JSCs and accordingly, transactional costs in many operational systems are reduced, and hence the firm would be more efficient (Williamson, 1985). This expectation is also reinforced by past studies. It is found that both management and workers maintain a strong sense of responsibility for the firm's profit when they co-own the firms they work

in, and often the firm productivity and market ability are improved (Child, 1994; Dyck, 1997).

In the case of China, JSCs resemble those firms in the USA and Western Europe in which ownership is shared between workers, managers and investors (Tse and Lau, 1999). However, despite the comparative advantages that JSCs have, one cannot give higher expectation of JSC performance compared with other modes of entry in China due to the following reasons.

As explorers of uncharted territories, early movers assume considerably more operational risks and face untold operational uncertainties. These operational risks can be either contextual or transactional (Root, 1988). At the contextual level, the regulatory environment in the early phase of opening up to FDI tends to be extremely uncertain and even hostile. Additionally, political and social uncertainties arising in the transitional stage often reinforce variations in contextual conditions (Peng and Heath, 1996). Moreover, drastic changes in industry and market structures in the early phase of structural transformation bring on substantial variance in the investment environment.

The first foreign invested JSC was established in 1997. Thus the mode of JSCs is the latest entry mode in China, although the amount of investment of a JSC is relatively larger than an EJV, WOE, and CJV (Wang, 2000, p414). As a new mode, it is expected to have some operational risks. For example, the regulatory environment in the early phase of opening up to JSC tends to be extremely uncertain and even hostile, as it usually takes time for government to learn how to deal with the JSC mode of foreign entry and decide how to create and enforce legislation. Such uncertainties may result in much more resource commitment, and hence a lower level of profitability. Previous studies indicate that government regulations and policies have a direct effect on FIE's performance in China (Osland and Cavusgil, 1996; Luo, 1998a). The instability of Chinese FIEs is demonstrated to positively correlate with variances in the early phase. As a result, JSCs, which operate in a relatively poorer regulatory environment than other three modes, are

expected to have unsatisfactory performance outcomes. As discussed above, it is hypothesised:

H4. Among the four modes, JSCs perform the worst.

Determinants of Performance

As discussed earlier, there is considerable disagreement over which mode tends to yield higher profitability. Meanwhile, performance is the outcome of many factors (Kerin, et al, 1992). Such factors include timing of market entry (experience in host country) (Luo, 1998a; Pan, et al, 1999; Pan and Chi, 1999; Luo & Peng, 1999); firm size (Contractor and Lorange, 1988; Contractor, 1990; Beamish, 1993; Pan, et al, 1999); marketing intensity (Douglas & Cragg, 1983; Luo, 1996); size of investment (Pan and Chi, 1999; Zhou, et al, 2000); market focus (local market-oriented or export-oriented) (Pan and Chi, 1999; Luo, 1998a; Gomez and Palich, 1997; Nitsch, et al, 1995); product sector concentration (Caves, 1998; Pan, et al, 1999); business type: consumer business/industrial business (Coughlan & Cragg, 1983; Pan, et al, 1999), pillar industry/non-pillar industry (Pan, et al, 1999); cultural distance between the MNC's home and host countries (Johanson and Vahlne, 1977; Kogut and Singh, 1988; Gomez and Palich, 1997; Hennart and Larimo, 1998; Luo & Peng, 1999); country of origin (Kim and Lyn, 1990; Pan & Chi, 1999); market potential (Contractor and Lorange, 1988; Contractor, 1990; Brouthers, et al, 1999); and regional difference in the host country (Luo, 1998a; Pan, et al, 1999).

These factors have been empirically found to have significant implications for the performance of multinationals. Therefore, the inconsistent and inconclusive findings of previous studies on entry mode performance may result from not having incorporated all these factors (Brouthers, et al, 1999; Lawrence, 2000), as these contingency variables may provide further insight into the relationship between entry mode and performance (Kim and Lyn 1990; Woodcock, et al, 1994; Nitsch, et al, 1996). Thus, to better explore the effect of entry mode on performance and ensure relatively reliable results in this

study, it is particularly necessary to incorporate determinants of a foreign firm's performance, and find out their impacts on entry mode performance.

Entry Timing

Timing of FDI plays a critical role in shaping transnational firm behavior, and represents an important source of competitive advantage in international settings (Mascarenhas, 1992). It is found that early movers in a given product sector enjoy enduring advantages over late entrants (Caves and Porter, 1977; Lambkin, 1988; Mitchell, 1991; Mascarenhas, 1992; Roinson, et al, 1992). The rationale for early entry advantages is based on four major types of factors, namely economic, preemptive, technological, and behavioral (DeCastro and Chrisman, 1995; Yeung, et al, 1994). Economic factors include cost advantages from economies of scale, the experience curve effect, and asymmetries in marketing costs. Preemptive factors limit or prevent late entrants from gaining access to suppliers, markets, and customers (Bain, 1956). Technological factors include the ability of early movers to set industry standards, protect innovations and maintain technological lead through continuing research and development. With respect to behavioral factors, studies have shown that early movers often enjoy a higher degree of customer preference and loyalty than late entrants (Carpenter and Nakamoto, 1989). Early movers benefit from asymmetries in terms of switching costs, reputation, information, and consumption experience (DeCastro and Chrisman, 1995).

At the same time, early movers assume substantial costs of the "liability of foreignness" in emerging economies. According to MNE theory, such a liability not only stems from the general costs of doing business overseas, but also from dramatic differences in institutional structures, organizational forms, and managerial psyches (Zaheer, 1995). These add to the scale and scope of uncertainties and risks of potential failure (Shenkar, 1990). In contrast, late entrants can gain advantages over an early mover when they possess capabilities to acquire the same technology at a lower cost, use superior technology to produce better or cheaper products, capture shifts in consumers' tastes more quickly, and make more intensive investments than early movers (Lieberman and Montgomery, 1988). Moreover, later movers can wait until first movers have made their

mistakes, educated local governments, partners and consumers, and lobbied for a more accommodating legal and institutional framework for FDI (Kvint, 1994).

In the case of China, past empirical studies find that early movers enjoy more advantages than late movers, and it is found that early movers outperform late movers in terms of profitability (Luo and Peng, 1998; Luo, 1998a; Pan and Tse, 2000). As current research also studies this issue in the context of China, from this point of view, a hypothesis developed based on the Chinese experience seems logical.

H5. Entry timing has significant and positive impact on FIEs' performance. The earlier the investment, the better the performance.

Firm Size

Firm size has long been considered to be an important determinant of performance (Haar, 1989; Smith, et al, 1989; Pan et al, 1999; Pan and Chi, 1999). Theoretically, there are many advantages of being a large firm, and these advantages affect a firm's business strategies, hence performance (Doz and Prahalad, 1991; Dunning, 1992). Specifically, large firms have more resources to invest in innovation (Cohen, 1996), and pursue more aggressive expansion strategies (Buckley and Pearce, 1979). They also benefit from economies of scale, scope, and learning (Kobrin, 1991; DuBois, Toyne and Oliff, 1993). Besides, large firms tend to have a more centralised management system, and more non-personal mechanisms of control (Ronen and Shenkar, 1985). In contrast, small and medium-sized firms often suffer from limited financial resources. They have a narrow market scope and inadequate management and technology capabilities. Additionally, they lack the necessary international experience (UN, 1993). In short, large firms tend to perform better than small firms, holding other factors constant (Rao and Rutenberg, 1979; Smith, et al, 1989).

Many empirical studies indicated that firms with large size are likely to have performance advantages (Hall and Weiss; 1967; Caves and Mehra, 1986; Kogut and Singh, 1988; Shaver, 1998). In China, it is also found that the venture size is likely to have a positive

effect on FIE performance because large size implies an ability to benefit more from economies of scale and scope and invest in advanced equipment and technology (Pan et al, 1999). Given the above, it is hypothesised:

H6. Firm size has significant and positive impact on FIEs' performance. The larger the firm size, the better the performance.

Cultural Distance

A key component of the multinational expansion process model is that cultural distance between the MNE's home and host countries influences the foreign entry process and performance (Johanson and Vahlne, 1977). The greater the extent to which corporate headquarters and subsidiaries differ in their cultural characteristics, the more difficult it becomes to effectively supervise the various units. More specifically, the headquarters depend on the unique knowledge and expertise of subsidiaries yet "the headquarters cannot relinquish all decision-rights of the subsidiaries since the local interests of subsidiaries may not always be aligned with those of the MNC as a whole" (Nohria and Ghoshal, 1994, P492). As cultural distance increases, the challenges for the organizational control system increase proportionately, as well as the cost of resource requirement, because complete and accurate information about agent performance becomes more difficult and expensive. In contrast, cultural similarity promotes communication between business partners. Improved communication should result in greater correlation between them and higher performance level (Geringer and Hebert, 1991).

Empirically, cultural distance is found to have a significant influence on performance (Luo and Peng, 1999; Li, 1995), and U.S. affiliates whose foreign parents are from culturally dissimilar countries are more likely to fail than those from culturally similar countries (significant at the .05 level) (Li and Guisinger, 1991). Since this study focuses on one host country – China, it is important to control for the cultural distance between China and different MNE's home country (Luo and Peng, 1999). The reason is that MNEs from countries that are culturally more proximate may be expected to do better in

China than MNEs from culturally more distant countries (Shenkar, 1990). It is also indicated that firms from Hong Kong, Japanese and U.S. have different levels of profitability in China (Pan and Chi, 1999). Based on the above analysis, it is hypothesised:

H7. Cultural distance has significant but negative impact on FIEs' performance. The higher the cultural distance, the poorer the performance.

Specific Industry

Research on the impact of industry diversification on firm performance has been a mainstay topic in strategic management for decades (Tallman and Li, 1996). It is indicated that firm performance is influenced by the characteristics of the industry (Caves and Mehra, 1986; Dess, et al, 1990; Kim and Lyn, 1990). Economists define an industry as a group of firms that supplies a market. Many approaches have been proposed for the classification of industry (Grant, 1998, p69). For example, industries can be classified by type of customer (producer goods and consumer goods), by the principal resources used (capital-intensive, technology-intensive, and marketing-intensive professional skill industries, or labor-intensive), or by the geographic scope of the industry (local, national, global). There exist industry effects, and industry effects mean that different industries have different performance levels (Grant, 1987).

With respect to the issue of entry mode performance, Shaver (1998) states that performance advantages from entry mode choice are not universal but depend on industry conditions. Brouther, et al (2000) also incorporate additional variables of the specific type of manufacturing industry to their model, in an effort to more completely understand the relationship between performance and entry mode choice. In the studies on entry mode performance in China, Pan, et al find that FIEs operating in the so-called pillar sectors (machinery, electronics, petrochemicals, automobiles, and construction) have a bigger market share and higher profitability than those in non-pillar sectors. Thus, to explore entry mode performance, the industry effects must be considered.

As noted above, industries can be classified by the principal resources used into capital-, technology-, and labor-intensive industries. Such a classification reflects the most distinction between industries from an international business perception (Grant, 1987). In China, FDI inflows used to concentrate in labor-intensive industries during the 1980s and then moved towards capital-intensive ones during the early 1990s. In recent years, technology-intensive industries have been attracting more and more FDI. There exists abundant cheap and good quality human resources in China, thus FIEs in the labor-intensive industries enjoy more competitive advantages than those in technology- and capital-intensive industries. On the other hand, China is a country that lacks capital, and this makes capital more costly in the country. For FIEs in capital-intensive industries, their return on investment can not be improved in the short term. Compared with those in capital-intensive industries, FIEs in technology-intensive industries do not need huge capital investment. Moreover, domestic companies are not so competitive as technology-intensive industries are underdeveloped in China, and a good infrastructure for developing such industries is relatively limited.

Given above, a dummy variable of specific industry is used to capture the industry effects on performance in this study. It is the first study on entry mode performance that employs such a variable to control for industry effects. Thus, it is hypothesised:

H8. Industry characteristics have a significant impact on FIEs' performance. Specifically, firms that are operating in labour-intensive industries should outperform those in technology-intensive industries, and firms that are operating in technology-intensive industries should outperform those in capital-intensive industries.

Sales Force Marketing

Previous research indicates that there are relationships between performance and marketing mix variables (Douglas and Craig, 1983). A number of studies have been conducted based on company performance and sales data, predominantly in the U.S. (e.g., Leone and Schultz, 1980). Outside the U.S., Lambin (1970) examined the impact of

advertising, price, distribution and relative product quality on market share for a small electrical appliance in 3 areas. All the variables, except price, had a positive effect on market share. In another study, Lambin (1972) investigated the use of different types of advertising and media on market share and sales of gasoline. Brand advertising was found to influence market share.

Douglas and Craig (1983) suggest that the relationship of alternative marketing mix strategies, such as sales force expenditure and advertising and promotional expenditure, to company performance needs to be examined. Moreover, such an examination in different types of country markets, ranging from developing countries to the highly industrialized countries, might also prove of interest (Douglas and Craig, 1983). Besides, marketing mix variables have not been considered when examining entry mode performance in the context of China in previous studies. One of marketing mix variables – sales force marketing is examined in this study.

In the case of China, it has been argued that Chinese nationals tend to rely heavily on personal relationships (*guan xi*) in business dealings (Chen, 1994). Sales force marketing, an activity heavily dependent on *guan xi*, has become an increasingly popular and effective marketing means. In addition to marketing personnel dispatched by head office, companies in China often set up regional sales offices in major target areas (Luo, 1995a). Davies (1995) argues that *guan xi* seems to be the lifeblood of the Chinese business community, extending into politics and society. Without *guan xi* one simply cannot get anything done. Bjorkman (1996) also finds that companies possessing good *guan xi* with the 'right' people are seen to enjoy an advantage over rivals. One empirical study indicates that sales force marketing (*guan xi*) had a statistically significant and positive impact on profitability and domestic sales growth of FIEs in China (Luo, 1997a). Following this logic, it is hypothesised:

H9. Sales force marketing has significant and positive impact on FIEs' performance. The more such an activity, the better the performance of the business.

In addition to the above factors that are commonly considered in the performance related studies, in emerging markets like China, there are several unique characteristics which need to be considered (Carpano, et al, 1994). As noted earlier, the impact of these China-specific characteristic on a FIE's performance, especially on its entry mode performance has not been fully considered in the past.

Market Focus

Export-oriented FDI and local market-oriented FDI are two major types of FDI in China (Luo, 1998c, p118; Pan & Chi, 1999). MNEs that adopt local market focus aim at penetrating the local Chinese market, and MNEs that adopt export focus choose China as a production base. Different types of projects carried out by MNE foreign subsidiaries have varying market performance (Kobrin, 1988).

MNEs in China that are export-oriented are more likely to operate their business on a global basis (Pan and Chi, 1999). They are able to move their production across countries in order to seek the most competitive labour, input supplies, and technology (Barlett and Ghoshal, 1988). They can internalise the arbitrage and leverage across various opportunities. Therefore, they enjoy a higher level of vertical integration to avoid various transaction costs. Moreover, in China, export oriented FIEs are levied income tax at half the rate stipulated for local-market oriented FIEs (Luo, book, p118-p119). In addition, export-oriented FIEs are exempted from paying import duty on inputs used to produce exported products. According to the Chinese turnover tax law which took effect on January1, 1994, the value-added tax (17%) paid by FIEs is refundable if the final goods are exported to foreign markets. Besides, FIEs investing in high export ratio projects are provided with further preferential treatment including: (1) reduction in land-use fees; (2) exemption from the profit remittance tax; (3) priority in obtaining water, electricity, transportation, and communication services. Evidently, export-oriented FIEs in China enjoy many incentives.

In contrast, FIEs established to exploit the local market are subject to uncertainty in both the local input and product market. They can't be run independently of the local market

like export-oriented FIEs; their exposure to country-specific risks is kept at a maximum. Most importantly, they must face the high protection of local Chinese markets (Pan, et al, 1999) . Thus, it is possible that MNEs with export focus perform better than those with local market focus. As a result, it is hypothesised:

H10. The factor of market focus has significant impact on FIEs' performance. Export-oriented FIEs should outperform those local market-oriented.

Specific Location

In an effort to attract foreign investments, many countries have developed special economic areas such as special economic zones (SEZs), export zones, free trade zones, high-tech zones, and so on (Rondinelli, 1987). Since 1979, China has established a number of special economic areas where more open policies have been applied. They include five SEZs, 14 open coastal cities, 6 open cities along the Yangtze River, 21 provincial capital cities and 13 inland boundary cities. These special economic areas enjoy greater flexibility in utilising foreign capital, introducing foreign technology and conducting economic cooperation overseas (WTO working paper 2001, p60). Correspondingly, FIEs located in these special economic areas are preferably treated in terms of income tax and other aspects compare with those in non-special economic areas (Luo, 1997a). They enjoy not only low-cost labour, tax exemptions, but duty-free imports of raw material and technology as well (Eiteman, 1990; Miljus and Moore, 1990).

Additionally, the special economic areas have historically been more developed economically, and contain better infrastructure (transportation, communication, production and business services, etc.) for foreign businesses than do the inland provinces (Luo and O'Connor, 1998). These areas also provide more Western-style business facilities and cultural atmosphere, and represent rich host markets for foreign firms, as well as the strong purchasing power in these regions. (Tse, et al, 1997). The inland provinces, by contrast, are considered to be more hostile, unstable, and risky investment locations. The infrastructure support and investment incentives in the special economic

areas imply that foreign ventures will experience fewer operating risks when they set up their operations there. As a result, these designated locations are expected to increase the likelihood that FIEs in these areas would be more profitable in China than those located elsewhere (Yan and Gray, 1994; Vanhonacker, 1997). Previous studies with regard to FIEs' performance issue in China indicate that location differences have an impact on performance (Pan, et al, 1999; Luo, 1998a; Luo, 1997a). As most of the special economic areas are located along the coast (Tse, et al, 1997), it's hypothesised:

H11. The factor of specific location has significant impact on FIEs' performance. Firms that are located **in the coastal areas perform better than those located in inner areas.**

The Level of Governments a FIE is Working with

When investing in a foreign country, the influence of the host country government can never be underestimated (Beamish, 1985; Gomes-Casseres, 1990; Brewer, 1993;). In developing countries, governments typically place restrictions on ownership by foreign corporations, production capacity, imports, and price increases (Osland and Cavusgil, 1996). They can directly and indirectly affect FIEs' structure, strategy, and performance.

In China, there is a clear hierarchy of government authorities comprising the state (i.e. the central government), the provincial, and the municipal or local government. The authorities at different levels differ from the scope of authority they are entitled. The government factor is more significant for operations in China than in other market economies because different level governments represent different risks to the investing firms (Grow, 1986). The particular level of government a FIE works with depends on the nature of its operation, its location and its scale. More specifically, it is generally regarded as safer to work with higher levels of the Chinese government because higher level governments have authority in approving projects, interpreting government policies, coordination resources, and exercising control. Such government approvals have been found to be crucial for doing business in China (Pye, 1982; Hendryx, 1986).

On the other hand, local government policies and internal guidelines are usually more flexible and more favorable than central government policies with specific effort to attract more foreign capital flow into specific regions (Zhan, 1993; Zhu, 1998). The lower the level of government a firm works with, the more flexibility a foreign venture enjoys (Tse, et al, 1997). For example, meritorious bonus systems for workers are more easily approved by lower rather than higher government levels (Miljus and Moore, 1990). As government regulations and policies have a direct effect on FIEs performance in China (Osland and Cavusgil, 1996), such flexibility will benefit FIEs that works with lower level governments. Given the above reasoning, the following hypothesis is generated. To be noted, the current study is the first attempt to examine the impact of the level of the government a FIE working with on its performance in China.

H12. The factor of the level of government a FIE is working with has significant impact on its performance. FIEs that work with government at a lower level should outperform those at the central or provincial level.

Table 3.1 summarizes of all the hypotheses developed in this chapter.

Table 3.1: Summaries of Hypotheses

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| <p>H1. EJVs should outperform WOE.</p> <p>H2. WOE should outperform EJVs.</p> <p>H3. WOE and EJVs should outperform CJVs.</p> <p>H4. Among the four modes, JSCs perform the worst.</p> <p>H5. Entry timing has significant and positive impact on FIEs' performance. The earlier The investment, the better the performance.</p> <p>H6. Firm size has significant and positive impact on FIEs' performance. The larger the Firm size, the better the performance.</p> <p>H7. Cultural distance has significant but negative impact on FIEs' performance. The Higher the cultural distance, the poorer the performance.</p> <p>H8. The factor of specific industry has significant impact on FIEs' performance. Specifically, firms that are operating in labour-intensive industries should outperform those in technology-intensive industries, and firms that are operating in technology-intensive industries should outperform those in capital-intensive industries.</p> <p>H9. Sales force marketing has significant and positive impact on FIEs' performance. The more such an activity, the better the performance.</p> <p>H10. The factor of market focus has significant impact on FIEs' performance. Export-Oriented FIEs should outperform those local market-oriented.</p> <p>H11. The factor of specific location has significant impact on FIEs' performance. Firms that are located in the coastal areas perform better than those located in inner areas.</p> <p>H12. The factor of the level of government a FIE working with has significant impact on its performance. FIEs working with government at lower level should outperform those with government at the central or provincial level.</p> |
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Section 3.3

Research Methodology

Data

Three data sets that contain information of FIEs in China in seven industries in 2000, 1999, and 1998 are used in this study. The profile of the data has been given in Chapter Two. One issue needs to be clarified here. The internationalisation literature has consistently shown that entry into a new international market requires a learning period over which entering firms establish themselves (Johanson and Vahlne, 1977; Cardozo, et al, 1989; Forsgren, 1989). During the startup period, financial performance may be poor and unstable for a variety of reasons. For example, new entrants require time to adjust to new markets, new organizational processes and systems, or new competitive factors. Also, some firms might have selected the wrong entry modes or markets and require time to recognise their errors and abandon the entries. Thus, when investigating the relationship between performance and entry mode, the effects of entry age must be considered. To control for these effects, and ensure more reliable estimation, in this study, for data 2000, those FIEs that were established after 1998 are deleted, because they may not have had enough time to establish a stable market position by 2000 (Woodcock, et al, 1994). Following the same logic, FIEs that were established after 1997 are deleted from the 1999 data, and those after 1996 from the 1998 data. Due to this factor and missing values, the final observations of 9,670 for 2000, 8,797 for 1999, and 8,411 for 1998 are used in the current study.

Table 3.2 provides details of the 2000 data as an illustration of the profiles of the final sample. Of the 9670 FIEs in 2000, 5569 were EJV, accounting for 57.6% of the total FIEs in the sample, followed by WOE (32.0%), CJV (9.3%), and JSC (1.1%). As noted in Chapter Two, one important limitation of the data set is that the share of JSCs is very small. Among them, 52.2% FIEs were invested by overseas Chinese from HongKong, Macao, and Taiwan. The remaining 47.8% FIEs were invested by other

foreign countries. In addition, only 903 FIEs, accounting for 9.3% of the total were located in non-coastal areas, all the remaining 90.7% were in coastal areas. Moreover, 46.5% of the FIEs in the sample were in labour-intensive industries (garment and food manufacturing), 36.6% in technology-intensive industries (pharmaceuticals, electrical goods and electronics products), and 16.8% in capital-intensive industries (general machinery and transport equipment). Besides, only 935 out of the total 9670 FIEs worked with central and provincial level governments, accounting for 9.7%. The remaining 90.3% worked with lower level governments. The earliest time that an operation started production was January 1978. It is the watershed for FDI in China, when China officially opened its door to FDI (Luo, 1998). The latest time was November 1998. Finally, of the 9670 FIEs, 9466, accounting for 97.9% are still in operation, 204 were closed, accounting for 2.1% of the total.

Table 3.2: Profiles of Data 2000

<i>Entry Mode</i>	EJVs (%) 5569(57.6%)	WOEs (%) 3093(32.0%)	CJVs(%) 903(9.3%)	JSCs(%) 105(1.1%)
<i>Investor's Origin</i>	Overseas Chinese Investors (%) 5044 (52.2%)	Other Foreign Investors(%) 4626(47.8%)		
<i>Geographic Location</i>	Coastal areas(%) 8767(90.7)	Inner areas (%) 903(9.3%)		
<i>Specific Industry</i>	Labor-intensive(%) 4501(46.5%)	Capital-intensive(%) 1625(16.8%)	Tech-intensive(%) 3544(36.6%)	
<i>Level of Government</i>	with Central and Provincial(%) 935(9.7%)	With Other Levels (%) 8735(90.3%)		
<i>Current Working Status</i>	Surviving(%) 9466(97.9%)	Failed(%) 204(2.1%)		

Variables and Measurements

Dependent Variables

A major problem with analysing corporate performance is how to accurately measure it (Nickell, 1995). Previous research shows that there are significant differences in the

operationalization of the indicators of the performance of MNEs (Geringer and Hebert, 1991). Typically, three types of performance measures are employed in business research (Geringer and Hebert, 1991): 1). Financial measure of performance, such as profitability, growth, and cost position (Dang, 1977; Lecraw, 1983); 2). Objective measures of performance, such as the survival of the MNE (Stopford and Wells, 1972; Killing, 1983); and 3). Subjective measure of performance, i.e. a single-item perceptual measure of a parent's satisfaction with a subsidiary's performance (e.g. "to what extent has the subsidiary met the expectations of your firm?") (Killing, 1983; Beamish, 1984).

Few researchers have investigated financial characteristics of international strategic alliances, such as asset efficiency, profitability, liquidity and financial risks (Luo, 1996). Some previous studies indicate that financial or objective measures may fail to adequately reflect the extent to which a MNE has achieved its short- and long-term objectives (Geringer and Hebert, 1991). They suggest at the same time that the use of subjective measures of firm performance relative to competitors is particularly desirable (Chandler and Hanks, 1993).

However, using managers' perception of satisfaction and a firm's survival as a measure of performance may provide mixed and inconclusive results (Osland and Cavusgil, 1996). Li (1995) and Shaver (1998) indicate that there is concern about using survival as a measure of performance, as failure may not always indicate poor performance. Other studies which use managerial satisfaction with firm performance as performance measures, also state that self-reported satisfaction with performance rather than financial (objective) measures of actual performance may raise questions of common method variance (e.g. Brouthers, et al, 2000). Additionally, as these data are always gathered after the mode choice has been made, it may be that the respondents' perceptions of performance satisfaction have changed since the original decision was made (Ding, 1997). It is also indicated that the use of subjective measures reflects difficulties in obtaining objective data or financial data (Osland & Cavusgil, 1996).

In contrast, Ghoshal (1987) points out that financial measures are significant performance

criteria because achieving efficiency, making profit, managing risks and expanding growth are major strategic objectives of MNEs' global strategy. Moreover, although some studies indicate that differences in national accounting procedures and financial reporting practices (as well as fluctuations in exchange rates) make it very difficult to compare measures such as profits across countries and different industries (Osland & Cavusgil, 1996; Brouthers et al, 1999), other studies indicate that financial or objective performance measures correlate with subjective performance measures with a high degree of reliability (Des and Robinson, 1984; Geringer and Hebert, 1991; Chandler and Hanks, 1993). Therefore, in the absence of other performance data, the use of financial or objective measures as reliable performance may be justifiable (Geringer & Hebert, 1991; Brouthers, et al, 1999). In the study of entry mode performance, the most direct and normative judgement is financial performance results, as it is possible to determine empirically the criteria with respect to which mode enjoys a relative advantage over others and to what extent, facing various options and limited time (Chowdhury, 1992).

As a consequence, in the current study, financial performance – **Profitability** and **Efficiency in Asset Management** are employed as the dependent variables. Profitability is measured by after-tax return on assets (*ROA*). Prior research suggested that the most common measure of firm performance in management research might be ROA (Gomez-Mejia and Palich, 1997). ROA measures “the relative efficiency with which the firm produces its output and is particularly well-suited to reflect the attainment of synergies in business operations” (Kim et al, 1989). This study employs ROA as one of performance indicators because of its wide-spread acceptance and its relative resistance to the financial manipulations of management (Gerhart and Milkovich, 1990). Moreover, it is widely employed in previous studies (e.g. Haar, 1989; Luo, 1996; Pan, et al, 1999).

Efficiency in asset management is measured by *Asset Turnover* - the ratio of sales revenue to total assets. Proficiency in deploying and managing the firm's assets is of vital importance (Lieberman and Montgomery, 1988; Robinson et al, 1992). Foreign firms need to pay particular attention to achieving and maintaining high operational efficiency when they expand the size of their local operations (Chan, 1995; Peng and Heath, 1996).

Both measures are generally accepted performance measures that are used in one or more of the major studies in the field (e.g. Haar, 1989; Simmonds, 1990; Luo, 1996; Gomez-Mejia and Palich, 1997; Pan, et al, 1999). They are especially widely used by firms in China and have captured the diverse objective of FDI seeking long term competitive advantages and efficiency in an emerging economy (Beamish, 1993). Table 3.3 is the summary of the dependent variables

Table 3.3: Dependent Variables and Measurements

Variables	Measurements
<i>Profitability</i>	(after-tax) Return on Assets (ROA) - Net Income /Total Assets
<i>Efficiency in Asset Management</i>	Asset Turnover - Sales Revenue/Total Assets

Note: the two measurements are taken in log function

Independent Variables

Entry Modes

Four modes of entry are examined in this study: equity joint ventures (*deju*), wholly owned enterprises (*dwoe*), contractual joint ventures (*dcju*), and Sino-foreign joint stock limited companies. As a dummy variable, entry mode falls into these three categories, and JSCs are used as the baseline.

Determinants of Performance

Cultural Distance (dculture)

As noted in Chapter Two, the available information in the data set only allows to differentiate FDI from Hong Kong, Macao and Taiwan with that from other countries. As

a result, a dummy variable "dculture" is imposed with 0 indicating the former and 1 the latter. Hong Kong, Macao, and Taiwan are indicated by prior research as culturally more proximate countries, and other countries as culturally more distant countries (Shenkar, 1990; Pan and Chi, 1999). Thus, it is assumed that investors from Hong Kong, Macao and Taiwan have smaller cultural distance than investors from the rest of the world.

Specific Location (dlcation)

A dummy variable called "dlcation" is introduced with 0 indicating the inner areas and 1 the coastal areas. Specifically, the coastal areas include provinces or cities of Beijing, Tianjin, Hebei, Liaoning, Jilin, Heilongjiang, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong, and Hainan. The inner areas include the remaining provinces. The limitations about the measure has been given in Chapter Two.

Specific Industry

It is used to capture the industry effect on performance. This dummy variable has three categories: labour-intensive industries (garment and food manufacturing); capital-intensive industries (*dcapital*) (general machinery and transport equipment); and technology-intensive industries (*dtech*) (pharmaceuticals, electrical goods and electronics products). In the analysis, labour-intensive industries are used as the baseline.

The level of government a FIE works with (dgovern)

This dummy variable is coded 1 if a FIE works with the government at the central or provincial level, and 0 otherwise.

Firm Size (fsize)

In previous studies, firm size was measured by net sales (Kim & Lyn, 1990; Gomez and Palich, 1997), sales revenue (Haar, 1989), and the number of employees (Nitsch, et al., 1995; Luo & Peng, 1999;). In this study, firm size is measured by a log function of a FIE's sales revenue. The larger the value, the bigger the firm.

Entry Timing (fage)

Competitive market entry can be measured as either categorical or continuous (Lambkin, 1988). While the categorical approach assesses market entry in terms of strategic types, such as first mover, second mover (or early follower), and late entrants, using a dummy variable measurement (Mascarenhas, 1992), the continuous approach diagnoses entry along a continuum (degree of earlier/later), measured by using the time difference in entry date between individual investors and the first mover (or other watershed moment) (Mitchell, 1990). Although both approaches capture the entry sequence, the categorical approach is often used for analyzing an oligopolistic industry (having very few firms), where the continuous approach fits better a more competitive sector (having many firms). As this study is designed to examine FDI timing in competitive industries, timing is defined as a continuous construct. Thus, in this study, entry timing of each FIE is measured by a log function of the difference between “2000”, the year investigated, and the year the FIE was established. The longer the age of a FIE in China, the longer the presence in the country and the earlier the timing of entry (Luo, 1998a).

Sales Force Marketing (marketing)

Using the same measurement given by Douglas and Craggs (1983) and Luo (1996), in this study, this factor is measured by a log function of a FIE’s sales force expenditure over its sales revenue. The larger the value, the more intensive sales force marketing a FIE conducted.

Market Focus (export)

With respect to the variable of market focus, the same method of measurement is used as in Pan and Chi (1999). Specifically, this variable is measured by the proportion of a FIE’s export value over total industrial sales value of its product sector. Industrial sales value is measured in the form of currency, and it represents total value of manufacturing goods sold or manufacturing activities provided by a manufacturing enterprise within a certain period of time (SSB, 1999, p47). Export value is part of the industrial sales value. The higher the proportion, the more a FIE is export-oriented. On the contrary, a low

proportion suggests a FIE is local-market-oriented. Table 3.4 is a summary of the independent variables.

Table 3.4: Independent /Control Variables and Measurements

Variables	Measurements
Entry Modes	<i>dejn, dwoe, dcjn</i> , jsc-baseline
Cultural Distance (<i>dculture</i>)	1= MNEs from other countries 0= MNEs from Hong Kong, Macro, and Taiwan.
Specific Location (<i>dlcation</i>)	1= coastal areas 0= inner areas
Specific Industry	Capital-intensive industries (<i>dcapital</i>) Technology-intensive industries (<i>dtech</i>) Labor- intensive industries as baseline.
The level of government a FIE working with (<i>dgovern</i>)	1= with central or provincial level 0= with other levels
Firm size (<i>fsize</i>)	log function of sales revenue
Entry timing(<i>fage</i>)	log function of the difference between 2000 and the year the FIE was established
Sales force marketing(<i>marketing</i>)	log function of sales force expenditure Over sales revenue
Market focus (<i>export</i>)	export value over industry sales value of the given product sector

Research Model

By incorporating all of these variables discussed above, the general model is generated as follows:

Performance = f (entry mode, culture distance, specific location in China, specific industry, the level of government a FIE works with, firm size, entry timing, sales force expenditure, market focus).

Correspondingly, the multiple linear regression equation is:

$$y = b_0 + b_1DEJV + b_2DWOE + b_3DCJV - b_4DCULTURE + b_5DLCATION \\ - b_6DCAPITAL - b_7DTECH - b_8DGOVERN + b_9FSIZE - b_{10}FAGE \\ - b_{11}MARKTING + b_{12}EXPORT$$

where y = dependent variables – profitability and efficiency in asset management, and are respectively measured by log functions of ROA and Asset Turnover. b_1 to b_{12} are the corresponding coefficients, and b_0 is the constant.

Analytical Approach

The technique of multiple linear regression analysis is used to estimate the effects of entry mode and other factors on performance measured by financial indicators, using the SPSS linear regression procedure (Norusis, 1999, p455). Multiple regression analysis is a statistical technique that can be used to analyse the relationship between a single dependent variable and a set of independent (predictor) variables (Hair, et al, 1998, p159). It aims to use the independent variables whose values are known to predict the single dependent value selected by the researcher (p148). Each independent variable is weighted by the regression analysis procedure to ensure maximal prediction from the set of independent variables. Moreover, the method of least squares is used to estimate the values of the coefficients. By using this method, a least-squares regression line can be obtained. The least-squares regression line is the line that has the smallest sum of differences between the observed and predicted values of the dependent variables. As a result, it is the line that fits the data best (Norusis, 1999, p383). Basing on this line, the most accurate predication could be expected.

Before performing the regression, several key issues need to be considered. The first thing is if there is correlation among the independent variables. Multicollinearity can have substantive effects on the estimation of the regression coefficients and their

statistical significance tests (Norusis, 1999, p188-189). The simplest and most obvious means of identifying multicollinearity is an examination of the correlation matrix for the independent variables. The presence of high correlations (generally .90 and above) is the first indication of substantial collinearity. Besides, two of the more common measures for assessing multiple variable collinearity are (1) the tolerance value and (2) its inverse-the variance inflation factor (VIF) (p.193). These measures tell us the degree to which each independent variable is explained by the other independent variables. More specifically, very small tolerance values (and thus large VIF values) denote high collinearity. A common cutoff threshold is a tolerance value of .10, which corresponds to a VIF value above 10.

Table 3.5 to 3.7 are the summaries of descriptive statistics and Pearson Correlation for two dependent variables. The results based on the final sample composed by the data of three different years tell a consistent story. It reveals that the highest correlation exists between *deju* and *dwoe*, in which $r = -.799$ of year 2000, $-.781$ of year 1999, and $-.770$ of year 1998. Such a result is similar to that given by Pan et al (1999) using data of 1995 China industrial census in which $r = -.727$. This is due to the fact that these two modes were adopted by the majority of foreign firms in China (Vanhonacker, 1997), and they account for a large number in the data used, thus the computer automatically regards them as correlated. Actually they are not correlated, as it is the common sense that there doesn't exist any relationship between EJVs and WOE. The other Pearson Correlation is much lower. In terms of the value of tolerance and VIF, the same results are presented. Only *deju* and *dwoe* exceed the cutoff thresholds of both tolerance and VIF. In summary, there isn't a serious problem of multicollinearity in the current study.

The second issue is if assumptions of regression analysis are violated. Meeting the assumptions of regression analysis is essential to ensure that the results obtained are truly representative of the sample and that the best results have been obtained (Hair, et al, 1998, p197). Two important assumptions to be addressed for the individual variables are linearity and normality (p197). The linearity of the relationship between dependent and independent variables represents the degree to which the change in the dependent

variable is associated with the independent variable. Normality refers to the shape of the data distribution for an individual metric variable and its correspondence to the normal distribution, the benchmark for statistical methods (p70). If the variation from the normal distribution is sufficiently large, all resulting statistical tests are invalid, as normality is required to use the F and t statistics. By using SPSS exploration techniques, the testing of this study indicates that the assumptions of normality and linearity are not violated. Besides, the testing also shows that there doesn't exist the effect of heteroscedasticity, one of the most common assumption violations. Finally, extreme outliers that may have a disproportionate impact on the regression results are not found in the current study.

Table 3.5: Descriptive Statistics and Pearson Correlation
(Data 2000, N=9670)

Variables	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11	12	13	Tolerance	VIF
1. ROA	2.1620	1.3561	1.000	-.080	.051	.077	-.153	.055	-.084	-.168	-.202	-.778	-.059	-.119	.165		
Asset Turnover	-0.0389	.8885	1.000	-.126	.104	.066	-.041	.143	-.136	-.050	-.098	.296	-.022	-.272	.262		
2. dejv	.58	.49	1.000	1.000	-.799	-.374	.093	-.132	.061	-.013	.178	-.001	.129	.112	-.238	.043	23.031
3. dwoc	.32	.47			1.000	-.220	-.052	.131	-.039	.030	-.173	.017	-.166	-.106	.256	.047	21.080
4. dcjv	0.0934	.29				1.000	-.073	.032	-.043	-.027	-.035	-.036	.027	-.027	.003	.114	8.785
5. dculture	.48	.50					1.000	-.039	.072	-.040	.122	.131	-.119	.099	-.034	.930	1.075
6. dllocation	.91	.29						1.000	-.038	.021	-.054	.038	-.002	-.135	.225	.934	1.071
7. dcapital	.17	.37							1.000	-.342	.075	-.004	-.039	-.008	-.152	.841	1.189
8. dttech	.37	.48								1.000	.061	.142	-.021	-.031	-.006	.848	1.179
9. dgovern	0.0967	.30									1.000	.145	.067	.095	-.154	.912	1.096
10. fsiz	10.3031	1.3613										1.000	.047	-.062	.005	.932	1.073
11. fage	1.7778	.5198											1.000	.017	-.001	.941	1.063
12. marking	-3.5967	1.4161												1.000	-.316	.873	1.145
13. export	.4375	.4433													1.000	.792	1.263

Table 3.6: Descriptive Statistics and Pearson Correlation
(Data 1999, N=8797)

Variables	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11	12	13	Tolerance	VIF
1. ROA	1.8313	1.3561	1.000	-.086	.053	.082	-.156	.059	-.099	-.151	-.219	-.758	-.045	-.121	.194		
Asset Turnover	-.1136	.9081	1.000	-.127	.109	.058	-.041	.131	-.142	-.063	-.088	.303	-.006	-.269	.267		
2. deyv	.60	.49	1.000	1.000	-.781	-.408	.083	-.124	.062	-.009	.169	.001	.127	.107	-.236	.042	23.733
3. dwoe	.29	.45			1.000	-.215	-.043	.120	-.034	.025	-.159	.021	-.167	-.102	.253	.048	20.965
4. dcjv	.10	.30				1.000	-.067	.029	-.049	-.029	-.044	-.044	.031	-.022	.012	.103	9.743
5. dculture	.48	.50					1.000	-.041	.089	-.049	.146	.133	-.158	.099	-.030	.913	1.095
6. dllocation	.91	.29						1.000	-.039	.015	-.042	.029	.013	-.124	.216	.941	1.062
7. dcapital	.14	.35							1.000	-.315	.065	.004	-.051	-.005	-.146	.861	1.162
8. dtech	.37	.48								1.000	.068	.115	-.007	-.024	-.015	.873	1.146
9. dgovern	0.0999	.30									1.000	.167	.033	.100	-.153	.906	1.103
10. fsize	10.2049	1.3337										1.000	.046	-.066	-.016	.930	1.075
11. fage	1.6900	.5142											1.000	.003	.012	.932	1.073
12. marking	-3.5533	1.4059												1.000	-.304	.881	1.135
13. export	.4297	.4432													1.000	.799	1.252

Table 3.7: Descriptive Statistics and Pearson Correlation
(Data1998, N=8411)

Variables	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11	12	13	Tolerance	VIF
1. ROA	3.4357	1.3701	1.000	-.098	.073	.065	-.145	.077	-.093	-.144	-.193	-.762	-.057	-.125	.188		
Asset Turnover	-0.088	.9189	1.000	-.131	.110	.065	-.054	.145	-.133	-.076	-.103	.264	-.003	-.285	.247		
2. dcjv	.61	.49	1.000	1.000	-.770	-.425	.098	-.120	.075	.001	.201	.010	.116	.091	-.249	.048	20.855
3. dwoc	.27	.45			1.000	-.209	-.062	.129	-.063	.029	-.189	.001	-.154	-.082	.256	.055	18.076
4. dcjv	.10	.30				1.000	-.063	.019	-.027	-.044	-.049	-.023	.026	-.035	.033	.112	8.896
5. dculture	.46	.50					1.000	-.046	.093	-.046	.129	.115	-.128	.075	-.030	.931	1.074
6. dlocation	.91	.29						1.000	-.050	.018	-.021	.022	-.013	-.127	.217	.938	1.066
7. dcapital	.13	.34							1.000	-.296	.071	.005	-.044	-.010	-.152	.872	1.147
8. dtech	.36	.48								1.000	.078	.100	.006	-.009	-.012	.888	1.127
9. dgovern	0.0992	.30									1.000	.132	.035	.100	-.156	.906	1.103
10. fsize	10.1495	1.2954										1.000	.060	-.071	-.025	.947	1.056
11. fage	1.5721	.5417											1.000	-.003	.017	.945	1.058
12. marketing	-3.5578	1.4295												1.000	-.296	.888	1.127
13. export	.4392	.4480													1.000	.799	1.251

Section 3.4

Results and Discussions

Empirical Results

To ensure that the results are generalizable to the population and not specific to the sample used in estimation, the most direct approach to validation is to obtain another sample from the population and assess the correspondence of the results from the two samples (Hair, et al, p.209). In this study, the same research model is tested on three data sets of 2000, 1999 and 1998 respectively, and the corresponding results are reported to see if they tell a consistent story. Table 3.8 is the summary of statistical results of the regression analyses based on the three data sets.

In the current study, both dummy and scale variables are included. Theoretically, the regression coefficients of scale variables represent the amount of change in the dependent variable for a one-unit change in the independent variable. The regression coefficients for the dummy variables represent differences between means for each group of respondents formed by a dummy variable from the reference category on the dependent variable. Significance testing of regression coefficients provides an empirical assessment of their “true” impact. In this study, the statistical significance of a coefficient indicates whether the corresponding explanatory variable significantly affects the performance of different entry modes. A positive coefficient means that the performance level increases when the value of the independent variable increases. A negative coefficient means that the performance level decreases when the value of the independent variable increases.

Entry Modes

The coefficients of three categories of the dummy variable entry mode show their performance difference relative to the reference category JSC. The larger the coefficient, the better the performance of the corresponding mode of entry. The highly significant ($p < 0.001$) coefficient of *dejv*, *dwoe*, and *dcjv* suggest that the performance of EJV's,

WOEs and CJVs differ significantly from that of JSCs in terms of ROA and asset turnover. The three positive coefficients imply that EJVs, WOE and CJVs have higher ROA and asset turnover than JSCs. H4 is supported. Moreover, the coefficient of *dwoe* is the largest, followed by *deju* and *dcju*, it suggests that WOE performs the best in terms of ROA and asset turnover, followed by EJVs and CJVs, H3 and H2 are supported, and H1 is hence rejected. Three data sets tell a consistent story.

Entry Timing

Table 3.8 also shows that entry timing is significantly ($p < 0.05$) but negatively associated with ROA and asset turnover, suggesting that, the earlier the entrant, the lower the ROA and asset turnover. The result is consistent by using three data sets for empirical testing. H5 is not supported.

Firm Size

It indicates that firm size has significant ($p < 0.001$) and positive effect on asset turnover. The larger a FIE's firm size, the higher its asset turnover. For ROA, however, firm size is significantly ($p < 0.001$) but negatively related to it, meaning that, the larger the firm size, the lower a FIE's ROA. The finding confirms the results generated by previous studies that in the context of China, larger firms have lower ROA (Pan, et al, 1999), but higher asset turnover (Luo and Peng, 1999). It suggests that firm size influences various performance dimensions differentially. Moreover, Chinese experience shows that smaller firms may have better profitability while their asset turnover may suffer. Usually the more asset, the more sales revenue, but not necessarily more profit, as larger FIEs usually have more bureaucracy/conflicts and higher costs for coordination/operation. The results are also consistent by using three different data sets. H6 is partially supported.

Culture Distances

As hypothesised, culture distance is significantly ($p < 0.001$) but negatively related to ROA and asset turnover. Specifically, in terms of ROA and asset turnover, FIEs invested by MNEs from other countries differ significantly from those from Hong Kong, Macao,

and Taiwan. The former has lower ROA and asset turnover than the latter. Moreover, three data sets tell a consistent story. H7 is hence supported.

Specific Industry

With respect to the factor of specific industry, the results show that FIEs in labour-intensive industries, with the highest ROA and asset turnover, differ significantly ($p < 0.001$) from those in technology and capital-intensive industries. Moreover, those that are in capital-intensive industries have the lowest ROA and asset turnover. It indicates the factor of specific industry has significant impact on a FIE's performance. Such results are consistent by using three data sets for testing. H8 is also supported.

Sales Force Marketing

The result shows that this factor has a significant ($p < 0.001$) but negative effect on a FIE's ROA and asset turnover, suggesting that the more sales force expenditure a FIE makes, the less its ROA and asset turnover. Three data sets tell consistent story. H9 is not supported.

Market Focus

It shows that the factor of market focus, which is measured by the proportion of a FIE's export value over total industrial sales value of its product sector, has significant ($p < 0.001$) and positive impact on the firm's ROA and asset turnover. The higher proportion is associated with higher ROA and asset turnover. It suggests that export-oriented FIEs differ significantly from local-market-oriented FIEs in both measures, and the former has higher ROA and asset turnover than the latter. The three data sets generate consistent results. H10 is supported.

Specific Location

Also as hypothesised, this factor has a significant ($p < 0.001$) impact on FIEs' ROA and asset turnover. The performance of FIEs located in the coastal areas differs significantly from those located in the inner areas. The former has higher ROA and asset turnover

than the latter. The result is consistent by using the three data sets for empirical testing. H11 is hence supported.

The Level of Government a FIE is Working with

The results indicate that this factor also has significant ($p < 0.001$) impact on performance in terms of ROA and asset turnover. FIEs working with the central or provincial government have significantly lower ROA and asset turnover than those working with other levels of government. The result is also consistent across three years. H12 is supported.

Table 3.8: Empirical Results

Variables	ROA			Asset Turnover		
	2000	1999	1998	2000	1999	1998
<i>Constant</i>	9.205***	8.651***	10.657***	-2.985***	-3.210***	-2.948***
<i>Dejv</i>	.132***	.126***	.098**	.209***	.209***	.150**
<i>Dwoe</i>	.138***	.135***	.113***	.220***	.220***	.172***
<i>Dcjr</i>	.115***	.113***	.094***	.182***	.182***	.143***
<i>Dculture</i>	-.028***	-.031***	-.032***	-.044***	-.045***	-.048***
<i>Dlocation</i>	.037***	.033***	.047***	.058***	.050***	.069***
<i>Dcapital</i>	-.100***	-.103***	-.097***	-.154***	-.156***	-.145***
<i>Dtech</i>	-.097***	-.098***	-.096***	-.152***	-.150***	-.143***
<i>Dgovern</i>	-.040***	-.042***	-.040***	-.066***	-.062***	-.060***
<i>Fsize</i>	-.762***	-.740***	-.749***	.323***	.331***	.283***
<i>Fage</i>	-.024***	-.018**	-.016*	-.039***	-.033**	-.026**
<i>Markting</i>	-.126***	-.126***	-.138***	-.188***	-.181***	-.204***
<i>Export</i>	.093***	.107***	.088***	.145***	.162***	.133***
<i>F ratio</i>	1623.989	1326.254	1294.795	253.006	238.556	201.635
<i>P<</i>	0.001	0.001	0.001	0.001	0.001	0.001
<i>R</i>	.818	.803	.806	.489	.496	.473
<i>R Square</i>	.669	.644	.649	.239	.246	.224
<i>Adjusted R Square</i>	.668	.644	.649	.238	.245	.223
<i>N</i>	9670	8797	8411	9670	8797	8411
<i>Standard Error of Estimate</i>	.7811	.8008	.8121	.7755	.7892	.8102

The entries in the table are standardized coefficients and their significance level, where $p < 0.05^*$, $< 0.01^{**}$, $< 0.001^{***}$.

Besides, table 3.8 also shows other information about the empirical analysis. Firstly, R is the absolute value of correlation coefficient, ranging from -1 to $+1$. It tells us how well the model fits the data. Values of R in table 3.8 indicate that the multiple linear regression model developed for the current study fits the data well. For ROA, all three values of R are above .800. The values of R are also higher for asset turnover.

Secondly, R square is another useful statistic. It tells what proportion of the variability of the dependent variable is “explained” by the regression model. In this study, the values of R square are above .640 for ROA, and above .230 for asset turnover, much higher compared with other studies on entry mode performance. For instance, in the study given by Pan et al (1999), the value of R square is only .105 for ROA. It indicates that the regression model applied in this study could explain relatively a large proportion of the variability of the dependent variables. It also indicates that entry modes and other performance determinants considered by this study could explain a large proportion of the observed variability in performance measured by financial indicators in term of ROA. Moreover, it is empirically confirmed that incorporating additional performance determinants could provide a more complete explanation of firms’ performance (Brouthers, et al, 1999, p842).

Table 3.8 also shows that the R^2 s are higher for the regressions with ROA as the dependent variable than in those with Asset Turnover as the dependent variable. This means that the multiple linear regression model better fits the prediction of performance and entry mode if the dependent variable is ROA. In other words, this model has higher level of prediction accuracy when the performance is measured by ROA. In contrast, the model has lower level of prediction accuracy when the performance is measured by Asset Turnover. It indicates that additional variables need to be incorporate in the model if performance is measured by Asset Turnover.

Discussions

The results given above are relatively robust, given the rationales that such results are generated by using three different data sets for testing, and each corresponding result tells a consistent story. Moreover, they are generated by incorporating a number of determinants of performance that are proved by prior research to have significant impacts on a firm's performance. Besides, a set of serious data examination before performing regression analysis also contribute to the robustness of the empirical results.

The empirical results provide solid evidence that mode of entry that a MNE employed for entering a foreign market has significant impact on its performance. It supports all the previous findings (Davidson, 1982; Killing, 1982; Anderson & Gatignon, 1986; Root, 1987; Porter, 1987; Hill, et al, 1990; Kim and Lyn, 1990; .Li and Guisinger 1991; Kim & Hwang, 1992; Woodcock, et al, 1994; Li, 1995; Delios & Ensign, 2000; Makino & Neupert, 2000; Isobe, et al, 2000). It is found that, in terms of ROA and asset turnover, WOE's perform the best among the four modes of entry followed by EJV's, CJV's, and then JSC's. It is the first study that gives such clear indications on the performance consequences of these four modes of FDI in the context of China. Thus, the objectives of the current study are fully accomplished.

With respect to other variables incorporated, the empirical study also provides solid and significant results. Some of them confirm previous findings. For instance, it is confirmed that cultural distance has significant impact on a FIE's performance, the higher the cultural distance between a FIE's home country and China, the lower its ROA and asset turnover (Li and Guisinger, 1991; Li, 1995; Luo and Peng, 1999). Moreover, the result with respect to specific location is also consistent with those pointed out in prior research. FIEs that are located in the coastal areas, such as Beijing, Shanghai, and Guangzhou, significantly outperform those located in the inner areas in terms of ROA and asset turnover (Osland and Causgil, 1996; Li, 1998; Luo, 1998a; Pan and Chi, 1999; Pan, et al, 1999). In addition, the findings confirm the size effect on performance of FIEs in China that larger firms have lower ROA, but higher asset turnover (Luo and Peng,

1999; Pan, et al, 1999).

Besides the above confirmations to previous findings, some new and interesting results are also generated. Firstly, most performance related studies control for industry effects by using the variable of industry concentration ratio (Harrigan, 1985; Kim and Hwang, 1992; Li, 1995; Pan, et al, 1999). Instead of this widely studied factor, the current study employs the factor of specific industry, which is categorized into three groups: labour-intensive, capital-intensive, and technology-intensive industries. It is the first study of entry mode performance that employs such a variable to control for industry effects. The results show that FIE performance differs significantly across Chinese industries.

Secondly, it is also the first attempt to examine the impact of the level of government a FIE working with on its performance. Although it is found to be important for FIEs operation in China (Tse, et al, 1997), this study provides solid evidence that the level of government a FIE is working with has significant impact on its performance.

Thirdly, in this study, sales force marketing is found to have significant but negative impact on the performance of FIEs in China, while a previous study found that its impact is positive (Luo, 1997a). It seems that *guan xi* may no longer be as important as previously, as China's economy is becoming more market-oriented than ever before. *Guan xi* built via sales force marketing might bring additional sales but the evidence in this study suggests that the associated cost outweighs the benefits. Bjorkman (1996) found from interviews with enterprises in China that in spite of the perceived importance of *guan xi*, with a few exceptions (usually concerning orders in South China), suppliers who were not able to compete in terms of technical quality and price had little chance of winning business deals in China. McGuinness, et al(1991) argue that for western companies having limited knowledge of the Chinese language, customs, and systems, it would seem mistaken to concentrate on building traditional type 'friendships' with the Chinese. Indeed, the Chinese themselves appear to be taking a more utilitarian approach to commercial relationships. Besides, the negative relationship between sales force expenditure and performance could also be supported by the explanation with

regard to better performance of exported-oriented FIEs (see market focus section on page 93), i.e. export-oriented FIEs, which enjoy low sales forces expenditure, out-perform those that are local market oriented.

Fourthly, although early entrants have been widely proposed to attain superior market performance than late entrants, in this study, however, entry timing is found to have significant but negative impact on FIE performance in China, i.e. early movers have lower ROA and asset turnover than late entrants. The result supports the argument that late entrants can gain advantages over an early mover, as discussed earlier. It could be further explained that in the early 1980s, the environment of FDI was uncertain, and local laws, rules, and government policies on FDI was incomplete (National Council, 1991). These factors affected the performance of early FIEs in China. Previous studies (Luo, 1995a; Luo and Tan, 1997) indicate that the instability of Chinese FIEs is positively correlate with variances in early phase. It is the first study to indicate that FIEs entering China in the early time perform worse than those entering late in terms of ROA and asset turnover.

Finally, prior research indicates that the performance of export-oriented FIEs does not differ significantly from that of local-market-oriented FIEs (Luo, 1998a; Pan and Chi, 1999). This study, however, shows that market focus has significant effect on FIEs' performance in China. Specifically, exported-oriented FIEs outperform those local-market-oriented in terms of ROA and asset turnover. It is also the first time that market focus has been found to have a significant impact on FIEs' performance in China.

Section 3.5 - Conclusions

Current research empirically examines the relationship between the entry mode that a MNE employed for entering a foreign market and its performance consequences in the context of China. Hypotheses are tested on the three data sets. Three results are generated, and they tell a consistent story. It is found that the mode of entry that a MNE employed for entering China has a significant impact on its performance. In terms of ROA and Asset Turnover, WOE's perform the best, EJV's better, followed by CJV's, and JSC's the worst. It's also found that the factors of culture distance, specific location, specific industry, the level of government a FIE working with, firm size, entry timing, sales force marketing, and market focus have significant impacts on a firm's overseas performance, in terms of ROA and Asset Turnover. Among these, the findings with respect to the effects of culture distance, specific location, and firm size on a firm's performance confirm the results generated in the past. Other findings regarding the factors of specific industry, the level of government a FIE is working with, and sales force marketing are relatively new, as these factors are first examined in the study on entry mode related performance.

These findings lead to a number of important implications for MNE managers, academics, especially international executives active in the Chinese market. First, if making profits is on top of their agenda, the WOE option is the best. Particularly, MNEs who choose this option as the mode of entry in China should not worry about their profitability at the initial stage. With respect to EJV's, it implies that the value of the local partnership in China should not be overestimated. It is possible that in the process of opening to the outside world, China has become better known by western companies. Therefore, MNEs can accumulate knowledge about the Chinese market by themselves rather than through local partners. Moreover, CJV is not a good option. For a JSC, there is a word of caution that it seems appropriate for foreign firms entering China in the near

future. At that time, the regulatory environment that may influence its performance is expected to improve significantly.

Second, although the old image that China is at the low level of the value-chain is giving way to that of a rising competitive location for technology-intensive activities for MNEs (UNCTAD, 2001, p26), the results of this study still imply that FIEs in labour-intensive industries may have higher level of performance than those in capital and technology-intensive industries, at least in terms of ROA and asset turnover.

Third, for FIEs in China, it would be better to operate projects which involve working with the local-level government, as the local authorities are expected to be more flexible than their central or provincial counterparts.

Fourth, MNEs entering China at an early year may no longer possess the first-mover advantages suggested by previous studies (Luo, 1998a; Pan and Chi, 1999; Pan et al, 1999), at least in terms of ROA and asset turnover.

Fifth, the preception that the Chinese market cannot be tackled effectively and efficiently without paying due attention to the construction and maintenance of good guan xi might be out of date. With the deepening of market-economy-oriented reforms, guan xi in China is no longer that important. A higher sales force expenditure a firm makes to build guan xi could only result in a higher cost burden and hence poorer performance. In contrast, less intensive sales force expenditure may bring a FIE higher ROA and asset turnover.

Last, the most profitable FIEs in China are those that focus on export activities. Nevertheless, it is still necessary to point out here that pursuing a local market focus is expected to increase profitable of MNEs in China. The rationale is that even a small proportion of the top income group in China could create a viable market for MNC products made in China. For example, revenues from China reached U.S. \$3.7 billion for Motorola in 1997, representing 11 percent of its total global revenues (Elegant, 1998).

Moreover, most Chinese workers normally receive higher economic rewards from income in kind (such as bonuses, housing, healthcare, children's education and other subsidies) than from formal wages and salaries. This will result in higher purchasing power than official statistics estimated hence a huge consumer market.

Like all studies, this study also suffers from some limitations that need to be pointed out for future research, most of them are caused by the secondary data used in this study. First, performance holds a multidimensional construct. It includes not only profitability, but also market growth and competitive position in the target market (Ghoshal, 1987). Ideally, multiple performance measures are preferable because no one measure is capable of capturing multiple performance objectives (Simmonds, 1990). Because of limitations imposed by data availability, profitability and efficiency in asset management have been used as indicators of performance. Future research should also consider other financial indicators such as productivity, liquidity and financial risk. As a firm may pursue the strategic dimensions of market performance as business objectives (Osland & Cavusgil, 1996), market share and sales growth rate are also desirable for performance analysis. In addition, the use of subjective measures in terms of managerial satisfaction is particularly desirable, as some previous studies indicate that financial or objective measures may fail to adequately reflect the extent to which a MNE has achieved its short- and long-term objectives (Geringer and Hebert, 1991).

Second, each FIE entity has been treated as an independent firm implying no influence of its parent(s) over its decision making. For FIEs with foreign and/or local parents, linkages of activities such as purchase/import and sales/export usually exist between parents and subsidiaries. The transfer pricing practice in such activities can also distort financial performance indicators. As data used in this study could hardly provide information about transfer pricing, the results generated should be interpreted with caution. Also, for export-oriented FIEs, costs may not be fully recorded in the data if the sales function is largely undertaken by the foreign parent company. This may have implications for interpretation of results on sales force marketing. In addition, the parent perceptions of performance could be very different from the actual financial performance

indicators. For example, the strategic mission of an overseas JV of the foreign parent may be just a sourcing place for its global network. In this case, the good performance of the JV from the perspective of the foreign parent is whether it can supply other business units with low cost and high quality components, although the declared financial performance of the JV is poor. The data used in this study could not capture such kind of information. It may also affect the results generated.

Third, China is a big country with different stages of development and diversified sub-cultures. This makes it difficult to have consistency and uniformity of the information collection. In addition, economic performance was exaggerated by local governments for political purposes. With the statistics law and a more systematic information collection system being in place, the exaggeration has been dramatically reduced. Besides, the data only cover FIEs with over RMB 5 million sales revenue, and there is no record for FIEs under RMB 5 million. Thus the conclusions from this study may not be applicable to smaller FIEs.

Fourth, like other previous studies, the current research is not based on longitudinal data. The lacking of longitudinal data prohibits tracking the sequences of FDI undertaken by MNE (Caves, 1998). For the study of entry mode performance, without longitudinal data, the changes of entry mode and some host country-specific factors may not be well observed (Pan and Tse, 2000). Yet using longitudinal data to examine performance issue over a longer period will enhance the robustness and generalizability of the key findings (Luo, 1998a). In addition, country of origin of each FIE is not provided due to the data used. This may result in the inaccurate measurement for the variable of cultural distance. The measurement of this variable needs to be improved.

Finally, the issue of how the inter-relationships between entry modes and other determinants of performance influence outcomes of entry mode performance haven't been considered in this study. The importance of examining the effect of inter-relationships derives from the fact that they may explain firm behaviour that cannot be

captured by the independent effects of the factors (Caves, 1998; Agarwal and Ramaswami, 1992).

Notwithstanding these limitations, this study provides a contribution to the existing literature in two aspect. For MNEs, the findings generated in this study lead to a number of important managerial implications for international executives presently active in China, as well as future investor to be there and beyond. It will enrich and be a step forward to a better understanding of what is the comparatively better entry strategy for MNCs in China. For researchers, it makes both exploratory and confirmatory contributions to the investment strategy studies in the FDI literature. Specifically, it is the first study that examines four FDI modes of entry and their performance consequences, and gives clear answers to which modes of entry perform better in China. Moreover, a larger number of determinants of performance than prior research are involved, in which several of them are first examined in the study of entry mode related performance, and new findings are generated accordingly. Besides, limitations generated by secondary data are intensively analyzed for future research.

Chapter Four

Performance Implications of JV Ownership Structure

Abstract

Previous research indicates that foreign equity ownership in an IJV affects the subsequent achievement of performance. The knowledge of the performance implications of JV ownership structure is thus valuable for managers who have to make decisions on their ownership position once they select IJVs, particularly the equity-based JVs as international entry modes. The current study empirically examines such an issue in the context of China, by using the same database as Chapter Three. It is found that defined by the percentage of equity held by the foreign parent, ownership structures of EJVs and JSCs have significant but negative impacts on the performance of these ventures. Specifically, minority-owned EJVs and JSCs outperform those majority-owned, in terms of Return on Asset (ROA) and Asset Turnover. It is also found that local partner selection has significant impact on JV ownership-related performance. In terms of ROA and Asset Turnover, EJVs and JSCs of China that have privately and/or collectively-owned local partners outperform those have state-owned local partners.

Section 4.1 - Introduction

With continued globalization of the world's economies, joint ventures (JVs) have become an important element of many firms' international strategies (Cave 1998; Davis, 2000). These ventures involve two or more legally distinct organizations (the parents), each of which actively participates in the decision-making activities of the jointly owned entity. If at least one parent organization is headquartered outside the JV's country of operation, or if the venture has a significant level of operations in more than one country, then it is considered to be an international joint venture (IJV).

An overwhelming majority of IJVs involves only two parent firms, one from a foreign country and the other from the host country. Some ventures may consist of multiple participants. The ownership structure of an IJV has traditionally been defined by the percentage of equity held by the foreign parent (Makino and Beamish, 1998). Where the foreign parent has a greater than 50 percent equity stake, the JV is called a majority-owned JV. If ownership is equal to 50 percent, the JV is considered co-owned, and if equity holding is less than 50 percent, it is identified as a minority-owned.

Previous studies indicate that ownership structure affects the subsequent achievement of the performance of IJVs, as it has strong implications for risk sharing, resource allocation, knowledge commitment, and organizational control (Janger, 1980; Killing, 1982, 1983; Schaan, 1983; Lecraw, 1984; Teece, 1986; Beamish and Banks, 1987; Hennart, 1988; Beamish, 1988; Gatignon and Anderson, 1988; Gomes-Casseres, 1990; Makino and Beamish, 1998). Nevertheless, explicit empirical investigations of the performance implications of JV ownership structure are still few compared with other types of studies of IJVs. Among them, some studies show that such a relationship is linear, and JVs minority-owned by foreign investors outperform majority-owned JVs. For instance, Beamish (1984), using a sample of less developed countries (LDCs), points out that when MNEs own less than 50% of the equity there is a greater likelihood of

satisfactory performance. Also, Franko (1971), by using a sample of 1100 EJV in developed countries, finds that an IJV is considered to be unstable when the holdings of the foreign firms cross the 50 percent ownership line. This is consistent with Beamish's (1984) findings. Based on the evidence discussed above, the hypothesis in this study is that there is a linear relationship between ownership structure and JV performance with lower share of foreign ownership associated with better performance. The 50% ownership level is also hypothesized to be an important threshold.

Other studies, however, indicate that such a relationship is non-linear. For instance, using intensive interviews with a small sample of Canadian firms that formed IJVs in developed countries (the U.S.) and LDCs (Mexico and Kenya), Killing (1982), Schaan (1982), and Beamish and Lane (1982) find that the relationship between IJV success and equity ownership is U-shape, i.e. IJVs in which the foreign company held a minority shared or majority share tended to be more successful than IJVs in which the partners held roughly equal shares. Using the data collected from 153 subsidiaries of MNEs based in the U.S., Europe, Japan, and other LDCs located in the 5 ASEAN countries, Lecraw (1984) points out that the relationship between percent equity ownership by MNEs and the success of investment is roughly J-shaped. That is the lower level of performance occurred when equity ownership is roughly split between the TNC and its local partners. When equity ownership clearly resides with one partner or the other, the subsidiary tends to be more successful from the MNE's point of view. The commons of U-shape and J-shape studies are both of them examine three types' JVs: majority, minority, and co-owned. The differences are U-shape means majority ventures and minority ventures outperform co-owned ventures, yet J-shape refers either majority ventures or minority ventures outperform co-owned ventures.

In contrast to the above, in the study of the characteristics and performance of Korean IJVs in LDCs, Lee and Beamish (1995) find the ownership structure has no relationship with the performance by using the subjective performance measure of manager's overall satisfaction with JV performance.

Obviously, the findings of which type of foreign equity ownership in an IJV may result in better performance remain incomplete and inconclusive. This is partly because the measurements of IJV performance employed in the above studies are not identical. Moreover, scholars focus on either less developed or developed countries, and only one type of JVs (equity joint ventures-EJVs) is examined. In addition, these studies have been limited to a direct test of the IJV ownership-performance relationship without taking account of other variables that have been found to affect a firm's overseas performance. Besides, all these studies employ small samples, which were collected by 90s'. Small sample size could prevent researchers from examining performance difference between majority and minority owned JVs (Chan, 1995), and research findings generated by using the dated data could bear less implication for current situations.

Furthermore, although no country has seen the formation of more JVs with foreign firms than China, empirical studies on the performance implications of ownership structure of IJVs in China are even fewer (Beamish, 1993). To my knowledge, only one study given by Zhao and Luo (2002) directly addresses this issue. Using the data comprised of 319 equity joint ventures (EJVs) in China, they find that majority-owned ventures outperform those minority, or co-owned, in terms of financial measures of sales growth and profitability. Their study, however, suffers from the same limitation as mentioned above, for instance, it employs a small sample. Moreover, it only focuses on EJVs, yet sino-foreign joint stock limited companies (JSCs), a new type of equity-based JV as discussed in the preceding two chapters, are not examined. In addition, the study fails to control for the determinants of a foreign firm's performance, especially for the factor of local partner selection. Few researchers have systematically investigated the relationship between local partner selection and IJV performance (Luo, 1997c). However, this question is critical, and is even more critical for the success of IJVs investing in newly emerging economies like China (Luo, 1997c).

The current study aims to address the above deficiencies by reexamining empirically the performance implications of ownership structures of EJVs and JSCs in the context of China. To do so, such a relationship is theoretically built up based on the literature of the

importance of local knowledge. Moreover, all the factors that have been empirically found in Chapter Three to have significant impacts on the financial performance of foreign invested enterprises (FIEs) in China are controlled for in this study. Apart from these, the current research also examines the effect of local partner selection on a firm's overseas performance. Besides, two measurements for ownership structure are employed for empirical testing. This study is conducted by using the same database explored in chapter two.

As in traditional thinking, co-owned (50/50) EJV's create the most difficulties, therefore, this type of ventures should perform the worst compared with minority- or majority-owned ventures. In the case of China, some FIEs are not allowed to own above 50% of equity in major product sectors, such as auto and auto components. As a result, the relative local markets are protected from international competition, and the profitability in such sectors is much higher than that of others. This may much distorted the picture that 50/50 EJV's should perform the worst. Therefore, in the current research, this kind of ventures is purposely ruled out as they are distorted by government regulations.

The remainder of this study is divided into four sections. Section 4.2 presents literature and develops the hypotheses. Section 4.3 discusses methodological issues, in which, the database, variables and measurements, research model, and analytical approach are presented. Section 4.4 reports research findings, followed by discussions. Section 4.5 is the summary of the current study. Possible practical implications, limitations of this study, as well as directions for future research are also suggested.

Section 4.2

Literature Review and Hypotheses

Ownership Structure

Foreign direct investment (FDI) has often been conceptualized as a firm's response to advantages (Makino and Delios, 1996). The Eclectic Paradigm (Dunning, 1993) argues that location and internalization advantages, as well as ownership advantages shape multinational enterprises' (MNEs) actions and the patterns of FDI. However, for the foreign parent in an IJV, while they have an ownership advantage, as a consequence of investing abroad, they also have the disadvantage of being foreign (Hymer, 1976). This disadvantages stems from the lack of local knowledge of social, political and economic conditions in the host country (Beamish, 1984). Local knowledge can complement the foreign parent's ownership advantages (Makino and Delios, 1996). Only a stock of local knowledge can mitigate those disadvantages, and hence improve IJV performance (Makino and Delios, 1996).

Local knowledge comprises information and know-how about the local economy, politics, culture and business customs of a region; information on local demands and tastes; as well as information on how to access the local labor force, distribution channels, infrastructure, raw materials and other factors required for the conduct of business in a region. Such knowledge can help foreign investors to overcome market uncertainties of host countries (Stopford & Wells, 1972).

Some forms of local knowledge or resources are specific to particular local firms. Examples of such knowledge are local firms' skills and capabilities to negotiate with the local government; its access to, and skills in negotiating with, the local elite; its ability to manage the local labor force and unions; and its competence with respect to local market access, product quality, branding, market reputation, and so forth. As these forms of local knowledge and skills are both location- and firm-specific in nature, it's difficult to acquire them by the foreign parent in an IJV through the mere accumulation of

experience in a host country (Rugman and Verbeke, 1992).

Correspondingly, in a minority-owned IJV, local partners hold more equity than foreign parents do. Thus, according to the transaction cost approach (Anderson and Gatignon 1986) the resource commitment given by the local partners is relatively more than that given by the foreign parent. Obviously, as local partners, their contributions to IJVs are primarily local knowledge, and some forms of them might not only be important, but are also unique that could not be acquired by the foreign parent through the accumulation of local experience. As a result, minority-owned JVs may possess more valuable local knowledge than majority-owned JVs, in which local partners hold less equity than the foreign parent may. Such advantages are expected to help minority-owned JVs perform better than those majority-owned.

To foreign investors, China is an unfamiliar territory with several millennia-old civilization, the huge size and market potential of its population, and the dramatic changes in its political and economic scene. Its cultural traditions, norms, values are also far from those of the western countries. Thus, the rules of the game are dissimilar from those of market economies (Osland & Cavusgil, 1996). The local knowledge is therefore of particular importance to the foreign parents in IJVs of China, hence the success of these ventures. For example, the local knowledge associated with obtaining operating licenses and leases, negotiating employment contracts and interpreting investment regulations, plays an important role in the success of Kentucky Fried Chicken in China (Andrew and Beamish, 1997). Given above, it's also assumed that the more equity the local partners hold in an IJV of China, the more valuable local knowledge the JV obtains, and the better performance the JV has. Thus, it's hypothesised:

H1. The ownership structure of EJVs and JSCs has significant but negative impact on their performance. Minority-owned ventures should outperform majority-owned.

Local Partner Selection

The above discussion also implies that the selection of a local partner is important, as the local partner is the source of local knowledge. Prior research indicates that partner selection determines the right mix of strategic resources of an IJV (Harrigan, 1985; Hammel, et al, 1989). For the foreign parent in an IJV, appropriate selection of a local partner can improve its disadvantage of “foreignness”, and increase its competitiveness in the local market in general (Yan and Luo, 2001, P19). For example, a desirable local partner can make it possible to invest in industries that are subject to local government restriction against FDI, and can help them gain access to marketing and distribution channels that are available only to local business. In addition, a well-connected local partner can significantly reduce local political risks and gain political advantages in the host country.

Local partner selection is even more critical for the success of IJVs investing in newly emerging economies (Luo, 1997c). On the one hand, such economies have in recent years become major hosts of direct investment by MNCs because these rapidly expanding economies provide tremendous business opportunities that MNCs can pre-empt. On the other hand, transnational investors in such economies face the challenges of structural reform, weak market structure, poorly specified property rights, and institutional uncertainty. Local partners can be of utmost value to foreign investors by helping boost market expansion, obtaining insightful information, mitigating operational risk, and providing country-specific knowledge (Beamish, 1987).

One criterion for local partner selection is the organizational form of a local partner, as a partner’s organizational traits affect the efficiency and effectiveness of interfirm cooperation (Geringer, 1991). Economic transition has given birth to a new diversity of organizational forms (Child, 1994). The spectrum spans the continuum from state-owned to private and collective businesses (Nee, 1992). In China, privately or collectively-owned enterprises are typically operated and managed by entrepreneurs. They have fewer principle-agent conflicts and greater strategic flexibility (Nee, 1992). The existence of many unfulfilled product and market niches in the Chinese economy also

increases their chance for survival and growth. Moreover, their simple structure and small size have positioned them for speed and surprise, giving them a greater ability to react quickly to opportunities in the environment and proactively outmaneuver more established firms (Tan and Litschert, 1994). In addition, they are constrained by a “hard budget”, forcing them to be more efficient and oriented on profit (Rawski, 1994).

In contrast, state-owned enterprises lack self-motivation and operational autonomy, yet are highly vulnerable to bureaucratic “red tape”. It is reported that over 60 percent of state-owned enterprises in China have shown a loss, whereas private or collective businesses have been showing continuous profit (Jefferson, et al, 1992). Other studies also indicate clearly that privately or collectively owned enterprises are typically more efficient than state-owned enterprises (Nee, 1992; Jefferson, et al, 1992; Rawski, 1994; Tan and Litschert, 1994; Nee and Mathews, 1996; Stiglitz, 1998). Such efficiency is expected to result in better performance. Given above, it’s hypothesized:

H2. For EJVs and JSCs, local partner selection has significant impact on their performance. Ventures that have privately and/or collectively-owned local partners should outperform those have state-owned local partners.

Control Variables

The results given by Chapter Three clearly show that the variables of culture distance, specific location in China, specific industry, the level of government a FIE is working with, firm size, entry timing, sales force marketing, and market focus have significant impacts on the performance of foreign invested enterprises (FIEs) in China, in terms of return on assets and asset turnover. Thus, in the current study, which also examines the performance-related issues in the foreign market, such variables should be incorporated as control variables.

Section 4.3

Research Methodology

Data

The current research uses the same database as Chapter Three, thus the detailed description of the data is not given here. The only difference is that the sample size for Chapter Three is larger than that for this study, as only EJVs and JSCs are examined in the current research. They are ventures that are established between one foreign parent and one or more local partners. By excluding wholly owned enterprises (WOEs), contractual joint ventures (CJVs), co-owned EJVs, JSCs and missing values, the final observations of the current study comprise 4898 firms for 2000, 4609 for 1999, and 4545 for 1998.

Variables and Measurements

Dependent Variable - *Performance*

Chapter Three has given the detailed rationales regarding the performance measures employed in the thesis. Briefly, the concept of IJV performance has been conceptualised and operationalised in many different ways. No consensus on the appropriate definition and measurement of this construct has yet emerged (Geringer & Hebert, 1989; Anderson, 1990). As subjective and objective measures are found positively correlated (Geringer and Hebert, 1991), and as MNEs form JVs in China are found to primarily penetrate the local market and pursue financial goals, the market share and profitability are thus the important measures of venture performance (Yan and Gray, 1994). Therefore, the current study also employs the return on asset (*ROA*) and *Asset Turnover* as performance measures, following the study of Chapter Three.

Independent Variables

Ownership Structure

In this study, ownership structure is defined by the percentage of equity held by the foreign parent in an EJV or JSC in China, and is expressed as the total foreign investment as a percentage of total investment in such a venture. To improve the robustness, this variable is measured in two ways. First, it's measured by a continuous distribution of the raw percentage figures "*eqt*". Second, these percentage figures are transferred into a dummy variable "*eqt1*", which is equal to "1" if foreign equity ratio is more than 50 percent, and "0" if it's less than 50 percent.

Local Partner Selection

A dummy variable is used for this variable. In the sample, the total investment of an EJV or JSC is contributed by one foreign parent and one or several local partners, and the local partners are composed of state-, privately-, and/or collectively owned enterprises. If a state-owned enterprise invests more than privately or/and collectively owned enterprise does, it's assumed that the local partner of the venture is a state-owned enterprise. Thus, the investment of state-owned enterprises as a percentage of total investment by local partners is calculated first. Then, such a percentage is transformed into a dummy variable "*partner1*". It's coded "1" if the ration is less than or equal to 50 percent, represents local partners are privately and/or collectively owned enterprises, and "0" if the ration is more than 50 percent, represents local partners are state-owned enterprises.

Control Variables

Table 4.1 is the summary of all the control variables as given in Chapter Three.

Table 4.1: Control Variables and Measurements

Variables	Measurements
Cultural Distance (<i>dculture</i>)	1= MNEs from other countries 0= MNEs from Hong Kong, Macro, and Taiwan.
Specific Location in China (<i>dlcation</i>)	1= coastal areas 0= inner areas
Specific Industry	Capital-intensive industries (<i>dcapital</i>) Technology-intensive industries (<i>dtech</i>) Labor- intensive industries as baseline
The level of government a FIE working with (<i>dgovern</i>)	1= with central or provincial level 0= with other levels
Firm size (<i>fsize</i>)	log function of sales revenue
Entry timing(<i>fage</i>)	log function of the difference between 2000 and the year the FIE was established
Sales force marketing(<i>markting</i>)	log function of sales force expenditure Over sales revenue
Market focus (<i>export</i>)	export value over industry sales value of the given product sector

Research Model

By incorporating variables discussed above, the general model is given as follows:

Performance = f (JV ownership structure, local partner selection, control variables).

Correspondingly, the multiple linear regression equation is generated as:

$$\begin{aligned}
 y = & b_0 - b_1EQT/EQT1 + b_2PARTNER1 - b_3DCULTURE + b_4DLCATION \\
 & - b_5 DCAPITAL - b_6 DTECH - b_7 DGOVERN + b_8 FSIZE - b_9 FAGE \\
 & - b_{10} MARKTING + b_{11}EXPORT
 \end{aligned}$$

where y = dependent variable, and is measured by the log function of ROA and Asset Turnover. b_1 to b_{11} are the corresponding coefficients, and b_0 is the constant.

Analytical Approach

The technique of multiple linear regression analysis is used to estimate the above equations, using the SPSS linear regression procedure, as in Chapter Three. Before performing regression, serious multi-collinearity assessments are also conducted as did in Chapter Three, and no serious multicollinearity problem is found in the current study. Table 4.2a and 4.2b are the summary of descriptive statistics and pearson correlation. Only the result of data 2000 is reported, as three data sets tell a consistent story.

Table 4.2a: Descriptive Statistics and Pearson Correlation - eqt
(Data 2000, N=4898)

Variables	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11	12	Tolerance	VIF
1.ROA	2.0332	1.3738	1.000	-.187	.183	-.156	.036	-.062	-.171	-.209	-.386	-.067	-.151	.200		
Asset Turnover	-.1621	.8902	1.000	.034	.156	-.023	.137	-.101	-.094	-.078	.316	-.010	-.275	.286		
2. eqt	.4409	.42	1.000	1.000	-.103	.107	.093	-.017	.066	.078	.207	-.072	.037	.080	.914	1.094
3. partner1	.77	.50			1.000	-.061	.126	-.010	.003	-.193	-.081	-.076	-.085	.136	.916	1.092
4. dculture	.51	.34				1.000	-.032	.069	-.054	.120	.143	-.134	.062	-.005	.930	1.076
5. dllection	.87	.38					1.000	-.039	.013	-.010	.051	.009	-.116	.209	.930	1.075
6. dcapital	.18	.48						1.000	-.361	.069	-.005	-.026	-.091	-.138	.814	1.228
7. dtech	.37	.35							1.000	.095	.116	.007	.125	-.122	.809	1.236
8. dgovern	.14	1.4047								1.000	.161	.038	.090	-.118	.907	1.102
9. fsize	10.3108	.5359									1.000	.063	-.032	-.016	.900	1.111
10. fage	1.8463	.5198										1.000	-.002	.019	.959	1.043
11. marketing	0.0681	0.0951											1.000	-.279	.884	1.132
12. export	.3405	.4149												1.000	.819	1.220

Table 4.2b: Descriptive Statistics and Pearson Correlation - eqt 1
(Data 2000, N=4898)

Variables	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11	12	Tolerance	VIF
1. ROA	2.0332	1.3738	1.000	-.211	.183	-.156	.036	-.062	-.171	-.209	-.386	-.067	-.170	.200		
Asset Turnover	-.1621	.8902	1.000	.025	.156	-.023	.137	-.101	-.094	-.078	.316	-.010	-.295	.286		
2. eqt1	.40	.49	1.000	1.000	-.126	.138	.054	-.013	.054	.099	.226	-.076	.058	.016	.909	1.100
3. partner1	.77	.42			1.000	-.061	.126	-.010	.003	-.193	-.081	-.076	-.109	.136	.913	1.095
4. dculture	.51	.50				1.000	-.032	.069	-.054	.120	.143	-.134	.093	-.005	.922	1.085
5. dllocation	.87	.34					1.000	-.039	.013	-.010	.051	.009	-.141	.209	.932	1.073
6. dcapital	.18	.38						1.000	-.361	.069	-.005	-.026	-.036	-.138	.821	1.219
7. dtech	.37	.48							1.000	.095	.116	.007	.081	-.122	.813	1.230
8. dgovern	.14	.35								1.000	.161	.038	.082	-.118	.908	1.101
9. fsize	10.3108	1.4047									1.000	.063	-.024	-.016	.895	1.117
10. fage	1.8463	.5359										1.000	-.005	.019	.958	1.044
11. marketing	-3.4380	1.3582											1.000	-.306	.875	1.143
12. export	.3405	.4149												1.000	.817	1.224

Section 4.4

Results and Discussions

Empirical Results

In this study, the three data sets and two performance measures are employed, and the variable of ownership structure is measured in two different ways. Thus, a total of 12 regression analyses are conducted. Table 4.3a and Table 4.3b are the summaries of the empirical results.

A negative coefficient means the performance level decrease when the value of the independent variable increases. The statistical significance of a coefficient indicates whether the corresponding explanatory variable significantly affects the performance of different ownership structures of EJVs and JSCs. Therefore, the negative and significant sign of both *eqt* and *eqt1* show that a JV ownership structure has significant (at least $P < 0.05$) impact on its performance. The more equity ownership the foreign parent holds in an EJV or JSC of China, the lower ROA and Asset Turnover the venture obtains. In other word, minority-owned EJVs or JSCs outperform those majority-owned in terms of ROA and Asset Turnover. Hypothesis1 is thus supported.

The coefficient of *partner1* shows the performance difference of the firms that have privately or collectively-owned local partners relative to the firms that have state-owned local partners. The positive coefficient means the performance of the former is better than the latter. Therefore, the positive and significant sign means that the factor of local partner selection has a significant (all $p < 0.001$) impact on the performance of EJVs and JSCs. Specifically, the ventures that have privately or collectively-owned local partners outperform the firms that have state-owned partner in term of ROA and Asset Turnover. Hypothesis2 is thus also supported.

It is also shown that all control variables involved in this study have significant impacts on the performance of EJVs and JSCs in China. In terms of ROA and asset turnover and for both *eqt* and *eqt1*, and by using three data sets for testing, the results are consistent. They are also consistent with those generated in Chapter Three, as a result, the results about the control variables are not reported here.

Table 4.3a: Empirical Results - for *eqt*

Variables	ROA				Asset Turnover		
	2000	1999	1998		2000	1999	1998
<i>Constant</i>	9.174***	8.638***	10.723***		-2.999***	-3.152***	-2.878***
<i>Eq</i>	-.022*	-.043***	-.045***		-.026*	-.054***	-.067***
<i>partner1</i>	.077***	.076***	.077***		.118***	.114***	.118***
<i>dculture</i>	-.025**	-.018*	-.026**		-.042**	-.029*	-.040**
<i>dlocation</i>	.023**	.024**	.036***		.038**	.038**	.056***
<i>dcapital</i>	-.086***	-.088***	-.089***		-.141***	-.136***	-.139***
<i>dtech</i>	-.083***	-.081***	-.084***		-.127***	-.129***	-.132***
<i>dgovern</i>	-.028***	-.033***	-.035***		-.046***	-.045**	-.053***
<i>fsize</i>	-.759***	-.738***	-.750***		.358***	.371***	.320***
<i>fage</i>	-.022**	-.019*	-.023**		-.037**	-.035**	-.039**
<i>marking</i>	-.134***	-.130***	-.148***		-.202***	-.192***	-.229***
<i>export</i>	.109***	.122***	.088***		.168***	.189***	.138***
<i>F ratio</i>	992.507	868.557	917.740		168.280	161.807	139.951
<i>P<</i>	0.001	0.001	0.001		0.001	0.001	0.001
<i>R</i>	.831	.822	.831		.524	.528	.504
<i>R Square</i>	.691	.675	.690		.275	.279	.254
<i>Adjusted R Square</i>	.690	.674	.689		.273	.277	.252
<i>N</i>	4898	4609	4545		4898	4609	4545
<i>Standard Error of Estimate</i>	.7647	.7795	.7742		.7589	.7670	.7725

The entries in the table are standardized coefficients and their significance level, where $p < 0.1^*$, $p < 0.05^*$, $p < 0.01^{**}$, $p < 0.001^{***}$

Table 4.3b: Empirical Results – for *eqt1*

Variables	ROA			Asset Turnover		
	2000	1999	1998	2000	1999	1998
<i>Constant</i>	9.144***	8.587***	10.667***	-3.023***	-3.194***	-2.932***
<i>eqt1</i>	-.021*	-.039***	-.031***	-.027*	-.049***	-.046**
<i>partner1</i>	.077***	.076***	.078***	.118***	.114***	.120***
<i>dculture</i>	-.025**	-.018*	-.026**	-.041**	-.028*	-.040**
<i>dlocation</i>	.022**	.023**	.034***	.037**	.037**	.052***
<i>dcapital</i>	-.087***	-.088***	-.089***	-.142***	-.136***	-.139***
<i>dtech</i>	-.083***	-.081***	-.084***	-.128***	-.130***	-.131***
<i>dgovern</i>	-.028**	-.033***	-.035***	-.046***	-.046***	-.054***
<i>fsize</i>	-.758***	-.738***	-.752***	.359***	.370***	.317***
<i>fage</i>	-.022**	-.018*	-.021*	-.037**	-.034**	-.035**
<i>marking</i>	-.134***	-.131***	-.149***	-.202***	-.192***	-.231***
<i>export</i>	.107***	.120***	.085***	.167***	.185***	.134***
<i>F ratio</i>	992.493	867.274	913.600	168.340	161.390	138.311
<i>P<</i>	0.001	0.001	0.001	0.001	0.001	.0001
<i>R</i>	.831	.821	.830	.524	.528	.501
<i>R Square</i>	.691	.675	.689	.275	.279	.251
<i>Adjusted R Square</i>	.690	.674	.688	.273	.277	.249
<i>N</i>	4898	4609	4545	4898	4609	4545
<i>Standard Error of Estimate</i>	.7647	.7799	.7754	.7589	.7673	.7736

The entries in the table are standardized coefficients and their significance level, where $p < 0.05^*$, $< 0.01^{**}$, $< 0.001^{***}$.

Discussions

The results given above support all the hypotheses developed in this study. Most importantly, they are robust as 12 regression analyses generate consistent results. It clearly indicates that minority-owned EJVs or JSCs of China, in which the foreign parent holds less than 50 percent equity, outperform those majority-owned in terms of ROA and asset turnover. This finding is consistent with that given by Beamish (1985), which states that in the IJVs of LDCs, when MNEs owned less than 50% of the equity there is a greater likelihood of satisfactory performance in terms of stability and a managerial assessment of performance. Thus, this study provides another piece of empirical evidence that there is a linear relationship between the performance of equity-based JVs and their ownership structure, and such a relationship is significant and negative. It also implies that basing on the importance of local knowledge to build the theoretical relationship between JV ownership structure and its performance consequence seems logical.

Moreover, the results show that local partner selection has a significant impact on ownership performance of equity-based JVs in China, yet a previous study suggests that such a relationship is not significant (Luo, 1997c). Additionally, although some studies suggested that state-owned organizations usually have an advantage over privately or collectively-owned firms in terms of industrial experience, market power, and production and innovation facilities (e.g. Child, 1994), the current study empirically found that a privately or collective-owned local partner should be more efficient for an equity-based JV in China. Finally, the results generated in this study strongly support the notion given in the past that performance is the outcome of many factors. In the current study, the same set of factors as Chapter Three is empirically tested, and is consistently found to have significant impacts on a firm's overseas performance. It suggests that determinants of performance should be considered as many as possible when examining the performance-related issues.

Section 4.5 - Conclusions

Previous research indicates that foreign equity ownership in an IJV affects the subsequent achievement of performance. Thus, the knowledge of the performance implications of JV ownership structure is valuable for managers who have to make decisions on their ownership position once they select IJVs, particularly the equity-based JVs as the international entry modes. The current study empirically examines such an issue in the context of China, by using the same data as Chapter Three. It's found that defined by the percentage of equity held by the foreign parent, ownership structures of EJVs and JSCs have significant but negative impacts on the performance of these ventures. More specifically, minority-owned EJVs and JSCs outperform those majority-owned, in terms of ROA and Asset Turnover.

It is also found that local partner selection has a significant impact on JV ownership-related performance. EJVs and JSCs of China that have privately and/or collectively-owned local partners outperform those that have state-owned local partners, in terms of ROA and Asset Turnover. Moreover, the control variables of culture distance, specific location, specific industry, the level of governments a FIE is working with, firm size, entry timing, sales force marketing, and market focus, which were proved to have significant impacts on entry mode performance in Chapter Three, are also found to have the same effects in the current study.

One issue needs to be clarified here. First, Chapter Three says that WOE's perform best, yet this chapter finds minority-owned JVs outperform those majority-owned, thus, someone may argue that these two findings are contradictory. However, they percept WOE's just as extensions of EJVs, within which foreign partners owns 100% equity. Actually, WOE's should not be just a form of EJVs, instead, WOE's should be considered as a fundamentally different form of venture from EJVs. This fundamentality can be further illustrated from two dimensions: conflict/difference of interests and local inputs.

As noted in Chapter Three, a WOE is a totally foreign owned subsidiary of the foreign parent, in which there is neither conflict of interests nor local inputs. Yet an EJV (both minority and majority) involves conflict of interests and local inputs. From this point of view, it's improper to compare both results, and regard them as contradiction.

The findings of this study have straightforward business implications for the management of EJVs and JSCs in China. First, foreign investors who plan to select such modes of entry for entering China need to recognize that the ownership positions they hold in these ventures have important impacts on the performance level of these ventures. Most importantly, the minority position in an EJV or JSC of China could also help them to achieve higher level performance.

Second, a local partner's organizational form is of utmost importance in contributing to the efficiency and effectiveness of EJVs or JSCs in China. Although some studies argue that state firms tend to have a better relationship with various governmental institutions, and this relationship is expected to result in a greater problem-solving capacity for these firms (Child, 1994), the results given by this study suggest that privately and/or collectively-owned local partners might be the better choice.

Third, to the Chinese government, it implies that although massive efforts have been made by the government to reform state-owned enterprises, the inefficiency problem in state-owned enterprises has not been largely improved. Such reform still needs to be intensified, and it would be desirable if the government could convert state-owned enterprises to the type of privately or collectively owned enterprises, promoting better performance.

Like other studies, the current research also suffers from its limitations that warrant further investigation. Most of them are data related problems, which have been addressed intensively in Chapter Three. For instance, the results could differ or be more illustrative if subjective measures as well as more financial indicators were employed, given the reasons addressed in Chapter Three. This study is restricted to manufacturing

industry, and only 7 product sectors have been examined. Future work on Chinese JVs needs to investigate the applicability of the model given by this study to other manufacturing sectors and service industries. In addition, as discussed in Chapter Three, some problems exist in the process of data collection given Chinese circumstances. Moreover, the data has the assumption that each entity is treated as a firm, thus the issues of transfer pricing, as well as the activities of sales force marketing of export-oriented FIEs could not be considered in this study. This could affect the results generated. Apart from the mentioned above, the study only focuses on minority and majority-owned ventures, but failed to consider co-owned EJVs or JSCs. The findings about JSCs should be interpreted with caution, given their small sample size. Finally, this study used China as its analytical setting. It would be interesting to extend this study to other emerging or transitional economies and identify commonalties or distinctions. The results and implications would be more robust and generalisable if such comparisons were made.

Notwithstanding these limitations, the current study also makes some contributions to the literature on IJVs. It is the first study that empirically examines JV ownership-related performance of two types of equity-based JVs. The new insights generate are expected to be helpful for the investigations of researchers, given the existing limited literature. Specifically, it may help them to sort out the previous controversy of relationship between JV ownership structure and performance consequence. Besides, it is the first attempt to examine and clearly find out the impact of local partner selection on the JV ownership-related performance.

In summary, all economies evolve, and the characteristics present at one point in time cannot be expected to remain static (Beamish, 1993). Thus, although the issue of performance implications of JV ownership structure is certainly not a new one, it does deserve renewed interest, particularly with respect to the newly and rapidly changing industrialized economies, notably China. The updated knowledge provided by the current research will be valuable for the future research, and the better understanding of the unique characteristics of IJVs in China.

Chapter Five

Overall Conclusions

In today's global economy, firms must expand their business internationally to reduce product costs, improve quality, sustain rapid sales growth, generate additional profits, and remain competitive. Having decided to enter a foreign market, MNEs have to determine the appropriate entry modes for organising their foreign business activities. Moreover, as JVs have become an important element of many firms' international strategies, knowledge of the performance implications of JV ownership structure is also of importance for both managers in MNEs and academic researchers. The current research empirically addresses the issues of the choice of international entry modes, the relationship between entry modes and performance, and the performance implications of JV ownership structure. Four FDI modes (WOEs, EJVs, CJVs, and JSCs) in the context of China are examined, in which EJVs and JSCs are studied with respect to the issue of JVs.

The study has found that MNEs, under the conditions of a good investment environment, large capital commitment and small cultural distance, prefer the WOE strategy. If these conditions were not met, the EJV mode would be of greater use. The relative propensity to pursue the CJV mode increases with a good investment environment, small capital commitment, and small cultural distance. JSCs are not favoured by MNEs when the investment environment improves and when affiliates are located in the coastal areas. MNEs have been found to have a greater preference for an EJV as a mode of entry into the Chinese market in all industries. It is also found that in terms of return on assets (ROA) and asset turnover, WOE performs the best, followed by EJVs, CJVs, and finally JSCs. Besides, defined by the percentage of equity held by the foreign parent, ownership structures of EJVs and JSCs have significant but negative impacts on the performance of these ventures. More specifically, minority-owned EJVs or JSCs are found to outperform their majority-owned counterparts in terms of ROA and asset turnover.

These findings lead to a number of important implications for MNE managers, academics, and policy makers, especially for international executives active in the Chinese market. First, the choice of entry mode is influenced by location-, firm-, and culture-specific factors. Managers are suggested to choose entry modes based on these

dimensions. Second, if making profits is on top of their agenda, the WOE option is the best. Compared with WOE, EJV and CJV are not the good options. Moreover, JSCs seem appropriate for foreign firms entering China in the near future. Third, FIEs in labor-intensive industries may have higher level of performance than those in capital and technology-intensive industries, at least in terms of ROA and asset turnover. Fourth, for FIEs in China, it would be better to operate projects with the local-level governments. Fifth, MNEs entering China at an early year may no longer possess the first-mover advantages, at least in terms of ROA and asset turnover. Sixth, the perception that the Chinese market cannot be tackled effectively and efficiently without paying due attention to the construction and maintenance of good *guan xi* might be out of date. Seventh, the most profitable FIEs in China are those that focus on export activities. Eighth, foreign investors who plan to select such modes of entry for entering China need to recognize that the ownership positions they hold in these ventures have important impacts on the performance level of these ventures. Most importantly, the minority position in an EJV or JSC of China could also help them to achieve higher level performance. Finally, a local partner's organizational form is of utmost importance in contributing to the efficiency and effectiveness of EJV or JSCs in China.

Like all studies, the current research also suffers from some limitations that need to be pointed out for further study. First, some aspects are not considered, e.g. factors associated with parent firms. Second, the issues concerning JSCs is suggested to give further study, as they are relatively new and sample size is not large enough. Third, the issue of how the inter-relationships between entry modes and other determinants of performance influence outcomes of entry mode performance hasn't been considered in this study. Fourth, co-owned EJV or JSCs haven't been considered. Fifth, the interpretation on the results should be made with caution, given the limitations generated by the secondary data used in this study. For example, apart from profitability and efficiency in asset management, other dimensions, such as productivity, liquidity, financial risk, and managerial satisfaction should also be considered if the data is available. Moreover, some problems exist in the process of data collection given Chinese circumstances, and the data has the assumption that each entity is treated as a firm, thus

the issues of transfer pricing, as well as the activities of sales force marketing of export-oriented FIEs could not be considered in this study. This could affect the results generated. Finally, like other previous studies, the current research is not based on longitudinal data. The lack of longitudinal data prohibits tracking the sequences of FDI undertaken by MNE.

Notwithstanding these limitations, the current research, compared with other studies in the area, has several advantages. It is an attempt to comprehensively study a series of issues facing MNEs. The data set used is the most comprehensive and recent one available regarding FIE activities in China. In addition, this study is the first attempt to examine all possible FDI entry strategies regarding the choice between them, and their performance consequences. It gives clear answers on which modes of entry perform better in China. Moreover, a larger number of determinants of performance than used in previous research have been used to provide richer insights. Besides, it is the first study that empirically examines JV ownership-related performance of two types of equity-based JVs in China. Finally, it is also the first attempt to examine and clearly find out the impact of local partner selection on the JV ownership-related performance.

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Appendix 1: Abbreviations

Contractual Joint Venture (CJV)

Equity Joint Venture (EJV)

Foreign Direct Investment (FDI)

Foreign-invested Enterprise (FIE)

Joint Stock Company (JSC)

Joint Venture (JV)

International Joint Venture (IJV)

Less Developed Country (LDC)

Multinational Enterprise (MNE)

Returns on Assets (ROA)

The Ministry of Foreign Trade and Economic Cooperation (MOFTEC)

The State Statistical Bureau of China (SSB)

Transaction Cost Approach (TCA)

Wholly Owned Enterprise (WOE)

Appendix 2: List of Type of Data

The statistics include five categories of data of the firms' activities recorded:

- Production/sales: (total industrial output, production volume/value, new product production volume/value, export value, number of employees, sales revenue)
- Financial: total asset, debt and liability, profit, taxes
- Energy purchase and consumption, inventory (inventory of energy at beginning of the year, purchase, consumption, inventory at the end of the year)
- Key technological and economic indicators: not included in the data. These are specified according to different sector/industry's requirements and therefore are not always comparable across sectors.
- Key product production capacity