Firm heterogeneity and location choice of Chinese Multinational Enterprises (MNEs)

Jing-Lin Duanmu

School of Management,

University of Surrey, Guildford, GU2 7XH, U.K.

Tel: +44 1483 686342; Fax: +44 1483 686346; E-mail address:

J.Duanmu@surrey.ac.uk

Abstract

Using data on 194 location choices in 32 countries for a decade, we investigated locational determinants of Chinese Multinational Enterprises (MNEs). We found that State-Owned MNEs, compared to their peers without controlling state equity, are less concerned about political risk of the host country, but more responsive to favorable exchange rate between Chinese RMB and the host currency. Strategic intent of Chinese MNEs affects their location choice in a way that manufacturing oriented investment, compared to trading subsidiaries, is more attracted to countries with large market size and more deterred by high cost structure of the host country.

Keywords: Location choice, Firm heterogeneity, Chinese MNEs, Conditional logistic regression, Nested logistic regression.

1. Introduction

China has been one of the largest FDI recipient countries in the world since the 1990s. Having been portrayed as a magnet for inward FDI in the last two decades, it is emerging as one of the most important FDI export countries in the developing world (World Investment Report, 2006). Outward FDI growth is expected to accelerate in the future given China's large and growing holdings of foreign exchange reserves and the apparent determination of Chinese authorities to diversify holdings of foreign exchange reserves away from fixed income assets towards equity assets (Globerman & Shapiro, 2009). Although still a relatively nascent phenomenon, scholars have started to examine China's outward FDI from various aspects, such as strategic-seeking motivations of Chinese MNEs (Deng, 2009), characteristics of founders of Chinese MNEs and their initial attempts to internationalize their businesses (Liu, Xiao & Huang, 2008), international venturing activities (Yiu, Lau & Bruton, 2007), and performance of overseas operations of Chinese MNEs in relation to their Indian counterparts (Henley, Kratzsch, Kulur & Tandogan, 2008).

Location choice is one of the most crucial decisions that MNEs need to make in their internationalization process. Location is costly to alter, and also has a profound impact on the efficiency and effectiveness of firms' overseas investment (Bartik, 1985; Li & Park, 2006; Wei & Liu, 2001). It therefore has been at the core of academic theorizing in international business (Buckley, Clegg, Cross, Liu, Voss & Zheng, 2007). Researchers have addressed this question with various approaches, most of which are generated from the motives and rationale of FDI (Luo, 2002; Vernon, 1966). Most research in the literature of FDI location only focused on FDI from developed economies, less is understood about the determinants that attract FDI from

emerging markets, such as China. In addition, most empirical studies of FDI location so far were conducted to examine the motivations of FDI at country level by using macro-economic data. But macro-economic models of FDI are insufficient to explore firm-specific behavioral differences on FDI location decisions as FDI behavior of MNEs is typically a firm-level decision.

Responding to the research gap, the present study wants to make contribution to the literature by examining the interplay of country level and firm level factors on FDI location choice of Chinese MNEs. To the best of our knowledge, it is one of the first empirical studies concerning location decisions of China's MNEs, and it is our hope that it will open up more discussions on this important issue in future.

2. Literature Review

Traditionally, location choice of MNEs has been tested on the basis of aggregated data. The fixed attributes of the host country are treated as exogenous stimuli to attract FDI inflows (Dunning, 1981; Brainard, 1997; Carr, Markusen & Maskus, 2001; Blonigen, Davies, & Head, 2003). This theoretical underpinning is also reflected in studies on the locational determinants of Chinese outward FDI. For example, using country level aggregated data, Buckley *et al.* (2007) investigate country characteristics that attract or deter Chinese outward FDI. They found low political risk of the host country is positively related to Chinese investment outflows between 1982 and 1991, but this impact evaporates in the time period of 1992 to 2001. The impact of distance is significant and negative for the period between 1984 and 1991, but not for the period of 1992 to 2001. This may suggest that geographic proximity to China was a positive influence

on early Chinese outward FDI. Buckley *et al.* (2007) also found that Chinese outward FDI is attracted by market size in the case of OECD countries and to non-OECD countries which have strong previous trade relations with China. Duanmu and Guney (2009) extend this analysis by comparing the location choice of Chinese outward FDI with that of India. They found that Chinese outward FDI is drawn to countries with promising market size, previous trading relations with China, depreciating exchange rate against Chinese currency, and a sound institutional environment. Chinese firms tend to shy away from locations with vast geographic distances and high corporate taxes. These studies provide important insights into the macro pattern of China's overseas investment, but the aggregated country-level data makes it impossible to understand how firm level factors affect this decision making process.

A growing recognition has arisen recently that it is necessary to understand not only how aggregate FDI responses to the fixed attributes of host locations, but also the impact of strategic formulation at individual firm level (Buch, Kleinert, Lipponer, & Farid, 2005; Cantwell, 2009). This literature argues that many decisions related to overseas business, such as exporting, undertaking FDI, and location choice of FDI, are not simply a reaction to exogenous host country characteristics. Instead, these decisions are shaped by firms' inherent attributes and their strategic intent (Helpman, Melitz & Yeaple, 2004). Recent empirical studies have also provided evidence that while some fundamental macro-economic and political factors have important influence on firm's decisions to entry, firm level heterogeneity can modify the magnitude of such influence and even alter the direction of the impact of these factors. For example, while economic and political risk are commonly perceived as negative factors in attracting MNEs, state shareholders are found to be more tolerant towards risk compared to private ones. In addition,

accumulated international experience makes MNEs more, *not less*, alert to the political risk of host countries (Garcia-Canal & Guillen, 2008). Similarly, while all firms could benefit from agglomeration effects, less-capable firms collate *less* than more-capable firms because of their concern of the simultaneous competition effort from collation (Alcacer, 2006). Moreover, although high technology endowment of the host country is generally an attractive factor, it proves to be more relevant to MNEs in research-intensive industries compared to those in low-tech industries (Chung & Alcacer, 2002). In addition, while high labor cost generally deters firm's entry, a firm's labor intensity magnifies the impact of this factor in its location decision (Hong, 2009). Using country of origin as a proxy for firm heterogeneity, Yamawaki (2006) found that Japanese multinationals consider production cost factors more important than demand-side factors. This suggests that Japanese firms' strategic intent to establish local production capacity to export within the EU market. In contrast, both cost-side and demand side factors are found to be important determinants of location choices of U.S. firms, reflecting an overall different strategy that U.S. MNEs seek in the EU compared to their Japanese counterparts. These studies demonstrate how nuanced variations owing to firms' inherent attributes and strategic intent affect their response to a certain location characteristic differently.

While macro-level location determinates of China's outward FDI has been examined by Duanmu and Guney (2009) and Buckley et al (2007), little empirical analysis has been conducted to assess the impact of firm level heterogeneity on this decision. Chinese firms can differ from each other in many important parameters, such as their ownership structure, their firm level capability, their strategic intention in undertaking FDI, etc. Built upon previous investigations, this study attempts to integrate both macro-economic and institutional factors, and

firm level heterogeneous attributes and strategic intent to understand the complex decision making process of Chinese MNEs' location choice.

3. Hypotheses

In this section, we develop hypotheses on how firms' inherent attribute and their strategic intent interact with location characteristics and shape their location decisions.

3.1. Ownership structure and location choice

The ownership structure is an enduring differentiator of firms in China. Before the economic reform initiated in 1978, the Chinese industrial sector was dominated by SOEs. These State Owned Enterprises (SOEs) acted as cost centers to fulfill production quotas and provide life-long employment. The restructuring of SOEs evolved from implementing a contract system in the 1980s, which improved internal managerial and incentive systems but left state ownership unaltered. This led to the separation of business management from state ownership through the creation of domestic joint stock companies in the 1990s. Many SOEs were reorganized into limited-liability joint stock companies. A selected group of them were listed on domestic stock exchanges. This process, which is termed "corporation" or "partial privatization" (Li, 1997; Zhang, Zhang & Zhao, 2001), attracted more capital and helped improve firms' performance through monitoring by shareholders. In tandem with the restructuring of SOEs, China's gradual economic reforms fostered the establishment of an ownership system which witnessed the emergence of the collectively-owned-enterprises (COEs), township-village enterprises (TVEs)

and private-owned enterprises (POEs). For the purpose of our study, we categorize Chinese MNEs into SOEs and non-SOEs. For firms with the state (the central government) or the local government as the controlling stakeholder, we categorize them as SOEs. The rest is non-SOEs considering that private interest dictate the nature and operations of the firm. It is noted that we exclude foreign invested firms in our investigation because we are primarily interested in the internationalization pattern of indigenous Chinese firms.

Recent government led “go-global” strategy has probably enhanced this firm level differentiator in their ‘go-global’ adventure. It has witnessed many “corporatized” SOEs expanding overseas with the visible hand of government intervention. In fact, state statistics shows that the bulk of China’s FDI was made by SOEs due to their rich resource endowment and state support (Luo et al., 2009; Fornes & Butt-Philip, 2009). These SOEs usually remain in tight state hands, which means that they still align their operations, whether at home or abroad, with the government initiative national imperatives (Buckley *et al.*, 2007). In contrast, private firms take a peripheral position in this “go-global” movement with less government assistance and limited resources. This inherent condition that differentiates SOEs and non-SOEs may yield a divergent trajectory in their location decisions.

The undertaking of FDI is a risky process. Firms have to face new business and institutional environment, and overcome cultural and regulatory barriers in a foreign country to conduct business. This is often called “liability of being foreign” (Hymer, 1976) or “liability of foreignness” (Zaheer, 1995). Foreign liability takes many different forms but collectively it represents the risk of doing business abroad. Even for a same foreign location, however, firms

may view its risk profile differently. This could be due to the different level of international experience the firm has, which reduces foreign liability. In addition, firm's risk taking attitude will also affect firm's perception and the level of risk that it is willing to take (Sitkin & Pablo, 1992). Therefore, firm's risk taking behavior will have a bearing on their decisions of internationalization. Empirical research has found, for example, that firms are heterogeneous in their attitudes toward risk (Garcia-Canal & Guillen, 2008). Firms with state equity exhibit a more tolerant attitude towards macroeconomic and political instability in foreign countries, but this tendency lessens when firms accumulate more international experience and become more risk-averse in their subsequent investment decisions.

For relatively inexperienced Chinese MNEs, we propose that their ownership structure will yield a like effect on their location decisions. SOEs can be more tolerant towards risks for two reasons. For one, the enduring intervention of the state in the banking system in China has produced long-lasting capital market distortions, in which SOEs enjoy preferential treatment in obtaining bank loans and accessing the financial markets whereas private firms face ongoing capital constraints (Morck, et al., 2008). In addition to the excess supply of capital, the fact that most SOEs are led by Party appointed officials renders managers with little individual interest in their firm's long-term economic performance. Higher risks may be taken to pursue personal agendas to advance their career in state bureaucracies or simply advance their personal wealth. In contrast, non-SOEs usually have less resource and will tend to be more cautious in their overseas expansion. Variance in the extent of principle-agent problem in SOEs and non-SOEs will lead to their different attitudes or tolerance towards risks. Therefore, we hypothesize:

H1: SOEs are less averse to countries with higher risk compared to non-SOEs.

Different ownership structure also renders firms with different competitive advantages and disadvantages which will influence their location decisions. Morck, *et al* (2008) argued that SOEs have more experience with chronically weak institutions in China, such as high level of direct state intervention, insecure property rights protection, and opaque corporate governance compared to their counterparts from developed economies. As a result, they are more capable of dealing with burdensome regulations and navigating around the opaque political constraints. This, indeed, is in line with internalization theory which posits firms tend to utilize intangible assets and capabilities in internationalization. If SOEs had truly developed such capabilities, they would prefer to expand into economies with like institutional environments to replicate the capabilities and exploit past experience. In contrast, non-SOEs probably do not have the competence or the resource to deal with burdensome institutional environment. In fact, “institutional escapism” is believed to be one of the principle motives for private Chinese investors to go abroad in order to seek better institutional environment for their conduct of business (Luo, *et al.*, 2010). Therefore, we hypothesize:

H2: SOEs tend to be attracted to countries with extensive state intervention, but this preference is absent for non-SOEs.

Third, we discuss the possible heterogeneous response of SOEs and non-SOEs to exchange rate in their location choices. The impact of exchange rate on FDI has been extensively discussed by Froot and Stein (1991), De Mello (1997), Feenstra (1998), and Pain and Welsum (2003). Favorable exchange rate increases wealth positions of potential investors and will incentivize

them to invest in countries where their home currency value appreciates. Although MNEs can also raise fund in host countries via external financing, inexperienced investors may be less likely to resort to this solution due to their unfamiliarity with the host country banking system and application procedures. Internal and external financing from sources in their home country plays a dominant role to support their initial internationalization.

Relating to our interest in Chinese MNEs, we suggest that although all firms may want to capture the advantage of appreciated home currency (or depreciated host currency), SOEs will be *more* able to capture the advantage due to the financial back up and ready access to foreign reserves granted by the government. Duanmu and Guney (2009) found that Chinese outward FDI is more responsive to favorable exchange rate between RMB and foreign currencies compared to their Indian counterpart. Although favorable exchange rate inflates investors' wealth and could therefore promote investment, it carries a simultaneous downside, which is that the profit margin in the host country may also be negatively affected. Duanmu and Guney (2009) conjectured that different reactions to favorable exchange rate between Chinese and Indian FDI could arise from the dominance of SOEs in Chinese FDI compared to their Indian counterpart. With easy access to foreign currency reserve and weak incentive to concern long-term profitability, SOEs dominated FDI will be more responsive to such exchange fluctuations. In contrast, if the outward FDI is dominated by private investors, such pattern may be lessened.

Our firm level investigation provides us with an opportunity to test this conjecture. We propose that the impact of exchange rate on SOEs and non-SOEs is likely to be non-monotonic, namely, both SOEs and non-SOEs may respond to favorable exchange rate positively, but the

reaction is stronger in SOEs' cases. The reason we suggest that non-SOEs also respond to exchange rate positively is because since early 2000s, the State Administration of Foreign Exchange (SAFE) has begun to issue policies that relax the purchase of foreign exchange by private companies, and make the approval procedure less cumbersome. For example, the documentation process has been simplified, and the limit on the amount of foreign exchange that an organization may retain is raised. These make it possible for private companies to capture the short-term benefit of favorable exchange rate, albeit at a lower magnitude compared to their SOE counterparts. Therefore, we hypothesize:

H3: SOEs respond more strongly to appreciated RMB (or depreciated host currency) compared to their non-SOEs peers.

Fourth, we want to explore how the political goals attached to SOEs may affect its location decisions. Lunding (2006) reported that the Chinese authorities have been aggressively courting the governments of host states by strengthening bilateral trade relations, awarding aid and providing much-needed transport and communications infrastructure to enable Chinese firms to access the strategically important raw materials. However, neither Buckley, et al (2007) nor Duanmu and Guney (2009) detect any statistical significance of this factor. This clearly contradicts to the media populated reports on China's booming FDI in Africa and other regions such as Australia (Laurenceson, 2007), Russia, Brazil, and Papua New Guinea (Wong & Chan, 2002) in search for natural resource. We speculate that perhaps country level FDI statistics has concealed the firm level heterogeneous response to resource endowments of host locations. While a portion of SOEs may receive government support to carry this mission in their overseas

adventure, non-SOEs may find it less relevant to their internationalization ambition. We therefore suggest the following hypothesis:

H4: SOEs tend to be attracted to countries with rich natural resources. This tendency is absent in non-SOEs.

3.2 Strategic intent and location choice

How the strategic intent of FDI influences location choice has been well documented in Dunning's electric paradigm. Empirically, scholars have provided ample evidence on firms' nuanced variations to specific location characteristics owing to their different strategic intent. For example, it is found technology-seeking FDI are strongly attracted to regions with high R&D intensity for the potential externalities of the location, whereas FDI in low-technology industry shows little interest in local technical knowhow (Chung & Alcacer, 2002; Alcacer & Chung, 2007); labor intensive firms react more strongly to labor costs of different locations, and firms relying on modern communication infrastructure priorities the information technology infrastructure of the local environment in their location decisions (Hong, 2009). It is evident that strategic intent, such as access to technology externalities, or lower production cost, shapes the location choice of MNEs.

We suggest that MNEs' strategic intent can be reflected in the activity or the role that the headquarters assign to the subsidiary. This view admittedly has an implicit assumption that MNEs centralizes its decision making power in the headquarters, and correspondingly, subsidiaries have limited autonomy. While such a view can be contentious in other contexts; it nevertheless has high empirical relevance to Chinese MNEs (Wang & Suh, 2009). As young

MNEs, the relationship between headquarters and subsidiaries tends to be tightly bounded owing to a general lack of international experience.

There are two kinds of subsidiaries are of our interest: manufacturing and non-manufacturing subsidiaries. The former is mainly engaged in production, distribution and promotion of products in a host country. The latter is that kind of subsidiaries whose sole role is to facilitate exporting and importing intermediate or end products to and from the MNE's home country. These subsidiaries can be called 'trading subsidiaries' and some of them will be eventually developed into full functional units with manufacturing operation. Following Dunning's location specific advantage logic, we suggest the principle that MNEs will locate their subsidiaries with different roles to the locations that are most productive to the fulfillment of their strategic intent. For manufacturing subsidiaries, both demand side and supply side factors are important, which include labor costs and market size. For non-manufacturing subsidiaries (trading only), market size and potential are probably the sole factor that of significant importance. Therefore, we hypothesize:

H5a: MNEs which invest a manufacturing subsidiary are attracted to countries with cheap labor costs and large market size.

H5b: MNEs which invest a non-manufacturing subsidiary are attracted to countries with large market size.

3.3. Substitutive relation between developed and developing countries

Finally, we have a broad speculation regarding the potential structurally substitutive relationship

between developed and developing countries as investing locations for Chinese MNEs. This is prompted by widely spreading anecdotal evidence suggesting that when investing in developed countries, Chinese MNEs tend to seek sophisticated technology or advanced manufacturing know-how by acquiring foreign companies or their subunits that possess such proprietary technology (Child & Rodrigues, 2005; Rui & Yip, 2008). Many high-profiled cross-border merger and acquisition cases in developed nations, whether succeeded or failed, have illuminated this ambition (Duanmu & Guney, 2009). The decisions to venture in developing countries, however, usually differ sharply from those in developed countries, where lower production cost, advantageous tariff and quota related status, and perhaps even weak institutional environments are the key attractions (Luo, et al., 2010). If this divide goes beyond an anecdotal level, then a pattern can be seen with our quantitative examination. Similar estimation has been employed by Disdier and Mayer (2004) to test whether there is structurally substitutive relation between Eastern and Western Europe as investing locations to French multinationals. The notable difference in local competition, institutional environments, and purchasing power of consumers between Western and Eastern Europe makes the location choices of French MNEs geographically nested. More interestingly, the relevance of this East-West structure is decreasing as the transition process of some Eastern economies advances, which adds a dynamic understanding to the evolving process of French FDI distribution in this region. We want to include such an analysis to assess whether a structurally substitutive relation between developed and developing countries also exists for Chinese MNEs in considering their location choice. Therefore we propose:

H6: There is a structurally substitutive relation between developed countries and developing countries.

4. Methodology and data

4.1 Methodology

Different from the scenario where only firm's characteristics, such as size and experience, are considered to affect its location choice, our investigation examines how firm's characteristics *and* the countries' characteristics collectively shape the location choice. This justifies us to adopt conditional logistic regression, which has the advantage of linking between the theoretical objective function of a representative location-seeking agent and the likelihood function of the empirical model (McFadden, 1974; Alcacer & Chung, 2007; Hong, 2009). We precede our estimations in two steps. First, considering all host countries on an equal ground with the conditional logit model to test hypotheses relating to firm ownership structure and strategic intent. Second, we test the relevance of a developed-developing structure in firms' decision-making process. We estimate this with nested logic model estimation because it allows groups of alternative (locations in developing countries versus those in developed countries) similar to each other in an unobserved way. Therefore, a structural relation between groups can be detected by such an analysis.

Our research population is all Chinese firms with foreign subsidiaries in developed and developing countries. While such comprehensive dataset is not available at the national level, we draw our sample from Jiangsu province, China, in 2009. Our dataset includes 264 location

choices by 189 Chinese MNEs investing in 47 countries from 1999 to 2008 (See appendix 1). The Chinese MNEs are from different cities in Jiangsu province, with the majority from Wuxi and Suzhou, the most economic active cities in the province. For each investment decision, we have the data of the year of investment, the chosen country for the investment, and the ownership structure of the MNE. The data are provided by local branches of Ministry of Commerce, and local economic statistics bureaus, which usually have different emphasize on their data collection. The former government arm usually keeps detailed record of the overseas projects undertaken by a local firm, such as investment purpose and activities, capital size, and investment location. But it collects rather limited information on the investing firm itself. In contrast, local statistics bureau keeps longitudinal record of local firms' overall business activities through their annual statistical census. It is from the latter that we collected the parent firm's information, such as their ownership structure, size, and profitability.

INSERT APPENDIX 1 ABOUT HERE

There are 47 destinations in which the 264 projects are distributed. We exclude 14 countries which only attracted one Chinese FDI because such data do not allow firm (case) specific variations to be estimated. We also exclude Hong Kong from the analysis because its dominance in hosting Chinese FDI projects could overturn the analysis, and also because it is not really 'foreign' to Chinese firms. Therefore, we are left with 194 projects located in 32 foreign locations in the formal data analysis. Regarding the dependent variable, since we have 32 choices, it means that there are possible 31 alternatives apart from the chosen destination. In addition, since the unit of our analysis is the foreign subsidiary, each individual subsidiary enters the

sample only once and therefore our sample dataset constitutes a cross-section, even though the period of the analysis covers the year between 1999 and 2008.

4.2 Variables and measurement

We explain our dependent, independent, and control variables as follows. Our dependent variable is labeled as 1 if the location is chosen, 0 for all other locations no chosen. The following is our country level independent variables. First, we break down risk into two components: political risk and economic risk. The data are drawn from PRS group. They are both a composite of subjective evaluations of different dimensions of country risk prepared by PRS group, a firm specializing in country risks, and published as the *International Country Risk Guide (ICRG)*. State intervention is measured by the index of Economic Freedom published by the Heritage Foundation and Wall Street Journal. “Economic freedom” measures to what extent that freedom of work, produce, consume, and invest are protected and unconstrained by the state. Exchange rate uses the average rate of host national currency per SDR for the year subsidiary is established. The data source is the IMF. To proxy for the natural resources endowment of a country, we employ the percentage of ores and metals exports to total merchandise exports by country, as reported by the World Bank in its World Development Indicators. Market size is measured by GDP of the country. Labor cost is measured by GDP per capita of the country. Development status of the host country is differentiated by developed countries, which are coded by 1, and developing countries, which are coded by 0. The criterion is based on World Bank where gross national income (GNI) per capita is the major indicator dividing countries into low income, middle income and high income. Low-income and middle-income economies are

sometimes referred to as developing economies, and the rest are developed economies. All the country level variables are one year lagged.

To test the possible heterogeneous response of MNEs owing to their ownership structure and strategic intent, we create a series of interaction terms. First, we assign value 1 to SOEs and 0 to non-SOEs to differentiate the ownership structure of the MNE. We also assign value 1 to manufacturing subsidiaries, 0 to those engaged in trading as the indicator of the strategic intent that the MNE invests with. Then we create 5 interaction terms with ownership structure to test the first 4 hypotheses, and 2 interaction terms with strategic intent to test the fifth hypothesis.

The following are country level control variables and the reasons for their inclusion. Corporate tax has been found to affect the location decisions of FDI in previous studies (Chung & Alcacer, 2002; Basile, et al., 2008; Duanmu & Guney, 2009; Buckley et al., 2007). The importance of this factor is that it directly relates to the profitability of foreign direct investment. The orthodox assumption of profit maximization leads us to propose that a high corporate tax rate would deter FDI, unless the motives of investors deviate from profit maximization. Data on corporate tax rates is from the Institute of Fiscal Studies (Klemm, 2005), and World Development Indicators by World Bank. Unemployment has been considered in some of earlier empirical studies rate, such as Chung and Alcacer (2002), Disdier and Mayer (2004) and Basile, et al. (2008). Its inclusion in our investigation is based on the consideration that most China's FDI is in relatively low-tech, high labor-intensive manufacturing sectors, which means that their demand for low skilled labor in the host country is high. Unemployment rate in the host country may be an advantage for them to recruit low cost labor. However, the counter argument is that

high unemployment rate may indicate poor economic health of the host country or rigid labor market regulation, and therefore can deter Chinese FDI. We draw this data from International Labor Organization (ILO). The impact of distance on the location choice is ambiguous, but distance has been widely considered as a necessary control variable in many earlier studies of FDI (Basile, et al., 2008). Therefore, we follow this practice and include it in the model. All these country level control variables are also one year lagged. The measurement of all variables and data sources is listed in more details in Table 1.

INSERT TABLE 1 AND TABLE 2 HERE

5. Results

Table 2 reports the results. Specification 1 reports the base model, which only includes country level independent variables. Consistent with conventional wisdom, the variable of political risk receives a positive and significant result. Since the index of political risk is composed in a way that higher values indicate lower political risk, we interpret this result as a less risky political environment attracts more Chinese FDI. This result confirms previous findings by Duanmu and Guney (2009), and Buckley, et al (2007). In contrast, economic risk proves to be irrelevant for Chinese firms' decision of FDI locations. the statistical analysis yields a non-significant result for this variable. Similarly, economic freedom does not achieve statistically significant result either. In contrast, exchange rate attains a marginal significance. This suggests that all Chinese FDI responds to favorable exchange rate between Chinese RMB and the foreign currency where they consider undertaking FDI. Natural resource does not attain

statistically significant result, with an even surprising negative sign. This, however, is consistent with the finding by Duanmu and Guney (2009). GDP and GDP per capita have attained most significant results, among all variables, suggesting that market size is an important attraction for Chinese FDI, whereas high cost deters Chinese FDI. Corporate tax is a marginally significant factor, deterring Chinese FDI. Unemployment rate of the host country has a negative and significant result, suggesting Chinese firms tend to shy away from countries with high unemployment rate. Distance does not attain statistically significant result.

Now we turn to our hypotheses testing by focusing on interaction terms. In Specification 2, interaction variables are added to examine whether firm level attributes alter firms' response to a certain country level attribute. The first interaction variable is political risk and ownership structure. Where political risk in the base model achieved statically significant result, this interaction variable does not attain a similar result. We interpret it as that while all firms respond to low political risk positively as shown in the base model, state ownership mitigates this overall response. Therefore, part of our first hypothesis that SOEs are less averse to countries with higher risk countries compared to non-SOEs is supported. Following this, the interaction variables between economic risk, economic freedom and ownership structure attain insignificant results, similar as those in the base model, suggesting that ownership structure does not alter firms' reaction to these two factors.

The interaction variable of exchange rate and ownership structure attains a highly significant result, suggesting that state ownership magnifies the impact of exchange rate on their location choice. This is a supportive evidence for our third hypothesis that SOEs respond more strongly to

favorable exchange rate than non SOEs. The interaction variable of natural resource and ownership structure, however, does not reach a statistically significant result, suggesting that SOEs do not respond more strongly to the natural resource endowments of the host country. This is probably because the media highlighted natural resource seeking FDI by very large Chinese corporations are only portion of the phenomena, and does not represent the general picture of state backed-up Chinese FDI.

Finally, the interaction variable of GDP and strategic intent achieves a statistically significant result with a positive sign. This suggests that the positive impact of market size is magnified when the investment intent is for manufacturing. In addition, the interaction variable of GDP per capita and strategic intent attains an expected significant result. Its minus sign suggests that the negative impact of cost is magnified when the strategic intent is to manufacture products in the chosen location. In other words, manufacturing subsidiaries of MNEs are more deterred by the high cost structure of the host locations than non-manufacturing firms. Taken together, the results largely support our hypotheses that for manufacturing oriented investment, the impact of both market size and low cost structure is larger for their location decisions than for trading oriented investment. This probably is because manufacturing subsidiaries tend to be more committed to the host location since there is sunk cost embedded in fixed investment. Therefore, both market demand and cost factors appear to be more influential in firm's decision, namely, firms consider these two factors more carefully before deciding to invest. In contrast, trading subsidiaries have more flexibility to withdraw their investments, and therefore the impact of these two variables on their location decisions tends to be lessened.

We also conducted some robust checks on our results. First of all, we deleted the projects conducted by the same MNEs in the same host countries due to the concern that the decision for additional investment projects could be very different from the first location decision. There were 14 such projects in our sample. It is noted that the number of host countries remains the same because we only delete the subsequent investment projects conducted by the same MNEs in the same host country. The results are shown in Specification 3. These are nearly identical to those in Specification 2. It shows that the small number of repeated investment projects in the full sample does not affect the overall results. In addition, we conducted tests by segmenting this stripped sample into two by year 2004. This segmentation enables the two sub-samples to have similar number of observations for the analysis. Specification 4 reports the results of the observations prior to 2004, and Specification 5 reports those after 2004. By and large, the results stand and remain almost identifiable to those in Specification 2.

Finally, we conduct nested logic estimation to assess whether there is a structurally substitutive relation between developed and developing countries. The estimates results, reported in Table 3, show that such relationship does not exist. Although the four specifications, in which Specification 1 reports the full sample results, Specification 2 reports the results without repeated investment projects by the same MNEs in the same host locations, and Specification 3 and 4 report those of subsample prior to and after 2004 respectively, all achieve acceptable model fitness, and the inclusive value falls in the right range between 0 and 1, it is not statistically significant across all models. This suggests a structurally substantive relationship between the two nests, namely developed and developing countries does not exist. For the sake of simplicity, we do not report the nested logic estimation results which include all the interaction terms, but it

is noted that the results obtained are in line with what we report here, namely, there are not statistically significant results suggesting a structurally substitutive relation. Therefore, the hypothesis that there is a structurally substitutive relation between developing and developed countries as desired investment location for Chinese MNEs is rejected.

INSERT TABLE 3 HERE

6. Discussions and conclusions

Having presented our results, we now summarize to what extent our hypotheses are supported. Basically, our first hypothesis gets a partial support from the empirical result, that is, SOEs respond to political risk of the host country less negatively, but this tendency does not apply to their response to the economic risk of the host country. In fact, economic risk is found to be unimportant for both SOEs and non-SOEs. Our second hypothesis does not obtain empirical support, suggesting that SOEs are not more attracted to countries with high state intervention. This could be because the capability of dealing with burdensome regulations and navigating around the opaque political constraints cannot be easily *replicated* in different institutional environment. Instead, this type of capability can be *location specific*, and does not generate value when the context is elsewhere. This is a rather interesting finding that is worth more studies and discussion.

The third hypothesis that SOEs respond more positively to favorable exchange rate largely gets supports. While both SOEs and non-SOEs respond positively to favorable exchange rate as

shown in the base model, this response goes stronger in SOEs' case. The fourth hypothesis regarding the impact of natural resources of the host country does not get support. This goes contrary to our conjecture, but is consistent what was found in Duanmu and Guney (2009). We suggest that this may be because the usual media highlighted cases do not represent the large proportion of government backed up FDI projects, and therefore a statistical analysis could not capture the presence of its significance. The fifth hypothesis regarding how the strategic intent influences the location decisions gets empirical support. Manufacturing oriented investment projects appear to respond to the host market size and cost structure more strongly, suggesting that more caution is taken in the decision making process in relative to trading oriented investment projects.

Finally, our hypothesis that there is a structurally substitutive relation between developed and developing countries is rejected. A simple and therefore very *restrictive* grouping of such proves insufficient to uncover the possible substitutive patterns among regions. It is possible that firms consider a combination of many factors in forming the structure of their decision making. When some factors that are irrelevant to the divide between developed and developing countries are important to their decision making, the hypothesized nested structure between developed and developing countries loses relevance. This opens up a rich research agenda in the future as how to have further investigations into this issue.

6.1 Managerial relevance

Location choice is one of the most crucial decisions that MNEs need to make in their internationalization process because it is costly to alter. Location has a profound impact on the

efficiency and effectiveness of firms' overseas investment. Therefore it is crucial for firms to carefully assess the compatibility of their investment strategies and the characteristics of the host countries to maximize their chance to succeed. The following are the managerial implications we draw from our empirical results. First, we suggest that Chinese MNEs should assess the economic risk of the host locations as carefully as assessing their political risk because the negative impact resulting from the host economic risks may prove no less profound than that of political risk. Second, our research shows that all Chinese MNEs appear to respond to favorable exchange rate very positively, with non-SOEs having a lower magnitude. We suggest that although appreciated home currency or depreciated host currency improves the wealth position of investors, equal caution should be taken with regards to the implications on long-term profitability. Rapid expansion partially promoted by exchange rate fluctuations needs parallel strategic visions and operational investment to ensure long-term profitability and growth. When such visions and investment are not present, Chinese MNEs should think twice about to what extent the 'advantage' will bring real benefits. Compared with non-SOEs, SOEs do not consider political risk of the host country as an important factor in their location decisions. Unless SOEs do have the ability to curve political hazards in different countries with their specific network connections or other hidden resources, more caution needs to be taken in their future location decisions.

6.2 Limitations

Let us reflect upon the limitations of this study. One of the limitations in our empirical model is that we are not able to include more firm level control variables, such as their size,

profitability, and international experience. It would be ideal to have these variables because previous research has shown that they can affect the location decisions of the firm. Great effort had been made to obtain such data, but the available data for a portion of the firms in the sample is insufficient to include them as control variables. Secondly, our measurement of strategic intent is rather simple. It would be more desirable to have a finer categorization for various strategic intents that firms have. The secondary data provided by local governments contained rather limited, albeit useful, information on this regard. Questionnaire surveys could be more instrumental in obtaining such data, which future studies may like to consider. A third limit is the measurement of natural resource. Although the ratio of ore and metal exports to total exports is widely used as the proxy of natural resource of a country, this measurement cannot measure other natural resources that a country possesses. In addition, if the export of other natural resources, such as timber, increases whereas the export of ore and metal remains the same, then a country's resource endowment proxied by this indicator will appear to be lower. This will also weaken the empirical accuracy of this indicator and compromise the empirical investigations based on such measurement.

References

- Alcacer, J., & Chung, W. (2007). Location Strategies and Knowledge Spillovers. *Management Science*, 53(5): 760-776.
- Aw, B. Y., & Lee, Y. (2008). Firm heterogeneity and location choice of Taiwanese multinationals. *Journal of International Economics*, 75, 167-179.
- Bartik, T. (1985). Business Location Decisions in the United States: Estimates of the Effects of Unionization, Taxes, and Other Characteristics of States. *Journal of Business & Economic Statistics*, 3(1): 14-22.
- Basile, R., Castellani, D., & Zanfei, A. (2008). Location choices of multinational firms in Europe: The role of EU cohesion policy. *Journal of International Economics*, 74, 328-340.
- Blonigen, B., Davies, R., & Head, K. (2003). Estimating the Knowledge-Capital Model of the Multinational Enterprise: Comment. *American Economic Review*, 93(3): 980-994.
- Brainard, S. L (1997). An Empirical Assessment of the Proximity-Concentration Trade-Off between Multinational Sales and Trade. *American Economic Review*, 87, 520-44.
- Buch, C., Kleinert, J., Lipponer, A. & Farid, T. (2005). Determinants and effects of foreign direct investment: evidence from German firm-level data. *Economic Policy*, 20(41): 52-110.
- Buckley, P., Clegg, J., Cross, A., Liu, X., Voss, H., & Zheng, P. (2007). The determinants of Chinese outward foreign direct investment. *Journal of International Business Studies*, 38, 499-518.
- Cantwell, J. (2009). Location and the multinational enterprise. *Journal of International Business Studies*, 40(1): 35-41
- Carr, D.L., Markusen, J.R., & Maskus, K.E. (2001). Estimating the Knowledge-Capital model of the Multinational Enterprise. *American Economic Review*, 91, 693-708.
- Child, J. & Rodrigues, S. B. (2005). The Internationalization of Chinese Firms: A Case for Theoretical Extension? *Management and Organization Review*, 1 (3): 381-410
- Chung, W. & Alcacer J. (2002). Knowledge Seeking and Location Choice of Foreign Direct Investment in the United States. *Management Science*, 48(12): 1534-1554.
- De Mello, Luiz, Jr (1997). Foreign Direct Investment in Developing Countries and Growth: A Selective Survey. *Journal of Development Studies*, 34(1):1-34.
- Deng, P. (2009). Why do Chinese firms tend to acquire strategic assets in international expansion? *Journal of World Business*, 44(1):74-84.
- Disdier, A. & Mayer, T. (2004). How different is Eastern Europe: Structure and determinants of

location choices by French firms in Eastern and Western Europe. *Journal of Comparative Economics*. 32, 280-296.

Duanmu, J. & Guney, Y. (2009). Locational Determinants of Foreign Direct Investment from China and India. *Journal of Asia Business Studies*, 3(2): 1-34.

Dunning, J. H. (1981). *International production and the multinational enterprise*. London, UK: Allen & Unwin.

Feenstra, R. (1998). Facts and Fallacies about Foreign Direct Investment. *NBER working paper*.

Fornes, G. & Butt-Philip, A. (2009). Chinese companies' outward internationalization to emerging countries: the case of Latin America. *Chinese Business Review*, 8(7): 13-28.

Froot, K. A., & Jeremy Stein. (1991). Exchange Rates and Foreign Direct Investment: An Imperfect Capital Markets Approach. *Quarterly Journal of Economics*, 106, 1191-1217.

Garcia-Canal, E. & Guillen, M. (2008). Risk and the Strategy of Foreign Location Choice in Regulated Industries. *Strategic Management Journal*, 29: 1097-1115.

Globerman, S., & Shapiro, D. (2009). Economic and strategic considerations surrounding Chinese FDI in the United States. *Asia Pacific Journal of Management*, 26(1): 163-183.

Helpman, E., Melitz, M., & Yeaple, S. (2004). Export Versus FDI with Heterogeneous Firms. *American Economic Review*, 94, 300-316.

Henley, J., Kratzsch, S., Kulur, M. & Tandogan, T. (2008). Foreign Direct Investment from China, India and South Africa in sub-Saharan Africa: A New or Old Phenomenon? *United Nations University, World Institute for Development Economics Research, Research Paper*, No, 2008/24.

Hong, J. (2009). Firm Heterogeneity and Location Choices: Evidence from Foreign Manufacturing Investments in China. *Urban Studies*, 46(10): 2143-2157.

Hymer, S.H. (1976). *The International Operations of National Firms: A Study of Foreign Direct Investment*, Cambridge, Mass: MIT Press.

Klemm, A. (2005). Corporate tax rate data. *Institute of Fiscal Studies*, Accessed from http://www.ifs.org.uk/publications.php?publication_id=3210, 08/07/2009

Laurenceson, J. (2007). Chinese Investment in Australia. *East Asia Economic Research Group Discussion Paper No.12 School of Economics*, the University of Queensland.

Li S., & Park, S. (2006). Determinants of Locations of Foreign Direct Investment in China. *Management and Organization Review*, 2, 95-119.

Li, W. (1997). The Impact of Economic Reforms on the Performance of Chinese State-Owned Enterprises. *Journal of Political Economy*, 105(5): 1080-1106.

- Liu, X., Xiao, W., & Huang, X. (2008). Bounded entrepreneurship and internationalization of indigenous Chinese private-owned firms. *International Business Review*, 17(4): 488-508
- Lunding, A. (2006). Global champions in waiting: perspectives on China's overseas direct investment. *Deutsche Bank Research*, Current Issues: China Special.
- Luo, Y. (2002). Capability exploitation and building in a foreign market: implication for multinational enterprises. *Organization Science*, 13,48-63.
- Luo, Y. Xue, Q. & Han, B. (2010). How emerging market governments promote outward FDI: Experience from China. *Journal of World Business*, 45(1):58-79.
- Makino, S., Lau, C.M. & Yeh, R. S. (2002). Asset-exploitation versus asset-seeking: Implications for location choice of foreign direct investment from newly industrialized economies. *Journal of International Business Studies*, 33(3): 403-421.
- McFadden, D. (1974). Conditional logit model analysis of qualitative choice behavior, In: P. Zarembka (Ed.), *Frontier in Econometrics*, 105-142. New York and London: Academic Press.
- Morck, R., Yeung, B., & Zhao, M. (2008). Perspectives on China's outward foreign direct investment. *Journal of International Business Studies*, 39, 337–350
- Nachum, L., Zaheer, S., & Gross, S. (2008). Does it Matter Where Countries Are? Proximity to Knowledge, Markets and Resources, and MNE Location Choices. *Management Science*, 54(7): 1252-1265.
- Pain, N. & Welsum, D. (2003). Untying the Gordian Knot: The Multiple Links Between Exchange Rates and Foreign Direct Investment. *JCMS*, 41(5): 823-846.
- Rui, H., & Yip, G., (2008). Foreign acquisitions by Chinese firms: A strategic intent perspective. *Journal of World Business*, (43)3: 213-226.
- Sitkin, S. & Pablo, A. (1992). Reconceptualizing the determinants of risk behavior. *Academy of Management Review*, 17, 9-38.
- Vernon, R. (1966). International investment and international trade in the product cycle. *Quarterly Journal of Economics*, 80(2):190-20.
- Wang, Y. & Suh, C. (2009). Towards a re-conceptualization of firm internationalization: Heterogeneous process, subsidiary roles and knowledge flow. *Journal of International Management*. 15, 447-459.
- Wei, Y. & Liu, X. (2001). *Foreign Direct Investment in China: Determinants and Impact*. Edward Elgar. Cheltenham. UK & Northampton, USA.

Wong, J. & Chan, S. (2003) China's Outward Direct Investment: Expanding Worldwide. *China: An International Journal*, 1(2): 273-301.

World Investment Report (2006). *FDI from Developing and Transition Economies: Implications for Development*. Geneva, United Nations.

Yamawaki, H. (2006). The location of American and Japanese multinationals in Europe. *International Economics and Economic Policy*, 3(2): 157-173.

Yiu, D., Lau, C. & Bruton, G. (2007). International venturing by emerging economy firms: the effects of firm capabilities, home country networks, and corporate entrepreneurship. *Journal of International Business Studies*, 38, 519-540.

Zaheer, S. (1995). Overcoming the liability of foreignness. *Academy of Management Journal*, 38, 34-63.

Zhang, A., Zhang, Y. & Zhao, R. (2001). Impact of Ownership and Competition on the Productivity of Chinese Enterprises. *Journal of Comparative Economics*, 29(2): 327-346.

Table 1: Variables and data sources

Key variables	Measurement	Data sources
Dependent variable		
Country chosen	The choice of the country=1, 0 otherwise	This study
Independent variables		
Political risk	A composite index of 5 elements	PRS group
Economic risk	A composite index of 12 elements	PRS group
State intervention	A composite index of 10 components	Heritage Foundation & WS
Exchange rate	Host national currency per SDR	IMF
Natural resource	% of ores and metals exports to total merchandise exports	World Bank
Market size	GDP	World Bank
Labour costs	GDP per capita	World Bank
Development status	Developed=1; developing=0	World Bank
Political risk*Ownership	SOE=1; non-SOEs=0	PRS group and this study
Economic risk*Ownership		PRS group and this study
Economic Freedom*Ownership		Heritage Foundation & WS and this study
Exchange rate*Ownership		IMF and this study
Natural resource*Ownership		World Bank and this study
Market size*Strategic Intent	Manufacturing=1; Trading=0	World Bank and this study
Labor costs*Strategic Intent		World Bank and this study
Control variables		
Corporate tax	Corporate marginal tax rate	World Bank and Klemm, 2005
Unemployment rate	% of total unemployment	International Labour Organization (ILO)
Distance	Kilometers between the capital of various cities in Jiangsu	City distance calculator: http://www.geobytes.com

Table 2: Conditional (fixed-effects) logistic regression results

Variables	Specification 1	Specification 2	Specification 3	Specification 4 <i>Before 2004</i>	Speciation 5 <i>After 20004</i>
Political risk	0.498**	0.625**	0.625**	0.532**	0.632**
	-0.206	-0.236	-0.231	-0.212	-0.202
Economic risk	1.144	0.327	0.326	0.165	0.185
	-0.205	-0.321	-0.321	-0.201	-0.231
Economic freedom	0.018	0.011	0.011	0.021	0.019
	-0.019	-0.021	-0.021	-0.021	-0.020
Exchange rate	0.001*	0.000*	0.000*	0.000*	0.000*
	0.000	0.000	0.000	0.000	0.000
Natural resource	-0.054	-0.006	-0.006	-0.058	-0.059
	-0.011	-0.013	-0.013	-0.010	-0.011
GDP	2.29e-13***	2.24e-13***	2.24e-13***	2.24e-13***	2.29e-13***
	-4.95E-14	-5.90E-14	-5.90E-14	-0.54E-14	-0.59E-14
GDP per capita	-0.000**	-0.000*	-0.000*	-0.000*	-0.000*
	0.000	0.000	0.000	0.000	0.000
Corporate tax	-0.042*	-0.051*	-0.051*	-0.052*	-0.052*
	-0.022	-0.023	-0.022	-0.024	-0.023
unemployment	-0.086*	-0.089*	-0.089*	-0.089*	-0.089*
	-0.041	-0.044	-0.044	-0.041	-0.042
Distance	0.000	0.000	0.000	0.000	0.000
	0.001	0.000	0.000	0.000	0.000
Interaction terms					
Political risk * ownership		-0.443	-0.443	-0.401	-0.402
Economic risk * ownership		-0.511	-0.511	-0.551	-0.548
Economic freedom * ownership		-0.828	-0.828	-0.688	-0.702
Exchange rate * ownership		-0.895	-0.895	-0.803	-0.861
Natural resource * ownership		0.014	0.014	0.013	0.013
		-0.037	-0.037	-0.034	-0.033
		0.000**	0.000**	0.000**	0.000**
		0.000	0.000	0.000	0.000
		0.015	0.015	0.014	0.014

	-0.026	-0.026	-0.021	-0.020
GDP * Strategic intent	2.45e-13***	2.45e-13***	2.85e-13***	2.89e-13***
	-5.40E-14	-5.40E-14	-5.42E-14	-5.42E-14
GDP per capita * Strategic intent	-0.001***	-0.001***	-0.001***	-0.001***
	0.000	0.000	0.000	0.000
Model summary				
Pseudo R-squared	0.114	0.1538	0.1541	0.1705
N	6208	6208	6208	3328
Log likelihood	705.583	712.349	712.352	402.556
Prob> chi2	0.000	0.000	0.000	0.000
* p<0.05, ** p<0.01, *** p<0.001				

Table 3: Nested logistic regression results

Variables	Specification 1	Specification 2	Specification 3 <i>Before 2004</i>	Specification 4 <i>After 2004</i>
Political risk	0.412**	0.412**	0.328**	0.301**
	-0.202	-0.202	-0.231	-0.224
Economic risk	1.121	1.124	0.307	0.166
	-0.215	-0.215	-0.301	-0.211
Economic freedom	0.017	0.017	0.011	0.021
	-0.019	-0.019	-0.021	-0.021
Exchange rate	0.001*	0.001*	0.000*	0.000*
	0.000	0.000	0.000	0.000
Natural resource	-0.055	-0.053	-0.005	-0.053
	-0.011	-0.011	-0.013	-0.010
GDP	2.89e-13***	2.89e-13***	2.14e-13***	2.54e-13***
	-4.85E-14	-4.85E-14	-5.90E-14	-0.54E-14
GDP per capita	-0.000**	-0.000**	-0.000*	-0.000*
	0.000	0.000	0.000	0.000
Corporate tax	-0.028*	-0.028*	-0.051*	-0.052*
	-0.012	-0.012	-0.023	-0.024
unemployment	-0.084*	-0.084*	-0.089*	-0.080*
	-0.0391	-0.0391	-0.034	-0.041
Distance	0.000	0.000	0.000	0.000
	0.001	0.001	0.000	0.000
IV params				
Developed	0.038	0.038	0.012	0.083
	0.058	0.058	0.016	0.081
Developing	0.041	0.041	0.024	0.051
	0.007	0.007	0.004	0.011
Model summary				
Pseudo R-squared	0.105	0.105	0.125	0.154
N	6208	6208	2880	3328
Log likelihood	515.583	515.583	357.349	398.322
Prob> chi2	0.000	0.000	0.000	0.000

*p<0.05, **p<0.01, ***p<0.001

Appendix 1: country distribution of Chinese MNEs from Jiangsu between 1999 and 2008

Country	Number of Chinese FDI	Country	Number of Chinese FDI
Afghanistan	5	Macao	2
Argentina	2	Madagascar	1
Australia	11	Malaysia	13
Bangladesh	2	Mongolia	2
Bolivia	1	Morocco	4
Brazil	4	Myanmar	1
Cambodia	11	Netherlands	3
Canada	4	Nigeria	4
Congo Republic	2	Pakistan	1
Egypt	2	Philippines	5
France	1	Romania	1
Germany	6	Russia	4
Hong Kong	58	Samoa	1
Hungary	2	Singapore	7
India	3	South Africa	2
Indonesia	2	Sweden	1
Ireland	1	Thailand	10
Italy	1	Ukraine	1
Japan	9	United Arab Emirates	12
Jordan	1	United Kingdom	3
Korea, Rep.	3	United States	31
Kyrgyz Republic	1	Vietnam	14
Libya	2	Virgin Island	6
Liechtenstein	1		