What Drives Internationalization of Chinese Firms: Three Theoretical Explanations

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Abstract

Employing detailed firm-level data, this study examines the drivers of internationalization of Chinese firms. Departing from previous empirical studies which focus on application of single theoretical perspective, this paper tests a comprehensive theoretical framework that integrates the insights of resource-based, industry-based, and institution-based views. We demonstrate that home institutions and industry structure are most important in explaining internationalization. The results show that conventional firm-specific resources including technological and advertising resources are not important antecedents of internationalization. The findings challenge the dominant theory of multinational enterprise which was developed from the developed country context and emphasizes the role of firm-specific assets in driving internationalization. These findings can guide practitioners as to the key drivers of internationalization in an emerging market context.

1. Introduction

The recent corporate evolution of emerging economies has been characterized by increased internationalization of firms in the form of outward foreign direct investment (OFDI). This phenomena has attracted considerable research interest (Buckley, Clegg, Cross, Liu, Voss, & Zheng, 2007; Yiu, Lau, & Bruton, 2007; Deng, 2009). The quest for understanding what drives internationalization of firms has led to three prevailing theoretical explanations which revolve around the role of resource (Westhead, Wright, & Ucbasaran, 2001; Hitt, Bierman, Uhlenbruck, & Shimizu, 2006; Tseng, Tansuhaj, Hallagan & McCullough, 2007; Tseng, Tansuhaj, Hallagan & McCullough, 2007), industry conditions (Boter & Holmquist, 1996; Yang, Jiang, Kang & Ke, 2009), and institutions (Child and Rodrigues, 2005; Luo, Xue, & Han, 2009; Peng, Wang, & Jiang, 2008; Wan & Hoskisson, 2003). Although these literatures have each assisted significantly in advancing theory on the antecedents of internationalization, little research has attempted to apply them in a unified framework, preventing thereby theoretical completeness and limiting our understanding of how variations in internationalization arise.

This research gap motivates our contributions. Our study departs from previous studies in at least two significant ways. First, rather than focusing on application of single theoretical perspective which is believed can not sustain on its own to account for internationalization, we propose and test a comprehensive framework that integrates theoretical developments from the literatures of resource-

based, industry-based and institution-based views. In developing this framework, we have drawn from the theoretical analysis of Yamakawa, Peng, & Deeds (2008) on the drivers of new ventures' entrepreneurial entries from emerging to developed economies, and the case-studies of Yang, Jiang, Kang & Ke (2009) regarding the differences and similarities of international expansion of Chinese and Japanese multinational enterprises, both of which apply and integrate the three leading theoretical perspectives. Different from these two studies, we contribute to the literature by conducting an empirical examination of the 'three-pillar' framework. The conceptual and methodological benefits of evaluating the determinants of internationalization in a comprehensive research framework allow us to better understand the relative contribution and the role of each type of factors.

Second, although the international expansion of firms from emerging economies has recently received attention, academic efforts are hampered by data constraints. Previous studies use three types of data: aggregate national level data (FDI) (e.g., Buckley, Clegg, Cross, Liu, Voss, & Zheng, 2007), survey-based data (e.g., Yiu, Lau, & Bruton, 2007), and case-studies (Deng, 2009, Duysters, Jacob, Lemmens, & Yu, 2009; Liu & Li; 2002). The employment of aggregate data has serious limitation in that internationalization is ultimately a firm rather than macro phenomenon and is often measured as a firm-wide construct; survey-based results are not always reliable because 'the true motives of foreign investors may not be disclosed for reasons of good public relations' (Hill and Munday, 1994); lastly, findings from case-studies lacks the power of generalization. We overcome the these data limitations by employing unique published firm-level data sets from China, which allow us to investigate comprehensively the role of firm-, industry-, and institution-level factors in shaping internationalization of firms.

The paper is organized as follows. In the next section, we use the three theoretical views as the theoretical foundation to develop hypotheses that relate the resource-based, industry-based and institution-based determinants to internationalization. Subsequently, we describe the research methods and data. In the last three sections, we present the empirical results, discuss their implications, and draw conclusions.

2. Theory and hypotheses

2.1 Resource-based view

Early explanations of the drive to expand internationally started from the perspective that firms have specific intangible assets which form 'competitive' or 'monopolistic' advantages—that can compensate for the additional costs associated with setting up and operating abroad (references). The emphasis on firm-specific intangible assets as drivers of internationalization has in fact its roots in the resource-based view of the firm because most economic approaches to internationalization are resource-based (resource exploitation or resource-sourcing). The resource-based view argues that resources that are valuable, rare, imperfectly imitable and imperfectly substitutable (Barney, 1991; Amit and Shoemaker, 1993) are an organization's main source of sustainable competitive advantage from which sustained performance results (Peteraf, 1993; Conner, 1991). The resource-based view has in recent years become a major research paradigm guiding inquiry into the antecedents of internationalization in recent years (Westhead, Wright, & Ucbasaran, 2001; Hitt, Bierman, Uhlenbruck, & Shimizu, 2006; Tseng, Tansuhaj, Hallagan & McCullough, 2007).

The resource-based view focuses on the heterogeneous and firm-specific characteristics, which is a significant departure from the Neo-classical market-based economics of the industrial organization view (Mahoney and Pandian, 1992). It sees foreign expansion primarily as a means by which firms can appropriate rents in overseas markets from the exploitation of valuable idiosyncratic resources, such as technological capabilities, brand names, or management know-how (Filatotchev, Strange, Piesse, & Lien, 2007; Hsu & Pereira, 2008). It is argued that the transfer of such resources overseas helps the firm 'buffer additional costs and risks incurred overseas due to greater managerial complexity and liability of foreignness' (Tseng, Tansuhaj, Hallagan & McCullough, 2007), and achieve economies of scale, scope and production rationalization (Hitt, Hoskisson, & Kim, 1997). Therefore, the resource-based view offers a promising alternative to the prevailing deterministic approach (e.g., industrial organization theory) in the internationalization literature.

2.2 Industry-based view

Traditional industrial organization literature emphasizes that conditions within an industry determine a firm's strategy and performance (Porter, 1980). Attributes of the industry structure, in terms of competitive rivalry, homogeneity of products and barriers of entry and exit shape the extent to which a firm is likely to achieve advantage on a global scale. According to the industrial organization thinking, internationalization decisions of a firm depend upon the degree of rivalry and competition of the particular industry in which it operates (Flowers, 1976; Hymer, 1976; Boter & Holmquist, 1996). Some argue that "high competition in domestic market motivates firms to seek new foreign markets" (Yang, Jiang, Kang & Ke, 2009), whilst others suggest that a firm is likely to pursue international expansion if the concentration rate of the firm's industry is high (Delios, Gaur & Makino, 2008). Additionally, rivalry-based theories of mimetic behaviour suggest that an international expansion is likely to engender strategic responses by competitors in the same industry who typically cluster, or bunch, in expansion of geographic scope (Knickerbocker, 1973; Yu & Ito, 1988; Delios, Gaur & Makino, 2008).

Industries differ in terms of globalization potentials (Yip, 1992) which accounts for variations internationalization across different industries. The degree of globalization is higher in sectors that rely on a standardized product or service for all customers such as microchips and engine components than in sectors that produce consumer products in which tastes and preferences are influenced by culture such as couture and processed food. Industries also differ considerably in terms of technological opportunities, defined as the set of possibilities for technological advance (Klevorick, Levin, Nelson, & Winter, 1995). Because technological advances are renewed quickly in high technological opportunity industries (Klevorick, Levin, Nelson, & Winter, 1995), there are reasons to believe that internationalization is more pronounced in high technological opportunities than in low technological opportunities. Industries also vary in terms of policy environment. The need for internationalization is particularly great in industries that are experiencing rapid deregulation. In telecommunications industry, for example, the ongoing regulatory liberalization and privatization has made it much easier for firms to expand overseas through acquisitions. Such industries often see concentrated waves of cross-border acquisitions as firms race each other to attain global scale. To summarize, idiosyncrasies across industries, to a large extent, should account for the decisions of whether or not and to what extent a firm internationalizes its value-creation activities.

2.3 Institution-based view

Institutions are the political, legal, economic, and social rules that articulate and maintain widely observed norms and rules (North, 1990; Scott, 1995). A number of scholars suggested that strategic choices are not only driven by industry conditions and firm-specific resources that traditional strategy research emphasizes (Barney, 1991; Porter 1980), but also are a reflection of the formal and informal constraints of a particular institutional framework that a firm is embedded (Oliver, 1997; Scott, 1995). Therefore, strategy research cannot just focus on industry conditions and firm resources (Khanna and Palepu, 1997). The institution-based view of firm strategy considers strategic choices as the outcome of such interactions between institutions and organizations, and (Peng, 2002).

The institution-based view suggests that the strategic choice of the firm is enabled or constrained by a multitude of institutional forces including elements that both promote and hinder the upgrading of existing resources and capabilities (Dunning and Lundan, 2008). The specific regulatory policies enacted by home country governments will encourage firms to engage in expansion overseas if they are straightforward, consistent and liberal (Buckley et al., 2007). On the other hand, weak institutional framework gives rise to high transaction costs of establishing new business relationships and inhibits potential transactions (Meyer, 2001b) because it increases search, negotiation and enforcement costs (Antal-Mokos, 1998). Buckley, et al. (2007) argue that a discretionary and frequently adjusted policy discourages outward FDI. Therefore, advocates of institution-based view argue that a firm's strategies, such as internationalization, are shaped at least in part by the institutional framework of the home country of the firm (Lee, Peng, & Barney, 2007; Meyer & Peng, 2005; Peng, Wang, & Jiang, 2008; Wan & Hoskisson, 2003; Yeung, 2002).

2.4 Hypotheses

Emerging market enterprises face a number of obstacles in entering foreign markets. Among those obstacles are constraints on various resources (Shenkar, 2009). These firms did not start from positions of strength, but rather from the resource-meager position due to the generally low level economic and technological development of their home countries (Uhlenbruck, Meyer, & Hitt, 2003). For this reason, emerging market enterprises do not possess the intangible resources such as patents or trademarks, marketing skills that have enabled the internationalization drive of developed market enterprises in last decades. Emerging market enterprises are more likely to compete on price rather than product differentiation, pursuing an imitation rather than innovation strategy (Shenkar, 2009). Because of the resource constraints, these firms normally utilize more labor-intensive and more flexible technologies than did other multinational firms from developed economies (Lecraw, 1993).

There is a large literature devoted to identifying the firm-specific ownership advantages possessed by firms that engage in foreign production (e.g., Filatotchev, Strange, Piesse, & Lien, 2007). UNCTAD (2006) suggests that MNEs from developed countries are most likely to possess advantages based on ownership of key assets such as technologies and brands. Similar to the IB literature, the resource-based view is concerned with identifying the sources of competitive advantage for superior firm performance (Powell, 2001; Priem and Butler, 2001; Sirmon, Hitt, & Ireland, 2007). The resource-based view considers that knowledge is strategically the most important intangible resource that forms the basis for a sustainable competitive advantage (Barney et al., 2001; McEvily and Chakravarthy, 2002).

However, emerging economies are developing countries and/or transitional economies, featuring generally lower levels of economic and technological development than developed countries. Therefore, firms from such economies may not possess the same overwhelming competitive advantage of those from developed countries (Dunning, Kim & Park, 2008; Kumar, 2007). Kumar (2007), for example, pointed out that the strengths of Indian MNEs are concentrated in relatively standardized and mature technologies in industries characterized by competition based on price rather than technology. Chinese firms are the same (e.g., Buckley, Clegg, & Wang). Research shows that R&D is not to be associated with internationalization of Chinese firms (Yiu, Lau, & Bruton, 2007). Emerging market MNEs also lack such assets as brand equity which are typical examples of resource stocks (Dierick and Cool, 1989), whose accumulation over a period of time is characterized by high levels of specificity and complexity (Fahy, 2002). For these reasons, the internationalization of emerging market enterprises is likely to be driven by 'learning objectives that allow these firms to overcome their initial resources hurdles arising due to technological gaps and later mover disadvantages in international markets' (Aulakh, 2007).

Hypothesis 1: Intangible assets (R&D resources and advertising resources) will not explain internationalization

Emerging economies are characterized by a rapid pace of economic growth, increasing liberalization of trade and investment regimes, and economic restructuring (Hoskisson, Eden, Lau, & Wright, 2000). China, for example, has been undergoing radical structural transformation (Luo & Tan, 1997). Such transformation leads to considerable inter-industry variation in a number of key industry factors, such as government control, degree of openness to foreign investors, investment opportunities, and profitability, each of which reflects the transitional nature of the economy (Wang, Clegg, & Kafouros, 2009; Luo and Tan, 1997). The transformation has created an industry structure that differs markedly not only from that in traditional central planning systems but also that in mature market economies, in terms of the degree of market imperfection, structural uncertainty and government interference partly because the industrial policy of Chinese government does not allow all sectors to be decentralized and privatized at the same time. Furthermore, while the Chinese government has adopted a favourable official attitude towards OFDI, policy making is implemented at the industry level. The government determines sector-specific incentives and restrictions on OFDI. As a result, distinct episodes in the evolution of policy can be identified in which sectoral OFDI restrictions were either tightened or loosened. For these reasons, industry is a key dimension to analyze the drivers of internationalization of Chinese firms.

Erosion of entry barriers that formerly protected state enterprises leads to the emergence of non-state-owned enterprises including private and joint stock firms, as well as foreign owned enterprises, creating an environment of 'hypocompetition' between domestic firms of different ownership in some industries previously unseen or unanticipated. On the other hand, openness through inviting FDI has increasingly exposed domestically-owned firms to new competitive pressures from foreign multinational firms, which have altered the nature of competition. Therefore, competition exists not only between domestic firms of different ownership but also between domestic and foreign-owned firms. Given these salient features of emerging market firms and industries, it is pertinent to argue that Porter's (1980) model should remain powerful in explaining the strategy of firms from these economies. We argue that emerging market enterprises that have embarked on OFDI are responding to a

number of industry structure factors at home that arise from the transition from command to market economy. For these considerations, we hypothesize:

Hypothesis 2: Industry structure will have an important effect in explaining internationalization.

Emerging economies often feature a legacy of significant governmental or political involvement in business affairs (Luo, Xue, & Han, 2009; Meyer & Peng, 2005; Meyer, Estrin, Bhaumik, & Peng, 2008) which are thought to constraint business activities. Internationalization may thus signify a determined attempt to escape the limitations of domestic institutional environment (Buckley et al., 2007, Witt and Lewin, 2007; Child and Rodrigues, 2005). However, some regulatory features of emerging markets could be an advantage to some firms since they can help to alleviate natural market failures and secure critical resources, thereby arbitraging and leveraging its economic and political positions against competitors (Boddewyn, 1993; Dunning, 1988; Rugman & Verbeke, 1990). Many emerging economy governments (such as India, China, and Brazil) now directly encourage local enterprises to go global (WIR, 2008). The Chinese government's "Go Global" policy has encouraged local firms to expand overseas (Child & Rodrigues, 2005). There is strong evidence that Chinese government support is one of the key drivers of Chinese internationalization (Rui & Yip, 2007; Buckley et al., 2007).

Although the Chinese government has vigorously pursued reform of ownership to fade out of state ownership in some industries and growth of other ownerships especially private ones, many of China's MNEs remain in the state hands, even though corporatized in order to focus on commercial objectives. Thus Chinese SOEs still cannot act as purely market-driven economic entities. Compared to non-state firms, Chinese SOEs tend to follow the state policy more closely, and are more protected by the state (SAIC, 1988, 1999). As a result, they are more likely to have access to factor resources they need from the state than nonstate firms. State ownership can thus be regarded as institution-related capital (Lu & Yao, 2006). We argue that firms with high state ownership are more likely to pursue internationalization[1]. In sum, the special characteristics of institutions in emerging economies mean that they may play a significant role in determining firms' internationalization strategy (Peng & Delios, 2006; Yamakawa, Peng, & Deeds, 2008).

Hypothesis 3: Institutional factors will have an important effect in explaining internationalization.

Reflecting the above arguments together, we also offer the following hypothesis:

Hypothesis 4: Industry structure factors and institutional factors will have a greater effect in explaining internationalization than firm resources.

3. Data and Methodology

3.1 Data

We combine two firm-specific datasets to assess the determinants of Chinese internationalization. Our data for parents firms that have conducted OFDI is drawn from the Report of Industrial Enterprise Statistics for 2006 and 2007, which was obtained from the State Statistical Bureau of China. The Report contains company

[1] In 2009, thirty-five Chinese firms entered the Fortune 500 list and almost all these firms are state-owned. While this is hailed as a spectacular achievement, many commentators voiced that the rise of many of these state-owned enterprises is, to a large extent, due to the fact that they operate in monopolized industries (such as oil refinery and electricity) and enjoy preferential government policies (such as subsidies and below-market bank loans).

profiles of Chinese companies with annual turnover of over five million Renminbi for a cross-section of branches of Chinese manufacturing industry. The database provides both quantitative information, such as input and output data including assets, number of employees, R&D, advertising, value-added, sales, new product sales and exports for firms, and qualitative data, such as information on sectoral and regional location. Our data concerning Chinese firms' OFDI are obtained from Ministry of Commerce, China (MOC). The database of the MOC provides detailed information on the investment activities of Chinese firms for 2006 and 2007, such as the name of parent firms and foreign subsidiaries, time and location of investment, capital investment of the project. The dataset shows that Chinese firms have set up 3101 foreign subsidiaries in 2007. The matching of the two datasets has provided us a sample of 667 observations after removing outliers and nonsense observations.

3.2 Measures

Dependent variable

Previous studies use different measures a firm's degree of internationalization, ranging from the ratio of foreign sales to total sales (e.g., Daniels and Bracker, 1989; Geringer, Tallman, &. Olsen 2000; Capar and Kotabe, 2003), the number of foreign subsidiaries (Tallman and Li, 1996; Lu & Beamish, 2004), number of overseas employees to number of total employees (Kim, Hwang, & Burgers, 1989), the ratio of foreign assets to total assets (Daniels & Bracker, 1989), measures of outward FDI (Delios & Beamish, 1999), the number of countries in which the firm operates (Ramaswamy, 1995; Delios & Beamish, 1997), to a composite index (Gomes & Ramaswamy, 1999; Sullivan, 1994). Following Buckley et al. (2007) and Majocchi & Zucclella (2003), internationalization in this study is operationalized as the actual amount of foreign direct investment.

Independent variables

We include three resource variables in the model. The resource-based view recognizes the importance of both tangible and intangible assets (Dunning and Lundan, 2008; Camelo-Ordaz, Martín-Alcázar, & Valle-Cabrera, 2003). Tangible assets are often considered to be a relatively poor source of advantage (Grant, 1991; Fahy, 2002) because they are relatively weak at resisting duplication by competitors (Barney, 1991). However, Foss (1997) claims that there are 'numerous' examples where physical assets bring firms sustainable competitive advantages. Therefore, we include *capital intensity*, defined as fixed assets per worker to capture the role of tangible resources. The literature on FDI emphasizes the role of firm-specific assets particularly in the form of technological capability and marketing skills. We follow Delios and Beamish (2001) and use both R&D intensity and advertising intensity to proxy intangible resources. *R&D intensity* is gauged by conventional measure, the ratio of R&D expenditure to total sales (Gatignon & Anderson, 1988; Erramilli et al., 1997; Yiu et al., 2009), while *advertising intensity* is similarly defined as the ratio of advertising expenditure to total sales (Lu & Beamish, 2004; Caves, 1996; Delios and Beamish, 1999).

Three industry structure variables are used. The first is *industry competition,* which is defined in terms of the growth in the number of firms in an industry (Jefferson, Rawski, & Zheng, 1992; Luo, 2001) (4 industry digit) [2] . Industry

[2] While traditional industrial organization studies often use concentration ratio to gauge the strength of industry competition, this ratio may be not well applicable to China. In emerging economies, because

competition should be positively associated with the degree of internationalization of firms (Yang, Jiang, Kang & Ke, 2009). Domestic firms in emerging economies react to the increased competitiveness by engaging in outward moves which allows the firm to reposition itself and address its competitive disadvantages through access to scarce resources and capabilities in the foreign market. The second is level of *foreign presence* in each industry, which is gauged as capital share accounted for by all foreign-owned enterprises in each industry[3] (4 industry digit). Inward FDI changes the landscape of competition in the domestic market, and may stimulate domestically-owned firms to speed up their response to the competitive threat posed by the entry of foreign firms by conducting their own FDI. The third variable is *high-tech dummy* which is defined to have the value of 1 if the firm is in high-technology industry and 0 otherwise[4]. Although research shows that high-tech industries are more globalised than low-tech industries, MNEs from these economies tend to engage in low-to-medium-tech industries where they have relative comparative advantage. Therefore, the sign of high-tech dummy variable is predicted to be negative.

We include three variables to account for the role of institutions. The first is *State ownership* which is defined as the percentage of state-owned assets in the enterprise as the measurement of state ownership (Luo & Yao, 2006). Chinese firms are subordinated to different levels of government agencies, namely, state-, provincial-, city-, county-, and other-levels (street-, town-, and village-levels). Since firms that are subordinated to a higher level of government are likely to enjoy a higher level of government support, we use *Government subordination* act as a proxy for government support. We have assigned a value of 5, 4, 3, 2, and 1 to state-, provincial-, city-, county-, and other-levels, respectively. A value of 5 thus indicates highest level of government support, and 1 the lowest level of government support. The Chinese government issued a guiding directory of industries for outward FDI in 2008, distinguishing them into 'encouraged' and 'discouraged' groups[5]. Firms in the 'encouraged' category enjoy preferential government support including funding, tax collection, foreign exchange, customs and others (Luo, Xue, & Han, 2009). The *industry policy* is constructed as a dummy variable, which takes a value of 1 if the firm operates in 'encouraged sectors', and 0 otherwise.

Control variables

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of government intervention and the state-owned status of leading firms (Perkins, 1994), the degree of inequality in firms' shares of industrial activity does not necessarily reflect the vigour of competition (Luo and Tan, 1997; Luo, 2001).

[3] A firm is defined to be foreign-owned if its foreign capital participation is above 25%.

[4] According to the State Statistical Bureau of China, there are 59 high-tech manufacturing industries at the 4-digit industry level, covering computer, electronic and telecommunications equipment, Air space, medical equipment, software, office equipment, and information chemistry and nuclear fuel.

[5] According to Guiding Directories of Target Nations and Industries for OFDI, issued by the State Council of China (2008), the Chinese government encourages OFDI that helps to secure scarce resources, stimulate exports, enhance technological capabilities of Chinese firms, and make use of frontier technology and advanced management skills overseas. OFDI in the following nineteen sectors are encouraged: Textiles, clothing, fibre, wood products, paper and pulp, agricultural machinery, polyethylene, chemical products that can not be made with domestic technology, fertilizer, medicine, sinter production, and pellet and ferrochrome production (烧结矿、球团矿生产，铬铁生产), non-ferrous metal smelting, civil satellite communication, digital machine tool, new building materials, measuring tool, bearing and instruments, automotive, household electronics, electronics and information related products.

Previous studies suggest that *firm size* is correlated with the probability of outward FDI (Dunning, 1995, 1998, 2000; Caves, 1996). We assess firm size by employee count (Geringer et al., 2000; Yiu, Lau, & Bruton, 2007) in the logarithmic form. *Firm age* can affect internationalization because it reflects accumulation of knowledge and experiences. Firm age is calculated as a firm's founding year subtracted from 2006 in the logarithmic form (Tseng, Tansuhaj, Hallagan, & McCullough, 2007). *Export intensity*, measured as the share of export sales in the total sales, is included to account for the well-known product cycle hypothesis of Vernon (1979), which suggests that firms undertake FDI on the basis of previous export experience. It is interesting to see whether this hypothesis commands general validity for FDI from emerging economies. Given that China features huge regional differences in economic and technological development and degree of openness, we also include *regional dummy* to control possible regional effects.

Table 1 provides information regarding the means, standard deviations and correlations among explanatory variables. None of the correlations is above 0.50 and the average variance inflation factors (VIFs) is well below the rule-of-thumb cut-off of 10 (Neter, Wasserman, & Kutner, 1990), indicating no serious problems of multicollinearity. Since this study uses cross-sectional data, without convincing instruments, it is therefore difficult to control for possible endogeneity. The firm-level variables included, such as R&D intensity and firm size, may be jointly determined with the decision to expand overseas and /or the size of those investments. However, there is little reason to be seriously concerned about reverse causality running from outward FDI to parent firm characteristics because most Chinese FDI projects have only started in very recent years. Nevertheless, in order to mitigate the problem, we follow previous studies (Grant, 1987; Grant, Jammine & Thomas, 1988; Raff, Ryan and Stähler (2009) and lag all independent variables by one year ahead of the establishment year of each foreign subsidiary in order to better address the possible potential causality. To deal with the possible threat of heteroskedasticity, we estimated the OLS regressions using Huber-White's robust standard error (White, 1980).

(Insert Table 1 about here)

4. Results

Hierarchical OLS regression analyses were used to test Hypotheses 1–4. The results are displayed in Table 2 and indicate variance explained and statistically significant coefficients. Model 1 is our baseline model which includes control variables only, while model 2, 3, and 4 contain the addition of the resource variables, industry structure variables, and institution variables, separately.

(Insert Table 2 about here)

Model 2 shows that both capital intensity and advertising intensity are not significant. The R&D intensity is statistically significant but it is wrongly signed. Hypothesis 1 is thus not supported. Model 3 shows that all the three industry structure variables are statistically significant, lending support to Hypothesis 2. Similarly, Model 4 shows that both industry policy and state ownership are significant. Although government subordination is not statistically significant, the results in the Model 4 provide some support to Hypothesis 3. Finally, the values of adjusted R^2 for both Model 3 and 4 are larger than that for Model 2, corroborating our Hypothesis 4.

As for the control variables, firm age has no impact on internationalization. This finding challenges the Uppsala model which highlights the importance of experience and knowledge in the internationalization process. Given the short window

of opportunities in today's global markets, an experiential learning approach might indeed be prohibitive for internationalization. In line with previous research, larger Chinese parent firms are more likely to self-select into the FDI group, and they also engage in larger FDI projects overseas. It is interesting to observe that export intensity is negatively associated with internationalization across almost all models. This finding suggests that exports do not lead to outward FDI. Rather, exports substitute FDI for Chinese firms. This finding contradicts Grosse & Trevino (1996) which found that FDI is used to preserve markets that were previously established by exports, as well as Eaton & Tamura (1994) which found that FDI follows exports. (more discussion on this in the next section?)

5. Discussion

The international business literature traditionally emphasizes the exploitation of firm-specific ownership advantages through internationalization. It focuses on the firms that already possess such advantages, and is less concerned with successfully internationalized firms whose resources are initially deficient. As such, questions often arise as to whether internationalization strategies and processes of emerging market MNEs are fundamentally different from those of firms in developed country markets (Luo and Tung, 2007). Our results indicate that both R&D and advertising resources are not important for Chinese internationalization. This is probably because Chinese firms are undertaking FDI at an earlier stage, where they control much less strategic assets than global rivals (Hitt, Harrison, & Ireland, 2001). Indeed, Nolan (2001, p. 187; 2004) argued that the competitive capability of China's large firms, even national champions remains relatively weak in terms of R&D, marketing capability, and brand development which form the basis of firm-specific ownership of western multinationals. Chinese MNEs are more dependent on the importation and or imitation of technologies and knowhow developed elsewhere (Shenkar, 2009), which can balance advantages due to innovation (Matheews, 2002).

Although this study was not able to identify firm-specific resources or capabilities, if any, that drive Chinese internationalization, our findings mirror the argument of Child and Rodrigues (2005) which suggest that the Chinese MNEs regard internationalization as the means to acquire advanced technology and R&D capabilities, which provide the means to strengthen product differentiation and/or brand advantage. Indeed, evidence is accumulating that emerging market firms expand overseas to explore new strategic assets as opposed to "exploitation" of existing advantage (Deng, 2009; Wright, Filatotchev, Hoskisson, & Peng, 2005; Liu and Li, 2002). Nevertheless, it appears that our findings challenge the view that "weak firms have no place in the field of FDI" (Chen and Chen, 1998), demonstrating that possession of (conventionally defined) strategic assets per se is not a necessary condition for Chinese firms to create sustainable competitive advantages for enabling internationalization drive.

Our empirical findings for role of industrial expansion are consistent with previous studies (Boter & Holmquist, 1996; Yang, Jiang, Kang & Ke, 2009) that underscore the role of home industry competition in triggering outward FDI activities. The low tariff barriers and increasingly integrated markets lead to increase in the number of firms in the industry, thereby the degree of competition considerably in China. Ghoshal (1987) argue that whenever a home industry appears to be highly competitive, emerging market firms are likely to shift their focus from local market development to production factor exploitation. This strategic choice, aimed at

production cost-minimization and globally-integrated network utilization, is expected to result in high degree of internationalization.

Interestingly, in our study, the degree of internationalization is negatively associated with the level of foreign presence within an industry. The literature on the impact of inward FDI suggests that presence of foreign-owned firms produces negative externalities to domestically-owned firms (Blomström and Kokko, 1998; Aitken & Harrison, 1999; Blomström, 2002), notably through a 'market stealing' effect in both final and intermediate markets (Buckley, Clegg, & Wang, 2007a). According to this logic, the negative competition effects of inward FDI could act as a powerful stimulus for domestically-owned firms to engage in outward FDI. However, there is the other side of the coin. One of the key catch-up strategies for emerging market enterprises is to equip themselves with strategic assets comparable to their western counterparts. This can also be achieved through 'inward internationalization' by taking advantage of inward FDI including equity and contractual joint ventures from developed economies. The presence of inward FDI allow domestic firms to gain access to foreign organizations' embedded knowledge, organizational skills and capabilities (Child, 2002; Inkpen & Beamish, 1997; Song et al., 2003). Joint ventures, in particular, may be the most effective vehicle with which to transfer knowledge to local firms (Lane, Salk, & Lyles, 2001). Indeed, literature has documented that Chinese firms have benefited substantially from inward FDI and especially equity joint ventures (e.g., Buckley et al., 2007a; 2007b; Luo, 2004).

The finding of the negative association between foreign presence and outward OFDI thus suggests that the positive effect of 'inward internationalization' dominates the crowding-out effect of inward FDI. While Chinese firms can acquire strategic assets through either 'inward' or 'outward' internationalization, they tend to avoid 'outward' internationalization if they are able to acquire strategic assets through 'inward' internationalization because the latter is much less costly and risky than the former. This argument has some value as it mirrors the proposition that the Chinese internationalization in the form of outward FDI is driven by seeking strategic assets from technologically advanced western firms in the foreign market (Child & Rodrigues, 2005). Our finding however contrasts markedly Deng (2009) which, in his case-studies, show that Chinese firms that operate in industries with large foreign presence are more likely to expand overseas. The insignificant role of high-tech dummy is well-expected and is consistent with the weak role of firm-specific resources, suggesting that Chinese MNEs still operate in sectors in which mature and standardized technologies prevail. In sum, our findings support Porter's (1980) model, demonstrating that the idiosyncratic characteristics of the industry explain Chinese internationalization.

Furthermore, in indicating that Government policy on outward FDI has important consequences for internationalization, our results justify the policies of Chinese government, which offer preferential incentives to encourage OFDI (Luo, Xue, & Han, 2009; Deng, 2009; Buckley, et al., 2007; Li, 2007). Our findings also show that firms with high state-ownership are more likely to expand overseas. This finding is consistent with Thomas, Eden, & Hitt (2002) who similarly found that emerging market firms use state ownership to initiate international expansion, and Oliver (1997) who finds that Chinese firms' foreign acquisitions are profoundly influenced by their home institutional context. Our findings provide empirical support for the view that institutional factors in home countries play an important part in shaping international expansion behavior and the trajectory of emerging market enterprises (Luo, Xue & Han, 2009; Yang & Stoltenberg, 2008).

Our findings demonstrate that emerging economies are an interesting context to explore the impact of institutions on firm internationalization strategy. The institutional frameworks in emerging economies differ greatly from those in developed economies (Meyer & Peng, 2005; Wright, Filatotchev, Hoskisson, & Peng, 2005; Gelbuda, Meyer, & Delios, 2008). In China, for example, although the entire set of institutional constraints has been greatly weakened in the last two decades, new and marketed-based mechanisms have yet to be established (Li, Zhou, & Shao, 2009). The Chinese institutions thus reflect 'both the heritage of communist ownership, a system of private property, capital markets and an appropriate legal and institutional infrastructure' (Bevan, Estrin & Meyer, 2004). This explains why institutional theory is "preeminent in helping explain impacts on enterprise strategies in emerging markets" (Hoskisson, Eden, Lau, & Wright, 2000). Indeed, the important role of institutions leads Child and Rodrigues (2005) to suggest that Chinese internationalization is ''institutionally embedded rather than reflecting a strategic choice by the leaders of firms''.

Finally, our findings demonstrate that emerging economies are a setting which may provide new insights for possible theory extension. First, the study suggests that the internationalization decisions of Chinese firms, in particular the decision on the extent of their commitment to outward FDI, depend not not so much on 'traditional' firm-specific resources, but rather on industry characteristics and institutional parameters of the home country. This finding challenges the classical explanation of FDI which sees exploitation of intangible assets (often in the form of proprietary assets) across countries is a key driver of internationalisation. Although it has been argued that China does not require a special theory of FDI which would differ substantially from mainstream Western theories (e.g., Peng, 2005), the findings in this paper agree with Child and Rodrigues (2005) that "China presents an opportunity to extend the existing theorizing on the internationalization of firms including that applied to developing country multinationals". Second, Dunning and Lundan (2008) suggest that the conventional ownership-advantage can be augmented to include advantages derived from institutions. Our study suggests that state ownership can be considered such a firm-specific advantage for many Chinese firms when it comes to internationalization. This, together with the finding of the important role of government support, supports Peng et al. (2008) which suggests that it is the research on emerging economies that pushed the institution-based view to the cutting edge of strategy research. Third, this study combines the three prevailing theoretical perspectives of internationalization, thereby providing a more comprehensive view on the internationalization of emerging market enterprises. Beyond this, our study represents an initial effort to examine the relative importance of the three categories of factors, and thus addresses a significant gap in our understanding of internationalization.

6. Conclusion

The central goal of this paper is to construct a plausible account of internationalization by emerging market firms. Building on three competing theoretical perspectives, we distinguish between the effects of firm-based, industry-based and institution-based factors on Chinese internationalization. We demonstrate that both industry structure and institutions are important in explaining internationalization of emerging market enterprises. This contrasts the weak role of firm resources which are found not to be important drivers of internationalization. In particular, we find that conventional firm-specific assets including technological and

marketing resources, which typically form competitive advantage of western MNEs and drive their internationalization, are not positively associated with internationalization variations. To our best knowledge, the current study is among the very first empirical study to use the insights of the three prevailing theoretical perspectives to explain internationalization and assess the relative importance of each category of factors. While some important insights on the antecedents of internationalization of emerging market enterprises have been offered in this study, further theoretical development and research is certainly called for.

The implications of this research are important for managers seeking to understand how the different sets of forces that may help or hinder their drive for internationalization. Managers of emerging market enterprises should examine all three categories of factors and analyze the relative importance of each category of factors when making decisions about whether and to what extent to engage in internationalization. According to the findings of this study, it appears that managers should pay more attention to institutional framework in which they are embedded in the home country. They should try to influence the institutional framework in their favour to support their internationalization drive. Managers should also study the structural factors of the industry in which they operate. This will help managers think the question of whether internationalization is really a right choice in view of the strength of domestic competition.

Many emerging market enterprises have not embarked on internationalization as yet partly because their managers believe that their firms are not ready due to a lack of conventional firm-specific ownership advantages such as technological and managerial skills. The findings of this study suggest that the ownership of those resources is not necessarily a pre-condition for initiating foreign expansion. Managers should make decisions on whether or not to enter international markets based more on the assessment of industry and institutional conditions rather than on their resource position. It should be pointed however that institutions and industry structure evolve over time, and strategy should change accordingly. As these two types of factors evolve to be similar to those in developed economies, firms should start to pay attention to fostering firm-specific resources if they wish to internationalize. Additionally, managers should realize that a heavy attention to and reliance on these two types of factors may reduce their motivation to compete on unique competitive advantage.

Nevertheless, this study has a number of limitations, some of which open up some exciting new avenues for future research. First, the results concerning the weak role of firm resources have left some important aspects unresolved. Although we find that R&D and advertising do not drive Chinese internationalization, we have not gone further to explore what firm-specific resources, if any, explain differences in internationalization of emerging market enterprises. While emerging market MNEs normally do not have the same intrinsic ownership advantages of western MNEs to leverage, they do have certain competitive advantages to exploit, especially when investing in other emerging and developing countries (Luo & Tung, 2007; Mathews, 2006). Further study should aim at uncovering the bundles of the firm-specific resources of Chinese firms that are instrumental to their internationalization.

Second, although we have examined three categories of factors, each category contains a small set of variables due to data constraints. Future research can expand each category to include a wider range of factors, and even combine the effects of all three types of factors in a more complete model that demonstrates how they interact with one another to determine internationalization. As with any empirical study, we

had to make some tough trade-offs and leave some important questions unaddressed to keep the study manageable.

Third, this study has focused on China which is the largest emerging economy and leading player in outward foreign direct investment. Because the industrial and institutional environments vary considerably across countries, the findings of this study are not equally applicable to other emerging economies. For example, Chinese FDI may be specific because of the dominance of large-sized SOEs and unique role of government (in other countries, parliament or congress can restrain governments' policy action). Comparable studies are required to gain deeper insights into the relevance of firm, industry, and institution characteristics as push factors of internationalization.

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Table 1. Correlation coefficients between variables

	Mean	s.d.	1	2	3	4	5	6	7	8
1.Firm age	2.18	0.72	1.00	0.45	-0.13	0.06	0.02	0.07	0.08	-0.0
2.Firm size	6.18	1.52		1.00	-0.02	-0.02	0.02	0.02	0.02	0.0
3.Export share	0.35	0.37			1.00	-0.14	-0.04	-0.13	-0.11	-0.0
4.Captial intensity	19.44	61.69				1.00	0.07	0.02	0.03	-0.0
5.R&D intensity	0.01	0.09					1.00	0.03	0.17	0.0
6.Advertising intensity	0.03	0.10						1.00	0.07	-0.0
7.High-tech industry dummy	0.14	0.35							1.00	0.0

8.Industry competition	1.85	0.67								1.0
9.Foreign presence	0.10	0.25								
10.Government policy	0.45	0.50								
11.Government subordination	0.56	1.06								
12.State ownership	0.37	0.42								

Table2. Regression results (Dependent variable: Internationalization)

Variables	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model
Control variables						
Firm age	6.21	5.95	7.02	6.37	6.74	7.0
Firm size	12.22***	12.31***	11.67***	11.35***	11.76***	10.5
Export share	-10.89**	-9.99**	-10.45**	-9.45*	-9.27*	-9.2
Region dummies	Included	Included	Included	Included	Included	Includ
Resources related variables						
Fixed asset per worker		0.06			0.06*	
R&D intensity		-11.74			-3.49	
Advertising intensity		-10.88			-4.17	
Industry related variables						
High-tech industry dummy			-20.08***		-20.58***	-24.0
Industry competition			7.87*		8.09*	7.1
Foreign presence			-11.16***		-10.78**	-10.2
Institution related variables						
Government policy				12.89*		13.5
Government affiliation				-1.08		-0.0
State ownership				11.72*		11.4
N	667	667	667	667	667	66
F-statistic	7.64***	6.00***	6.58***	6.49***	5.46***	5.89
R^2	0.104	0.107	0.116	0.114	0.118	0.1
Adjusted R	0.091	0.089	0.098	0.097	0.097	0.1
ΔR^2						

Notes: (1) *, **, *** denotes significance at 10%, 5% and 1% level, respectively; (2) Results are corrected for heteroskedasticity.