

Local institutions, local market orientation, and the performance of foreign

SMEs operating in emerging economies

Abstract

Foreign SMEs adopt local market oriented strategies to capture emerging market opportunities. However, such strategies do not guarantee success. This study provides a multi-institutional framework for understanding how local institutions influence the effect of local market orientation on the performance of foreign SMEs. Analyzing a sample of 6147 Taiwanese firms investing in China, this study found that well-established legal and financial institutions had a positive moderating effect on the relationship between local market orientation and foreign SME performance. The study disentangles agglomeration economic institutions by distinguishing between specialized and diversified agglomeration economies, and found that both had positive moderating effects.

Keywords: local market orientation; legal institutions; financial institutions; agglomeration economic institutions; performance

1. Introduction

Due to the rapid growth that often characterizes emerging economies, many ambitious small and medium-sized enterprises (SMEs) seek to exploit emerging market opportunities. However, foreign SMEs are typically regarded as resource-constrained, lacking the market power to operate viably in local markets (Hessels and Terjesen, 2010). This is thought to be especially true for foreign SMEs from emerging economies. In such cases, the SMEs will likely rely heavily on local

institutions for access to local resources. Several previous studies have stressed the impact of differing institutional distances across countries (e.g., Bevan et al., 2004), while largely ignoring the variations that may exist within a single nation. Such differences are particularly characteristic of China. Because of China's uneven implementation of economic liberalization policies, the implications of institutional variation within it require further exploration. While recent studies have started to examine the different facets of institutions such as legal system development and intellectual property rights (e.g. Li et al., 2013b) and informal relationships with governments (Kotabe et al., 2011; Zhou, 2014) distinctively, relatively little research has integrated both formal and informal institutions within one framework. Further, given the fact that foreign SMEs have limited capacity to change institutions, North (1990) and Chang and Park (2005) has suggested to choose a location with favorable formal and informal institutional contexts including legal, as well as the financial and agglomeration economic institutions that are important indicators of the general business environment in emerging economies.

The legal institutions that provide contract and legal expertise to solve local disputes are of critical concern to foreign SMEs seeking to adopt a local market orientation in emerging economies. Since emerging economies are known to be complex and sometimes unstable environments characterized by information asymmetry and operational uncertainty, well-developed legal institutions can help to reduce foreign SMEs' transaction costs and foreign liabilities (Bruton et al., 2008). Further, adopting a local market orientation generally gives rise to enhanced local trade and local cooperation. We suspect that foreign SMEs adopting a higher degree of local market orientation are likely to benefit more from well-established legal institutions than are those foreign SMEs implementing a lower degree of local market

orientation.

Lack of access to financing has also been identified as a key obstacle to the survival of foreign SMEs (Zhu et al., 2012). While most studies have used the presence of public equity markets as a proxy for financial institutions (e.g., Guler and Guillén, 2010), the liability of smallness increases the difficulty for foreign SMEs seeking to gain capital through the public equity markets. Accordingly, this study focuses on the availability of credit from banks. Specifically, if financial institutions generate a greater proportion of loans to the private sector, foreign SMEs have more opportunity to acquire local financial resources. Further, in adopting a local market orientation, foreign SMEs are likely to require local financial support as they enter a new market to capture and benefit from fleeting market opportunities; thus, well-developed financial institutions are likely to provide greater value to foreign SMEs adopting a local market orientation.

With regard to agglomeration economic institutions, this study defines it as the ecosystem that emerges when foreign firms choose to co-locate their enterprises in regions where many other foreign firms are located. Most studies have discussed the effects of geographically agglomerated firms in the same industries (i.e., specialized agglomeration economies) (Chang and Park, 2005), while ignoring the effects of geographically proximate firms in different industries (i.e., diversified agglomeration economies). Specialized agglomeration economies serve as sources of industry-specific resources and knowledge (Belderbos and Carree, 2002). In contrast, the benefits of diversified agglomeration economies are realized through the exchange of knowledge across diverse industries (Jacobs, 1969), which increases the likelihood of serendipitous events that provide innovative ideas and enhance innovation. Given the fact that a local market orientation requires foreign SMEs to

continuously innovate and modify their products to establish themselves in local markets, we anticipate that both specialized and diversified agglomeration economies should be significant drivers of the performance of foreign SMEs adopting local market oriented strategies.

This paper makes several contributions to the existing literature. First, we explicitly integrate the institutional and strategic perspectives, allowing us to derive relevant institutional contingencies based on the value of a local market orientation. Second, this study helps to unpack the “black box” of institutions by capturing the effects of local legal, financial, and agglomeration economic attributes. Further, we shift the focus from examining *whether* institutional environments matter, to studying *how* they matter to foreign SMEs with different levels of local market orientation, which is perhaps more meaningful. Third, by distinguishing between specialized and diversified agglomeration economies, this study suggests that these two distinct regional economic institutions may be the keys to SMEs’ ability to overcome liabilities of foreignness and smallness. Fourth, we contribute to the entrepreneurship literature by testing how a foreign SME from an emerging economy operates in another emerging economy, as those SMEs characterized by constrained resources face many hurdles in host countries.

2. Literature Review

The internationalization of entrepreneurial SMEs has increasingly attracted the interest of scholars (Kiss et al., 2012), and several studies of entrepreneurship have focused on foreign SMEs investing in advanced countries (Bruton et al., 2008; McDougall and Oviatt, 1996). Recently, however, foreign SMEs have begun to invest in newly liberalized emerging markets, and to adopt the local market orientations that will enable them to benefit from rapid economic growth. However,

implementing such a locally oriented strategy is not likely to benefit all foreign SMEs (Halaszovich and Lundan, 2016). Some scholars have found that a local market orientation tends to be positively associated with profitability (Li et al., 2013c), while others have found the reverse (Ito and Fukao, 2010). One possible reason for this discrepancy in findings, according to institutional researchers, is that institutions determine what arrows a firm has in its quiver as it struggles to formulate and implement strategy and to create competitive advantage (Ingram and Silverman, 2002).

Given the fact that a local market orientation requires more interaction with an unfamiliar local community, such an orientation may be associated with a higher level of outcome uncertainty and a greater probability of failure (Li et al., 2013c). Aware of this, local market oriented foreign SMEs are likely to search for local institutional support to mitigate the uncertainty and risk posed by their strategic orientation. Practically speaking, however, institutional development is far from consistent or complete across regions in emerging economies such as China (Gao et al., 2010). China has been undergoing a radical change from a centrally planned to a market-based economy, and the change has been accompanied by heterogeneous institutional transitions in political systems, legal frameworks, financial systems, and economic institutions. One stream of research has examined the impact of formal political institutions, investment regulations (Djankov et al., 2002), as well as of formal legal frameworks that are able to support property rights (Zhou, 2014) and intellectual property rights (Li et al., 2013b).

Another stream of research has highlighted the effects of informal institutions. Since informal institutions are less transparent, they can easily become a source of uncertainty (Meyer and Nguyen, 2005). Furthermore, even though a legal

framework can be changed radically to create a new set of formal rules (e.g., laws and regulations), the transformation of informal institutions often lags behind changes in the law (e.g. Bevan et al., 2003). Given the fact that the unobservability and unpredictability of informal institutions is a source of significant uncertainty for foreign SMEs, this study chooses to integrate the impact of formal and informal institutions. Existing research on informal institutions in the context of China has focused on the establishment of trust-based relationships with local governments (Zhou, 2014; Zhao and Lu, 2016) and local partners (Kotabe et al., 2011), with less attention on the ecosystem of informal institutions. Recent studies have begun to explore the effects of legal institutions on ownership decisions (Henisz, 2000), the impact of the emergence of financial institutions on the entrance of U.S. venture capital investors (Guler and Guillén, 2010), and the influence of economic institutions on Japanese firm owners' involvement (Delios, and Beamish, 1999), separately. To our knowledge, little research has been conducted on the influence of both formal institutions (i.e., legal and financial institutions), and information institutions (i.e., agglomeration economic institutions) in the context of foreign SMEs from one emerging economy operating in another emerging economy. Due to the distinct characteristics of emerging economies, this study hopes to help fill that gap in the research.

2.1. Legal institutions

Although the Chinese legal system has undergone significant changes, the development of legal institutions characterized by legal expertise for the implementation of these changes has remained limited (Fernandez and Weinstein, 2004). In any given locality, it takes time to establish the legal institutions required to underpin the law, as well as to train the lawyers who will deliver knowledge

about—as well as help carry out—laws and legal proceedings (Bevan et al., 2003). Thus, this study takes the proportion of lawyers within a region as a proxy for the development of legal institutions.

Lawyers act to protect the legitimate interests of various parties (Guler and Guillén, 2010). First, lawyers enable the credible communication of information between parties to a transaction, and help to resolve conflicts about or discrepancies in information. Second, lawyers work to handle credit defaults or behavior that could be construed as a violation of contract. Third, lawyers often play the role of knowledgeable business advisers for foreign firms by providing high quality professional services. Lawyers play a critical role in sustaining legal institutions, and efficient legal infrastructures facilitate the establishment and enforcement of contracts while reducing the transaction costs of doing business (Li et al., 2013b). Indeed, Zhang and Li (2010), examining a sample of domestic SMEs within a technology cluster in China, found that company ties to law firms are positively related to product innovation. When it comes to local resource exchanges with a variety of parties, the availability of advice from local professional sources becomes essential for foreign SMEs. To advance the literature, we further examine whether legal institutions moderate the relationship between foreign SMEs with a local market orientation and the enterprises' performance.

2.2. Financial institutions

Emerging economies are generally known for having underdeveloped or poorly functioning financial institutions, resulting in the diminished availability of credit (Chakrabarty, 2009). While the development of public equity markets is often taken as a proxy for the development of financial institutions (Chacar et al., 2010), it cannot be assumed that there is a common model for financial institutions across emerging

economies. In fact, in most emerging economies—including China—the central government maintains tight control on public equity markets to avoid instability. The result of such control is that bonds and equities remain at around only 10% and 5% of total financial services, respectively, while bank lending remains at a level above 85% (Milana and Wu, 2012). Therefore, in China, the best proxy for financial institutions would appear to be bank lending markets.

While debt financing from banks is important in helping foreign SMEs expand their presence in local markets, in China the allocation of bank lending is often distorted (Gao et al., 2010). Specifically, in some regions, financial assets are disproportionately composed of loans allocated to state-owned enterprises (Wu and Shea, 2008). This constrains the availability of loans for foreign SMEs' medium- and long-term investment needs, thus hampering their ability to engage in product innovation, market expansion, and organizational growth (Levin and Zervos, 1998). While prior studies have demonstrated the positive role of well-established financial institutions, it is still not clear whether financial institutions influence the performance of foreign SMEs operating in emerging economies. Our study suggests that heterogeneity in the development of China's financial institutions across regions may partially explain variations in the performance of local market-oriented foreign SMEs.

2.3. Agglomeration economic institutions: Specialized & diversified agglomeration economies

In considering informal economic institutions, we chose to emphasize agglomeration economies—i.e., those economies created by a geographically concentrated group of foreign firms—which are highly subject to economic externalities. While the research on agglomeration has highlighted benefits including accessibility to specialized suppliers, workers, and market demand

(Marshall, 1920), the presence of such benefits simply are not enough to explain spatial agglomeration. Recent research has begun to point out that agglomeration facilitates knowledge spillover, which plays a key role in helping firms overcome liabilities of foreignness (e.g., Bronzini, 2007).

Several studies have highlighted the knowledge spillover that occurs within a group of geographically proximate foreign firms in the same industries (e.g., Lamin and Livanis, 2013), hereafter referred to as “specialized agglomeration economies.” In situations of collocation with other foreign firms in similar fields, new ideas can be quickly disseminated through observation, imitation, and the rapid inter-firm movement of skilled labor. Thus, foreign SMEs benefit from the complementarities and synergies that arise from the technological improvements undertaken by other firms in a cluster.

However, knowledge externalities may not only exist in the same industry. Another line of research presents a different type of knowledge spillover, occurring in clusters of foreign firms in different industries (Feldman and Audretsch, 1999), hereafter referred to as “diversified agglomeration economies.” A greater diversity in the local economy would likely produce a more abundant and diverse supply of technical knowledge, which could potentially spill over. Jacobs (1969) proposed inter-industry spillovers, explaining that the important knowledge transfers often come from outside a core industry. Further, such economic diversity promotes innovative behavior (Maine et al., 2010), which in turn fosters firm performance and, often, firm value.

Surprisingly, the empirical results associated with the relationship between specialized agglomeration economies and performance are not consistent. Gilbert, McDougall, and Audretsch (2008), surveying a sample of initial public offerings

(IPOs) among technology-based ventures in the U.S.; and Li (2004), exploring a sample of foreign firms operating in China, found that locating within geographic clusters can contribute to the absorption of external knowledge as well as facilitate innovation enhancement and performance improvement. In contrast, Feldman and Audretsch (1996) found that industry localization does not significantly increase firm growth or innovative activity.

The empirical evidence on diversified agglomeration economies is also mixed. Feldman and Audretsch (1999), using regional-level aggregate data, found that the proximate presence of firms from diverse industries facilitates economic growth. Maine et al. (2010), using firm-level data from the information and communication technology industry, showed that proximity to a cluster within a diverse metropolitan area was associated with firms' superior performance. However, Bronzini (2013), examining a sample group of industrial and service-oriented Italian firms, observed that specialized agglomeration economies encourage inward foreign investment, whereas diversified agglomeration economies have no impact.

We suspect that such inconsistent findings may result from ignoring firms' strategic orientation, which will cause very different interactions with different types of agglomeration economies. As foreign SMEs become increasingly oriented toward local markets in emerging economies, they face highly dynamic environments associated with significant uncertainty, thus encouraging them to search for external information and engage in environmental analysis. Further, foreign SMEs typically suffer from serious unfamiliarity with local environments, including a lack of knowledge of local resource holders such as buyers or customers. Accordingly, these foreign SMEs may place significant value on specialized and diversified agglomeration economies. We seek to examine the interaction effect of specialized

and diversified agglomeration economies and local market orientations on foreign SMEs' performance.

3. Hypotheses

3.1. The effect of local market orientation and legal institutions

Legal institutions affect the relationship between local market orientation and the performance of foreign SMEs in two ways. First, the facilitating effect of legal institutions may be due to the fact that a local market orientation will expose foreign SMEs to local market volatility and unpredictability in emerging economies. In general, foreign SMEs tend to face a high risk of ex-ante inverse selection and ex-post opportunistic recontracting from transaction parties (Henisz, 2000). In such situations, the presence of lawyers allows for more consistent contract enforcement and the protection of property rights (Zhang and Li, 2010). Subsequently, well-established legal institutions would likely reduce contractual hazards and reinforce the performance of foreign SMEs.

Second, frequent changes in taxation and regulation increase the difficulties for foreign SMEs of immediately adapting to local legal frameworks. Due to unfamiliarity with local laws and customs, foreign SMEs may be forced to engage in costly preparations for potential disputes, which may increase the cost of their interactions with local resource providers, including suppliers and consumers. Well-established legal institutions, characterized by a sufficient number of trained lawyers, are likely to reduce transaction costs for foreign SMEs in cases of transaction disputes. Further, the presence of local legal expertise is not merely the knowledge of local laws on the books, but an experience-based, culturally sensitive expertise that grows from day-to-day legal practice, as well as creativity in dealing with the economic, political, and cultural contexts in which their work is embedded (Liu,

2008). Such legal institutions give rise to the resolution of the nonfulfillment of contractual obligations, as well as support land registration, legal services for foreign direct investments (FDIs). We thus expect that foreign SMEs adopting a greater degree of local market orientation will realize significantly more value from well-established legal systems. This leads us to put forth the following hypothesis:

Hypothesis 1. The positive relationship between foreign SMEs' local market orientation and their performance will be stronger when local legal institutions are well established.

3.2. The effect of local market orientation and financial institutions

When conjecturing that a high degree of local market orientation does not guarantee a high level of profit, it is important to consider whether the value of a local market orientation is contingent on financial institutions. Foreign SMEs adopting a local market orientation must continue to develop new products to match market changes, and to pay attention to expanded options. In such cases, if foreign SMEs choose to locate within a better-established financial institutional context, they are better positioned to access financial resources, including loans, as well as to leverage potential market opportunities. In contrast, lack of local credit availability may become a major inhibitor to the growth of foreign SMEs, as it may force them to turn to other more expensive sources (Park et al., 2006).

China has pursued incremental transformation by decentralizing government control. Some regions have seen significant movement toward more openness, and well-developed financial institutions are pushing for better support of non-state firms (Park et al., 2006). However, other regions have been constrained in the development of free financial institutions, because their local governments have

seized the opportunity to pursue their own interests. Additionally, China is awash in bad debt, and has come to be known for its “triangle debt” problem (Liao and Young, 2012). Hence, the lack of a well-developed financial institutional context would likely increase transaction costs and make it more difficult for foreign SMEs to achieve their goals of market expansion, as well as influence the profits derived from local market penetration.

Additionally, Wolpert (2002) has suggested that local banks sit at the intersection of many firms, and can facilitate the exchange of information about operational issues among firms. Therefore, regions characterized by liberalized financial institutions may enable foreign SMEs to plug into local networks to broaden the scope of their external financial and knowledge search, as well as reduce their search costs (Zhang and Li, 2010). Subsequently, the facilitating effect of a local market orientation on the performance of foreign SMEs will be improved. Therefore, we propose:

Hypothesis 2. The positive relationship between foreign SMEs’ local market orientation and performance will be stronger when local financial institutions are well established.

3.3. The effect of local market orientation and specialized agglomeration economies

Variation in the performance of foreign SMEs adopting a local market orientation can be attributed to their locations’ differing levels of specialized agglomeration economies. Specialized agglomeration economies—i.e., pools of geographically proximate intra-industry foreign firms—create a market for high-quality labor and suppliers, and help foreign SMEs cope with the underdeveloped factor markets characteristic of emerging markets (Li et al., 2013a). Further, intra-industry agglomeration provides ample opportunity for

inter-organizational knowledge spillovers, either through face-to-face interactions, or as a result of the mobility of knowledge-carrying employees (Lamin and Livanis, 2013). This is because knowledge is sticky and place-specific, and the ability to transfer knowledge decays with distance. When foreign SMEs adopt a greater level of local market orientation, they require a deeper involvement in local markets. By interacting with a group of technologically advanced foreign firms, foreign SMEs would likely gain significant access to advanced technology and management skills (Kotabe et al., 2011), adapt to local manufacturing conditions, and ensure a good match with local market requirements. Accordingly, as foreign SMEs become more highly local market-oriented, they will likewise become more attracted to locations with specialized agglomeration economies than will their less local market oriented counterparts.

However, it could be argued that the presence of an intra-industry, geographically proximate group of foreign firms is likely to become a hotbed of competition. In fact, Baum and Mezias (1992) found that competition among large generalist organizations at the center of a particular market actually works to liberate the peripheral resources most likely to be used by small organizations. That is, increased concentration among generalist organizations would likely increase failure among large generalists, but decrease failure among small specialists. In this way, many foreign SMEs could exploit locally available resources without directly competing with large generalists. Therefore, specialized economies derived from intra-industry foreign firm agglomerations help foreign SMEs increase their local search depth, while lowering search costs. Such local search depth also allows foreign SMEs to align their initiatives with industry trends appropriately. Accordingly, we propose the following hypothesis:

Hypothesis 3. The positive relationship between foreign SMEs' local market

orientation and performance will be stronger when the local specialized

agglomeration economy is well established.

3.4. The effect of local market orientation and diversified agglomeration economies

Instead of assuming that local market orientation always enhances the performance of foreign SMEs, we incorporate diversified agglomeration economies into our examination of how broadened local search breadth enhances the relationship between local market orientation and foreign SME performance. First, for foreign SMEs adopting a local market orientation, the absorption and application of inter-industry knowledge is of significant strategic importance in the generation of rents. Such knowledge helps foreign managers explore new, locally relevant ways of doing things, reduces redundancy, and enhances their knowledge diversity (Kotabe et al., 2011). Further, they can understand what local customers want and what products other geographically proximate foreign firms offer, which provides an opportunity for them to see the gaps in products and services and to modify their own products accordingly. Along these lines, foreign SMEs that collocate with a group of foreign firms from diverse industries will have a better chance of broadening knowledge search scope than those without such a location (Maine et al., 2010). Thus, diversified agglomeration economies enable foreign SMEs to understand domestic market demands and competition, thereby facilitating innovation as well as performance. Jaffe et al. (1993) found that knowledge spillovers are not confined to closely related industries, as approximately 40 percent of citations do not come from the same primary patent class as the original patent. Li et al. (2013a), using information from Chinese manufacturing firms from 2000 to 2006, found that Chinese

firms improve product innovation when they are located in cities with a group of firms in different industries.

Second, foreign firms in different industries are less likely to compete with one another, and may be more willing to share knowledge than firms within the same industry. In contrast, when foreign SMEs are strategically oriented toward exports and more focused on international markets, they will rely less upon local diversified externalities in their search for locally relevant innovations and modifications.

Given such circumstances, the value of diversified agglomeration economies, with respect to firm performance, will be limited. Conversely, diversified agglomeration economies interacting with SMEs having a local market orientation are likely to enhance the performance foreign SMEs. Thus, we put forth the following hypothesis:

Hypothesis 4. The positive relationships between local market orientation and foreign SMEs' performance will be stronger when diversified agglomeration economies are well established.

Figure 1 shows our research framework for this relationship.

****Insert Figure 1 about here****

4. Methodology

We obtained data on Taiwanese manufacturing SMEs investing in China. These ventures were listed in a directory of Taiwanese firms' foreign expansions, published by the China Credit Information Service (CCIS), one of Taiwan's largest business data publishing services (Luo and Chung, 2013). Our data on Taiwanese manufacturing investments in China allows us to focus on emerging-economy SMEs' entrepreneurial activities in a different emerging economy. In 2014, SMEs accounted for more than

97.61% of firms in Taiwan (Small and Medium Enterprise Administration, 2015).

The significance of SMEs makes Taiwanese SMEs an interesting and, we believe, appropriately representative subject of study. Following the European Union's definition, we categorize firms with fewer than 250 employees as SMEs.

Additionally, Taiwanese companies have invested heavily in Mainland China, becoming its eighth largest-source of FDI (National Bureau of Statistics, 2015).

Taiwan's government statistics confirm this, reporting that the average percentage of Taiwanese firms investing in China relative to all other foreign countries was 60.26% for each year in the period between 1991 and 2016 (Investment Commission, 2016).

Although Taiwan and China are neighboring countries with many cultural similarities, Taiwanese SMEs are not free from the liabilities of foreignness. O'Grady and Lane (1996) point out that countries sharing languages often have different institutions that do not allow for the simple transfer of business practices and attitudes across borders.

The choice of China as the host country was made on the grounds that China has emerged as one of the world's largest recipients of FDI. Further, China is an unevenly developed country with significant regional differences in legal and financial institutional quality, as well as in agglomeration economies (Du et al., 2008), giving rise to distinct formal and informal constraints in different regions. This considerable institutional diversity across regions makes China an ideal context in which to explore how a foreign local market oriented strategy aligns with the impact of institutional forces in influencing the performance of foreign SMEs.

The second dataset on legal and financial institutional indices was developed by the National Economic Research Institute (NERI) (Fan et al., 2011). This index assigned each of the 31 provinces, municipalities, and autonomous regions a score that captured their progress in the development of legal and financial institutions. A

higher score means better institutional development. Data supplied by NERI has been used to examine China's institutional development in several previous economic and finance studies (e.g., Gao et al., 2010). The third dataset related to agglomeration economies also came from CCIS. We randomly cross-checked the data with information derived from the *China Statistical Yearbook* compiled by the National Bureau of Statistics of China, and found them to be similar.

We chose to study the period between 2004 and 2006 for two reasons: First, a constitutional amendment in 2004 acknowledged that citizens' lawfully owned private property was inviolable (Chen, 2007). In addition, at that time local private firms were encouraged in their operations within local markets. Given such conditions, foreign SMEs were confronted with enormous challenges related to new, often dysfunctional competitive situations, as well as volatile markets. Second, to eliminate the confounding effect of the financial crisis of 2007-2008, we felt that the time period from 2004-2006 offered a better period within which to measure economic performance when we tested our hypotheses. Also, because not all firms disclosed sales and performance data each year, with some even leaving the sample set, we had to be extremely scrupulous in creating our final panel.

Our dataset originally contained 14662 records on 6257 foreign SMEs for the time period 2004-2006. After deleting records with obviously inaccurate numbers (e.g., negative sales and negative local sales), we were left with 14251 observations on 6215 firms. We then dropped 135 records whose founding year was before 1979, due to the fact that China began to implement its "open door" policy in 1979. We were left with 14116 observations on 6146 firms. We also dropped 74 observations corresponding to firms that entered and exited the database within two years. Only firms with at least two years of operations were kept, in order to allow us to have

reliable measures of firm performance. This procedure left a working sample of 14042 records on 6147 foreign SMEs for the time period 2004-2006.

We used pooled time-series data in testing the hypotheses, as potential autocorrelation is often presented in time series data. The results of the Breusch–Pagan test did not enable us to exclude the possibility of heteroskedasticity ($p < .01$). Therefore, we used the generalized least square (GLS) analysis. A random effects model was chosen over a fixed effects approach, as the number of years of observations in this study is limited (Nielsen, 2010). Further, a random-effects model enables us to consider both interfirm and intrafirm variation over time. A Hausman test was also conducted to determine which of these effects would be more suitable, and the result was not significant ($p > .05$), showing support for the use of random-effects models (Wooldridge, 2002). Further, to correct for heteroskedasticity, we reported the results with robust standard errors by applying the Huber-White sandwich estimator of variance to produce valid standard errors (White, 1980).

4.1. Measurement

Performance. Following previous studies (Luo and Chung, 2013), we used return on assets (ROA) to measure foreign SME performance, defined as net income divided by total assets. ROA takes into account the efficiency of using a foreign SME's assets and hence reflects an SME's profitability.

Local market orientation. In keeping with Meyer and Nguyen's (2005) study, we used the proportion of local sales as an indicator of a foreign SME's local market orientation. Specifically, it is measured as the ratio of local sales to total sales. A higher percentage of local sales demonstrates that foreign SMEs pay more attention to local markets' requirements and local consumers' desires.

Legal institutions. As suggested by Zhang and Li (2010), Li et al. (2013b) and Che and Wang (2013), we measured legal institutions as the ratio of the number of lawyers to total provincial population using data from NERI. A score for each province is then normalized to a value between 0 and 10, proportionately, to measure legal institutional conditions relative to other provinces. We matched the index with our multi-year data. Score indices beyond the base year of 1997 were relaxed from the 0–10 restriction to reflect institutional changes over time.

Financial institutions. Aligned with Levine and Zervos' (1998) research, the proportion of banking loans to non-government sectors is calculated as a proxy for financial institutions using data from NERI. Such a ratio quantifies the financial institutional development in terms of the credit given specifically to the non-government sector. Indeed, Chakrabarty (2009) observed that a lack of such credit is related to an financial institutional void in credit availability.

Specialized agglomeration economies. We used the level of geographically concentrated foreign firms in related industries as a proxy for specialized agglomeration economies. Following Li's (2004) and Bronzini's (2007) suggestion, this measure is defined as the ratio of foreign firms within an industry in a region to all firms in the industry nationwide. Industries are classified according to the Standard Industrial Classification (SIC) three-digit industry codes. These industry- and province-specific measures capture the extent to which foreign firms in an industry are clustered within a province.

Diversified agglomeration economies. In creating this variable, we used a measure of diversified inspired by the Herfindahl index, which is equal to the sum of the squared foreign firms' proportion across all the three-digit industries within a province (Feinberg and Gupta, 2004). Further, a common measure of diversity is the

inverse of such a Herfindahl index. In this study, therefore, the diversity measure is given by $DIV_i = 1/\sum_{j=1}^h x_{ij}^2$, where x_{ij} denotes the share of total foreign firms in three-digit industry j within province i to all firms within province i , where h denotes to be across all three-digit industry codes. The Shapiro–Wilk test reveals that diversified agglomeration economies are not normally distributed. Hence, we took the natural logarithm of this data.

Control variables. Prior studies have primarily focused on how internal firm factors and external factors influence foreign SME performance; thus, we controlled for the following variables. Firm age was operationalized as the logarithm of the number of years since the founding of a foreign SME. Firm size was measured by the logarithm of the number of employees, and was taken to represent the size of the available pool of resources or capabilities that could be exploited upon entering a new local market. Net working capital (in ten thousands of RMB) measures a firm's capabilities to maintain the quality of its operations, as well as its credit, should it need to recover from an operating loss (Chen and Chuang, 2009). According to the Organization for Economic Co-operation and Development's (OECD) (2005) industry classification, the industry dummy variable is coded as 1 if a foreign SME belongs to the high or medium-high technology manufacturing sectors. The low or medium-low technology sector is offered as an alternative. Additionally, we inserted several external factors with the aim of disentangling the effect of agglomeration from the effect of the geographical distribution of productive factor endowments. Potential market demand was operationalized as the yearly growth rate of consumption. A strong market potential would likely influence foreign SMEs' performance. Labor supply is presented as the manufacturing employee population within a province (in increments of 10 thousand); we expected that a large regional

labor supply would influence foreign SMEs' local operations and activities.

Additionally, we included the growth rate of labor costs in the manufacturing sector (in thousands of RMB) to reflect the relative cost of regional labor within a province (Chang & Park, 2005). The growth rate of labor costs tends to have a negative effect on the performance of foreign SMEs.

5. Results

The means, standard deviations, and correlations of all of the variables are provided in Table 1. The data were inspected carefully before the analysis.

Table 2 summarizes the regression results based on the random effects models. We first estimated Model 1 with control variables. The findings shows that net working capital, industry dummy, and potential market demand are positively related to performance ($b = .001, p < .01$; $b = .001, p < .05$; $b = .003, p < .05$, respectively, in Model 1). The growth rate of labor costs is negatively associated with performance ($b = -.108, p < .05$). In Model 2, the independent variables are added, and Model 3 includes the examined interaction effects that were deemed necessary in testing this study's hypotheses. Further, to minimize the distortion caused by multicollinearity, each scale was mean-centered (Aiken and West 1991).

The interaction of local market orientation and legal institutions is positively related to the performance of foreign SMEs ($b = .009, p < .01$), in support of H1. To gain further insight into this relationship, we plotted the interaction and conducted t-tests to examine the differences in slopes. This involved splitting the moderator (legal institutions) into a high group (two standard deviations greater than the mean) and a low group (two standard deviations less than the mean) and reestimating the relationship between local market orientation and the performance of foreign SMEs. The plot in Figure 2, Panel A, shows that the slope of this line for high-legal

institutions was significantly different from that for low-legal institutions ($p < .01$).

The interaction term for local market orientation and financial institutions is positively related to performance ($b = .013$, $p < .01$), in support of H2. Figure 2, Panel B, shows that when financial institutions are better established, there is a greater positive link between local market orientation and performance ($p < .01$).

The interaction between local market orientation and specialized agglomeration economies is positively related to the performance of foreign firms ($b = .009$, $p < .10$), in support of H3. The plot in Figure 3, Panel A, shows that the positive slope between local market orientation and performance is stronger when the degree of specialized agglomeration economies is high than when it is low ($p < .01$). Similarly, the product of local market orientation and diversified agglomeration economies is positively related to performance ($b = .010$, $p < .10$), in support of H4. Figure 3, Panel B, shows a greater positive relationship between local market orientation and performance when the level of diversified agglomeration economies is high than when it is low ($p < .01$).

****Insert Table 1 & 2 about here****

****Insert Figure 2 & 3 about here****

5.1. Robustness test

We tested the sensitivity of our results in several ways. First, we examined other performance measures, such as return on equity (Luo and Chung, 2013). The results from both were similar. Second, while the number of lawyer represents a sufficient proxy for the development of legal institutions, several studies have suggested measuring the impact of patents granted to establishments (Delios and Beamish, 1999; Guler and Guillén, 2010). Therefore, an alternative measure used is the growth rate of the ratio of patent applications granted to gross capital within a

province, which is reported by the *China Statistical Yearbook*. Additional regressions suggest that these four hypotheses are still firmly supported by using such an alternative measure. Third, aiming to construct another measure relating to financial institutions, we calculated the number of financial practitioners within each province based on the *China Statistical Yearbook*. Using such an index led to similar results. Fourth, because the foreign SMEs in our sample were established in different local industries, there may have been unobserved characteristics or propensities that influenced the foreign SMEs in their financial performance. We therefore included local industry dummies and year dummies to control for the 22 SIC two-digit industries and the three years. The results were similar. Fifth, following the method outlined by Sobel (1982), we also examined the potential for a mediating (vs. a moderating) effect of legal institutions, financial institutions, and specialized and diversified agglomeration economies where local market orientation influences the degree of the aforementioned four institutional variables, which in turn affects firm performance. Non-significant t -values ($p > .05$) would indicate that legal institutions and financial institutions, as well as specialized and diversified agglomeration economies, respectively, were not mediators. Thus our data negate the possibility of a mediating relationship.

Sixth, a potential concern for the empirical analysis is that four institutional factors—legal institutions, financial institutions, and specialized and diversified agglomeration economies—may be endogenous. Since performance and the aforementioned institutional factors are continuous, a two-stage least squares (2SLS) regression analysis was used to overcome the endogeneity problem. In the first stage, we chose two instrument variables (IVs)—regional population and new registrations of medium-sized trucks—from the *China Statistical Yearbook* and found that regional

population and new registrations of medium-sized trucks are positively and strongly correlated with the presence of legal institutions and financial institutions ($p < .00$), and that the IVs are also jointly statistically significant ($F = 356.89$, $p < .00$ in the legal institutions model, and $F = 677.59$, $p < .00$ in the financial institutions model, respectively). We chose another two IVs—length of highway transport routes and persons employed in state-owned enterprises—in the *China Statistical Yearbook*, and tested the relevance of the four IVs. Our findings showed that the length of highway transport routes is positively associated with specialized and diversified agglomeration economies, while the number of persons employed in state-owned enterprises is negatively correlated. Further, these two IVs are jointly statistically significant ($F = 62.11$, $p < .00$ in the specialized agglomeration economic model, and $F = 722.11$, $p < .00$ in the diversified agglomeration economic model, respectively). However, these four IVs are uncorrelated with foreign SMEs' performance. Additionally, the Sargan statistic (overidentification tests of all instruments) failed to reject the null hypothesis that the instruments are not correlated with the main equation errors ($\chi^2 = .01$, $p > .05$ in the legal institutions model, and $\chi^2 = 1.48$, $p > .05$ in the financial institutions model, and $\chi^2 = .77$, $p > .05$ in the specialized agglomeration economic model, and $\chi^2 = .89$, $p > .05$ in the diversified agglomeration economic model, respectively). We were therefore confident in the relevance and exogeneity of the IVs. Note that these instruments are not perfect, but are useful in eliminating reverse causality problems. In the second stage, the results show that the coefficients on the interaction of local market orientation and the instrumented legal institutions and financial institutions, as well as the interaction of local market orientation and the instrumented specialized and diversified agglomeration economies, are statistically significant and positive in the 2nd-stage regressions, indicating that

our findings remain valid even after controlling for the potential endogeneity problem. Finally, we also estimated our regression using lagged-structure models by regressing performance in year $t+1$ on all independent variables in year t to correct for potential endogeneity. The results did not change, though the remaining sample size consisted of only 7949 observations.

6. Discussion and conclusion

A strategy of local market orientation is frequently adopted by foreign SMEs aiming to capture potential market opportunities in emerging economies. However, the strategy does not necessarily generate similar levels of profit for SMEs. Our study offers insight into the contention that foreign SME performance depends on the strength of local legal and financial institutions, as well as agglomeration economies. First, if contractual arrangements governing exchanges between foreign SMEs and local resource exchange parties can be legally enforced by legal institutions, foreign SMEs adopting a local market orientation will be able to secure their property rights, reduce transaction costs, and enhance their performance. Second, foreign SMEs often need external financial support to continue innovating, and to meet consumer needs. If SMEs can locate within a region characterized by well-established financial institutions, it can help them gain financial assets and expand markets as well as enhance growth. Third, given the fact that knowledge tends to be localized, foreign SMEs characterized by a local market orientation would likely benefit from knowledge spillovers within an industry-specific foreign-firm agglomeration by absorbing advanced technological knowledge and applications. Fourth, by locating within diversified agglomeration economic institutions, foreign SMEs can exploit various knowledge spillovers across industries, enabling them to boost their financial performance through the cross-fertilization of ideas and the transmission of

innovation from one industry to another. In sum, the local market orientation/performance relationship is much more complex than has been commonly presumed, since institutional environments would likely moderate the strength and direction of this relationship.

This study was motivated by our awareness of a theoretical gap. First, traditional strategy research typically holds that the value of a certain strategy is driven by firm-specific resources and capabilities (Barney, 1991). This study, however, highlights the support of a particular institutional framework encountered by foreign SMEs (North, 1990). Specifically, foreign firms' strategic behaviors do not proceed in isolation, but are supported (or not) by external environments. Second, although most research has involved large, well-established firms, SMEs are a key source of employment and economic growth, especially in emerging economies. Further, although international entrepreneurship researchers have acknowledged the role of supportive environments in the growth of entrepreneurial firms, and especially of SMEs, they have devoted relatively less attention to different institutions (Kshetri and Dholakia, 2011). This study extends recent efforts to disentangle such institutions as legal and financial institutions, as well as agglomeration economies. Third, given the condition of bounded rationality and the potential for opportunistic behavior, the ability of foreign SMEs to adapt to potentially unforeseen changes is limited. Effective legal enforcement, as well as financial institutions capable of extending credit, would likely prove conducive to entrepreneurship. Fourth, due to the inconsistent results of agglomeration economies, agglomeration is divided into two broad categories: specialized and diversified agglomeration economies. Building on previous work, we further examine their distinct impact on the relationship between local market orientation and the performance of foreign firms.

Our study provides some empirically based suggestions for managers. We argue that, because foreign SMEs from emerging economies often possess fewer globally transferable firm-specific resources, they often suffer from a significant disadvantage in their international expansion efforts. In such cases, emerging-economy foreign SMEs should be aware of the differences of their host institutional environments, and choose a location most likely to help them overcome their deficiencies. Given the fact that foreign SMEs have limited abilities to anticipate all environmental conditions or to specify all requirements in written contracts, locating in regions that have well-developed legal institutions will at least enable them to settle transactional conflicts, navigate market volatility, and, finally, to enhance the performance of their local operations. Additionally, local market oriented foreign SMEs need to cultivate market sensors, and to place a high priority on collecting market intelligence and integrating it with strategic decision-making processes. Accordingly, foreign SME managers would likely purchase sophisticated industrial machinery and consumer goods relevant to their local customers. Regions characterized by the availability of financial credit would likely allow foreign SMEs to acquire the financial resources necessary to take advantage of local market opportunities. Finally, market intelligence comes from outside-in processes that link with spanning processes. Given the fact that foreign SMEs are often superior in combining and integrating outside technologies with their own resource base, specialized and diversified knowledge spillovers increase their capacity to implement modifications and commercialize them quickly. Further, diversified agglomeration economies matter more to SMEs' product innovation capabilities because they have a positive effect on the scope of SMEs' external search, and increase their odds of finding commercially valuable new knowledge combinations.

The implications of this study should, however, be evaluated in light of the following limitations. First, due to the heterogeneity of emerging market economies, some of our measures may fail to accurately estimate the strength of the institutions in question, when the measures are adopted in other emerging economies. Specifically, it is not clear whether lessons from centrally planned economies in transition apply to emerging economies that have not followed such a trajectory. Future research should seek to identify survey instruments that could identify separate constructs for institutional factors. Second, while our observed institutional effects may hold for foreign SMEs from one emerging economy entering another emerging economy, they may not hold true for foreign SMEs from developed countries. Further research might usefully consider this heterogeneity by incorporating samples of firms from both emerging economies and developed economies. Third, we selected foreign manufacturing SMEs to align our analysis with previous work on foreign performance. However, research on internationalization is increasingly recognizing that there are important differences between the manufacturing and service sectors in terms of their influence on crucial strategies. Future research might usefully consider differences in the behavior of firms from the manufacturing and service sectors.

References

- Aiken, L.S., West, S.G. 1991. Multiple regression: testing and interpreting interactions. Sage, Newbury Park, California.
- Barney, J., 1991. Firm resources and sustained competitive advantage. *J. Manag.* 17 (1), 99-120.
- Baum, J.A.C., Mezias, S.J., 1992. Localized competition and organizational failure in the Manhattan hotel industry, 1989-1990. *Adm. Sci. Q.* 37 (4), 580-604.
- Belderbos, R., Carree, M., 2002. The location of Japanese investments in China:

- agglomeration effects, Keiretsu, and firm heterogeneity. *J. Jpn. Int. Econ.* 16 (2), 194-211.
- Bevan, A., Estrin, S., Meyer, K., 2004. Foreign investment location and institutional development in transition economies. *Int. Bus. Rev.* 13 (1), 43-64.
- Bronzini, R., 2007. FDI Inflows, agglomeration and host country firms' size: evidence from Italy. *Regional. Stud.* 41 (7), 963-978.
- Bruton, G.D., Ahlstrom, D., Obloj, K., 2008. Entrepreneurship in emerging economies: where are we today and where should the research go in the future. *Entrep.: Theor. Pract.* 32 (1), 1–14.
- Chacar, A.S., Newburry, W., Vissa, B., 2010. Bringing institutions into performance persistence research: exploring the impact of product, financial, and labor market institutions. *J. Int. Bus. Stud.* 41 (7), 1119-1140.
- Chakrabarty, S., 2009. The influence of national culture and institutional voids on family ownership of large firms: a country level empirical study. *J. Int. Manag.* 15 (1), 32-45.
- Chang, S., Park, S., 2005. Types of firms generating network externalities and MNCs' co-location decisions. *Strateg. Manag. J.* 26 (7), 595-615.
- Che, Y., Wang, D.T., 2013. Multinationals, institutions and economic growth in China. *Asian Econ. J.* 27 (1), 1-16.
- Chen, W., 2007. Does the colour of the cat matter? the red hat strategy in China's Private Enterprises. *Manag. Organ. Rev.* 3(1), 55-80.
- Chen, Y., Chuang, W., 2009. Alignment or entrenchment? corporate governance and cash holdings in growing firms. *J. Bus. Res.* 62 (11), 1200-1206.
- Delios, A., Beamish, P.W., 1999. Ownership strategy of Japanese firms: transactional, institutional, and experience influences. *Strateg. Manag. J.* 20 (10), 915-933.

- Djankov, S., La Porta, R., Lopez-De-Silanes, F., Shleifer, A., 2002. The regulation of entry. *Q. J. Econ.* 117(1), 1–37.
- Du, J., Lu, Y., Tao, Z., 2008. FDI location choice: agglomeration vs institutions. *Int. J. Financ. Econ.* 13 (1), 92-107.
- Fan, G., Wang, X. Zhu, H., 2011. NERI index of marketization of China' provinces 2010 report. Economics Science Press, Beijing.
- Feinberg, S.E., Gupta, A.K., 2004. Knowledge spillovers and the assignment of R&D responsibilities to foreign subsidiaries. *Strateg. Manag. J.* 25 (8/9), 823-845.
- Feldman, M.P., 1999. The new economics of innovation, spillovers and agglomeration: a review of empirical studies. *Econ. Innovation New Technol.* 8 (1/2), 5-25.
- Feldman, M.P., Audretsch, D.B., 1999. Innovation in cities: science-based diversity, specialization and localized competition. *Eur. Econ. Rev.* 43, 409-429.
- Fernandez, D., Weinstein, V., 2004. Will China enforce your intellectual property rights? *Electron. Bus.* 30 (1), 14.
- Gao, G.Y., Murray, J.Y., Kotabe, M., Lu, J., 2010. A “strategy tripod” perspective on export behaviors: evidence from domestic and foreign firms based in an emerging economy. *J. Int. Bus. Stud.* 41 (3), 377-396.
- Gilbert, B.A., McDougall, P.P., Audretsch, D.B., 2008. Clusters, knowledge spillovers and new venture performance: an empirical examination. *J. Bus. Ventur.* 23 (4), 405-422.
- Guler, I., Guillén, M.F., 2010. Institutions and the internationalization of US venture capital firms. *J. Int. Bus. Stud.* 41 (2), 185-205.
- Halaszovich, T.F., Lundan, S.M. 2016. The moderating role of local embeddedness on the performance of foreign and domestic firms in emerging markets. *Int. Bus. Rev.* 25 (5), 1136-1148.

- Henisz, W.J., 2000. The institutional environment for multinational investment. *J. Law. Econ. Organ.* 16 (2), 334-364.
- Hessels, J., Terjesen, S., 2010. Resource dependency and institutional theory perspectives on direct and indirect export choices. *Small Bus. Econ.* 34 (2), 203-20
- Ingram, P., Silverman, B.S., 2002. Introduction: the new institutionalism in strategic management. In Ingram, P., Silverman, B.S. (Eds.), *Adv. Strateg. Manag.* vol.19, pp.1–30, JAI Press Inc., Greenwich, Connecticut.
- Investment Commission., 2016. Taiwanese firms investing in China and other foreign countries. Ministry of Economic Affairs, R.O.C., Taipei (in Chinese).
http://www.moeaic.gov.tw/system_external/ctrl?PRO=NewsLoad&id=1126
- Ito, K., Fukao, K., 2010. Determinants of the profitability of Japanese manufacturing affiliates in China and other regions: does localisation of procurement, sales and management matter? *World Econ.* 33 (12), 1639-1671.
- Jacobs, J., 1969. *The Economy of Cities*. Random House, New York.
- Jaffe, A., Trajtenberg, M., Henderson, R., 1993. Geographic localization of knowledge spillovers as evidenced by patent citations. *Q. J. Econ.* 108 (3), 577-598.
- Kiss, A.N., Danis, W.M., Cavusgil, S.T., 2012. International entrepreneurship research in emerging economies: a critical review and research agenda. *J. Bus. Ventur.* 27 (2), 266-290.
- Kotabe, M., Jiang, C.X., Murray, J.Y., 2011. Managerial ties, knowledge acquisition, realized absorptive capacity and new product market performance of emerging multinational companies: a case of China. *J. World. Bus.* 46 (2), 166-176.
- Kshetri, N., Dholakia, N., 2011. Regulative institutions supporting entrepreneurship in

- emerging economies: a comparison of China and India. *J. Int. Entrep.* 9 (2), 110-132.
- Lamin, A., Livanis, G., 2013. Agglomeration, catch-up and the liability of foreignness in emerging economies. *J. Int. Bus. Stud.* 44 (6), 579-606.
- Levine, R., Zervos, S., 1998. Stock markets, banks, and economic growth. *Am. Econ. Rev.* 88 (3), 537–558.
- Li, S., 2004. Location and performance of foreign firm in China. *Manag. Int. Rev.* 44 (2), 151-169.
- Li, J., Chen, D., Shapiro, D.M., 2013a. FDI spillovers at the national and subnational level: the impact on product innovation by Chinese firms. *Manag. Organ. Rev.* 9 (3), 413-435.
- Li, J., Vertinsky, I., Zhang, H., 2013b. The quality of domestic legal institutions and export performance. *Manag. Int. Rev.* 53 (3), 361-390.
- Li, X., Liu, X., Thomas, H., 2013c. Market orientation, embeddedness and the autonomy and performance of multinational subsidiaries in an emerging economy. *Manag. Int. Rev.* 53 (6), 869-897.
- Liao, J., Young, M., 2012. The impact of residual government ownership in privatized firms: new evidence from China. *Emerg. Markets Rev.* 13 (3), 338-351.
- Liu, S., 2008. Globalization as boundary-blurring: international and local law firms in China's corporate law market. *Law Soc. Rev.* 42 (4), 771-804.
- Luo, X.R., Chung, C.N., 2013. Filling or abusing the institutional void? ownership and management control of public family businesses in an emerging market. *Organ. Sci.* 24 (2), 591-613.
- Maine, E.M., Shapiro, D.M., Vining, A.R., 2010. The role of clustering in the growth of new technology-based firms. *Small Bus. Econ.* 34 (2), 127–146.

- Marshall, A., 1920. *Principles of Economics*. Macmillan, London.
- McDougall, P.P., Oviatt, B.M., 1996. New venture internationalization, *Strateg. Change*, and performance: a follow-up study. *J. Bus. Ventur.* 11 (1), 23-40.
- Meyer, K.E., Nguyen, H.V., 2005. Foreign investment strategies and sub-national institutions: evidence from Vietnam. *J. Manag. Stud.* 42 (1), 63-93.
- Milana, C., Wu, H.X., 2012. Growth, institutions, and entrepreneurial finance in China: a survey. *Strateg. Change* 21 (3/4), 83-106.
- National Bureau of Statistics., 2015. *China Statistical Yearbook*. China Statistics Press, Beijing.
- Nielsen, S., 2010. Top management team internationalization and firm performance. *Manag. Int. Rev.* 50 (2), 185-206.
- North, D.C., 1990. *Institutions, Institutional Change and Economic Performance*. Harvard University Press, Cambridge, Massachusetts.
- O'Grady, S., Lane, H.W., 1996. The psychic distance paradox. *J. Int. Bus. Stud.* 27 (2), 309–333.
- Organisation for Economic Co-operation Development., 2003. *OECD Science, Technology and Industry Scoreboard 2003: Towards a Knowledge-Based Economy*. OECD, Paris.
- Oxley, J.E., 1999. Institutional environment and the mechanisms of governance: the impact of intellectual property protection on the structure of inter-firm alliances. *J. Econ. Behav. Organ.* 38 (3), 283–310.
- Park, S.H., Li, S., Tse, D.K., 2006. Market liberalization and firm performance during China's economic transition. *J. Int. Bus. Stud.* 37 (1), 127–147.
- Small and Medium Enterprise Administration., 2015. *White Paper on Small and Medium Enterprises in Taiwan*. Ministry of Economic Affairs, ROC.

- Sobel, M.E., 1982. Asymptotic confidence intervals for indirect effects in structural equations models. In Leinhardt, S. (Ed.), *Sociological Methodology*. Jossey-Bass, San Francisco, pp. 290-312..
- Taiwan Research Institute., 2016 The Basic Knowledge of SMEs.
<http://www.tri.org.tw/ceo/> (in Chinese).
- White, H., 1980. A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica* 48 (4), 817–838.
- Wolpert, J.D., 2002. Breaking out of the innovation box. *Harv. Bus. Rev.* 80 (August), 77–83.
- Wooldridge, J., 2002. *Econometric Analysis of Cross Section and Panel Data*. MIT Press, Cambridge, Massachusetts.
- Wu, H.X., Shea, E.Y.P., 2008. The ‘China’ chapter on institutions, domestic financial architecture and macro volatility. In Fanelli, J.M. (Ed.), *Macroeconomic Volatility, Institutions and Financial Architecture*. Palgrave Macmillan.
- Zhang, Y., Li, H., 2010. Innovation search of new ventures in a technology cluster: the role of ties with service intermediaries. *Strateg. Manag. J.* 31 (1), 88-109.
- Zhao, H., Lu, J. 2016. Contingent value of political capital in bank loan acquisition: evidence from founder-controlled private enterprises in China. *J. Bus. Ventur.* 31 (2), 153-174.
- Zhou, L., Wu, W., Luo, X., 2007. Internationalization and the performance of born-global SMEs: the mediating role of social networks. *J. Int. Bus. Stud.* 38 (4), 673-690.
- Zhou, W., 2014. Regional institutional development, political connections, and entrepreneurial performance in China's transition economy. *Small Bus. Econ.* 43 (1), 161-181.

Zhu, Y., Wittmann, X., Peng, M., 2012. Institution-based barriers to innovation in SMEs in China. *Asia Pacific J. Manag.* 29 (4), 1131-1142.

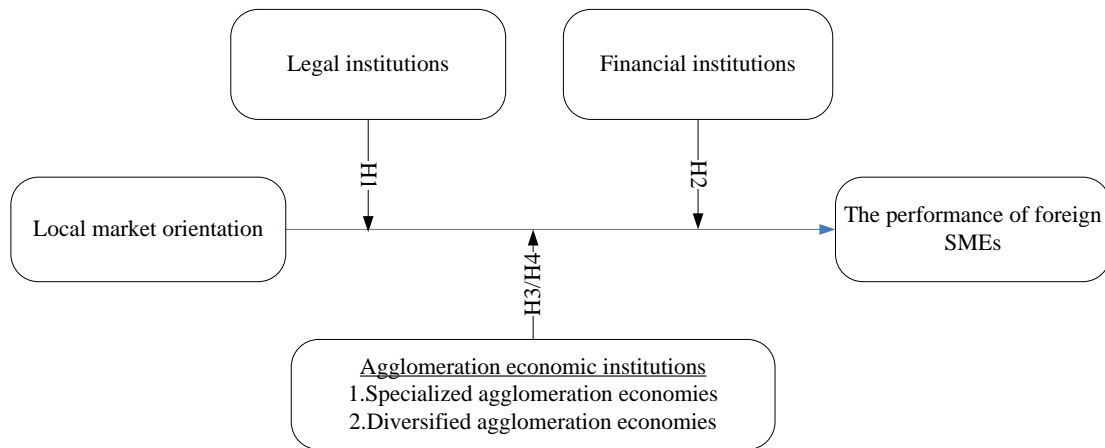


Fig. 1. Research framework

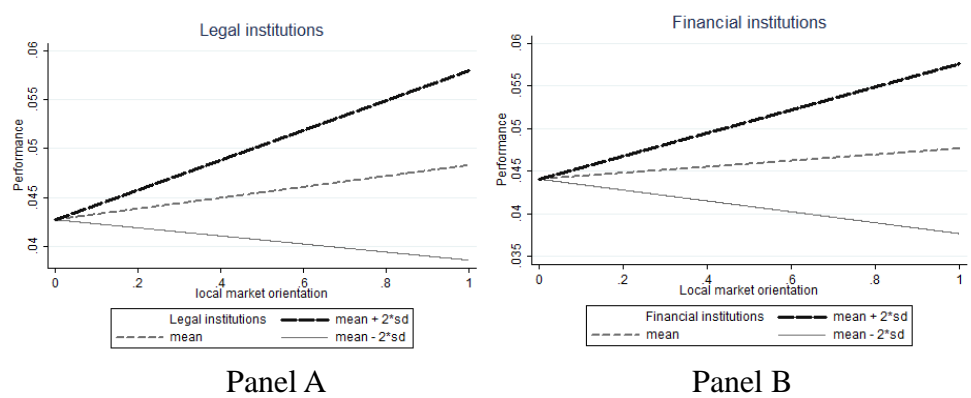


Fig. 2. Interaction effects: Legal and financial institutions

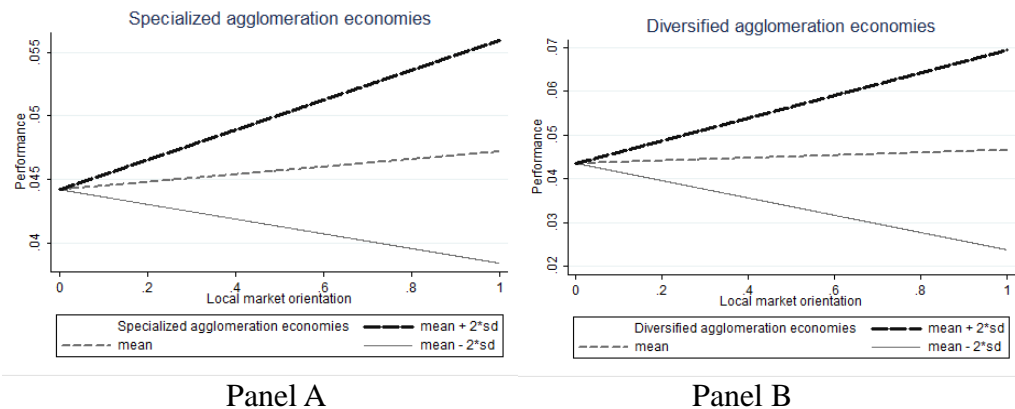


Fig. 3. Interaction effects: Specialized and diversified agglomeration economies

Table 1
Correlation matrix and descriptive statistics^a

	1	2	3	4	5	6	7	8	9	10	11	12	13
1.Performance	1.00												
2.Local market orientation	.02**	1.000											
3.Legal institutions	.01	-.26**	1.00										
4.Financial institutions	.01	-.17**	.02	1.00									
5.Specialized agglomeration economies	.03**	-.01	-.07**	-.16**	1.00								
6.Diversified agglomeration economies ^b	.06**	-.15**	-.21**	-.29**	.12**	1.00							
7.Firm age ^b	-.01	-.03**	.02	-.10**	.02**	-.06**	1.00						
8.Firm size ^b	.01	-.16**	-.03**	.10**	.02**	-.05**	.04	1.00					
9.Net working capital	.09**	-.01	.05	.02*	-.01	-.03	.03	.05**	1.00				
10.Industry dummy	.03	.08	.02	.05**	-.04	-.04	-.09	-.08**	.05**	1.00			
11.Potential market demand	.04	.11	.10**	.32**	-.08**	.13**	-.11**	.02*	-.01*	.05**	1.00		
12.Labor supply	.02	.04	-.30**	.20**	-.04**	-.12**	-.05**	.07**	.03**	.02*	.12*	1.00	
13.Growth rate of labor cost	-.03**	.01	-.32**	.25**	-.03**	-.06**	-.08**	.04**	-.02*	.02**	.08**	-.08**	1.00
Min	0.00	.00	-0.14	2.69	0.00	4.83	1.39	.69	-68.10	.00	104.10	1.40	-.08
Max	12.50	1.00	10.00	12.61	0.38	9.61	3.43	5.52	68.50	1.00	118.20	387.30	.16
Mean	.05	.78	5.72	10.45	0.05	5.86	2.51	4.47	0.44	.33	111.63	149.37	.02
S.D.	.19	.36	2.79	1.38	0.05	.96	.32	.70	2.02	.47	2.63	119.98	.06

a: n=2200*3, “ ** ” indicating significant at .01, “ * ” indicating significant at .05.

b: Logarithm. c: Coded 0/1

Table 2.
Regression results for performance^a

	Model 1	Model 2	Model 3
<u>Control variables</u>			
Firm age ^b	-.009(.006)	-.005(.006)	-.006(.006)
Firm size ^b	.003(.003)	.003(.003)	.003(.003)
Net working capital	.001(.001)***	.001(.001)***	.001(.001)***
Industry dummy ^c	.001(.004)**	.009(.004)**	.009(.004)**
Potential market demand	.003(.001)**	.001(.001)**	.002(.001)**
Labor supply	.001(.000)	.001(.001)	.000(.000)
Growth rate of labor cost	-.108(.023)**	-.085(.022)***	-.083(.022)***
<u>Independent variables</u>			
Local market orientation		.004(.005)	-.007(.007)
Legal institutions		.001(.001)*	-.001(.001)
Financial institutions		.003(.002)**	.003(.002)*
Specialized agglomeration economies		.004(.005)	.003(.004)
Diversified agglomeration economies ^b		.014(.003)***	.014(.003)***
<u>Interaction</u>			
Local market orientation * Legal institutions			.009(.003)***
Local market orientation * Financial institutions			.013(.030)***
Local market orientation * Specialized agglomeration economies			.009(.005)*
Local market orientation * Diversified agglomeration economies			.010(.006)*
_cons	.047(.002)***	.047(.002)***	.049(.002)***
Wald chi-square	111.62***	141.15***	156.35***
Df	7	12	16
Observations	14042	14042	14042
Number of firms	6147	6147	6147
R ²	0.021	0.025	0.028

a: The method of General Linear Square (GLS) Random-Effects models was used to estimate the parameters of models, in which “ *** ” indicating significant at .01, “ ** ” indicating significant at .05 and “ * ” indicating significant at .10. Robust standard errors are reported in parentheses.

b: Logarithm.

c: Coded 0/1