Sub-National Institutional Contingencies, Network Positions, and IJV Partner Selection

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ABSTRACT   The differences in sub-national institutions within large and complex emerging economies have been increasingly noted. Drawing on social network theory and the institution-based view, we argue that two network structural attributes of domestic firms – centrality and structural holes – have distinctive values in different sub-national regions where institutional contexts differ widely. In addition, these sub-national institutional contingencies influence the attractiveness of different network attributes to foreign entrants seeking international joint venture (IJV) partners. Specifically, in regions where the degree of marketization is high, centrally positioned domestic firms are more likely to be selected by foreign entrants as IJV partners. In regions where the degree of marketization is low, domestic broker firms are more attractive IJV partners. Results from the electrical and information technology industries in 18 provinces in China largely support our hypotheses.

Keywords: alliance network, emerging economies, IJV, institution-based strategy, sub-national region

INTRODUCTION

How can multinational enterprises (MNEs) identify the best local firms as international joint venture (IJV) partners in emerging economies? While partner selection is important everywhere (Lau and Bruton, 2008; Roy and Oliver, 2009), it may be more critical for the success of IJVs when investing in emerging economies due to the challenges of underdeveloped institutional regimes faced by foreign entrants (Luo, 1997; Wright et al., 2005; Xu and Meyer, 2012). Existing research has identified a variety of partner selection criteria, such as technology (Nielsen, 2003), managerial capability (Hitt et al., 2004), and international experience (Roy and Oliver, 2009). Nevertheless, two important but relatively underexplored questions merit further investigation.

First, what is the role of a local firm's network position when foreign entrants select IJV partners? Prior research has paid less attention to a local partner's network position as an important selection criterion, despite the critical roles of network positions in firms' strategies and competitive advantages documented by Burt (1992). Geringer (1991) argued that the relative importance of a particular selection criterion should be placed within the IJV's embedded strategic context. To the extent that a network relationship constitutes an important dimension across both personal and business landscapes in many emerging economies (Boisot and Child, 1996; Peng and Luo, 2000), our focus on network position as a selection criterion can enrich our understanding of how a local firm's network can offer complementary resources to foreign firms. However, a local partner's network position is a strategic attribute that remains underexplored in research on IJV partner selection in emerging economies (Lin et al., 2009). It is therefore both theoretically and empirically imperative to investigate this factor in an effort to advance our knowledge along this line of research.

Second, how does the host country's institutional environment interact with the role of a local firm's network position as a selection criterion? Recent research on partner selection has only begun to explore the role of institutional environments (Hitt et al., 2004; Roy, 2012; Roy and Oliver, 2009). While these studies tend to focus on *cross*-country institutional effects, the role of *within*-country institutional variation (or sub-national institutional differences) has been largely ignored (as critiqued by Chabowski et al., 2010). In large and complex emerging economies, sub-national institutional differences are significant because they both constrain and facilitate the strategies pursued by foreign entrants and domestic firms (Chan et al., 2010; Meyer and Nguyen, 2005).

As scholars and practitioners increasingly focus on large and complex emerging economies (notably Brazil, Russia, India, and China – BRIC), which respectively feature significant regional differences within them (Atsmon et al., 2011; Kwon, 2012; Tse, 2010), a focus on their sub-national (intra-country) institutional differences may enable us to probe deeper into the significance of institutional environment for foreign entrants' partner selection (Hitt et al., 2004; Lu and Ma, 2008; Meyer et al., 2011; Peng et al., 2009; Zhao et al., 2005). Theoretically, this is a critical issue since the specific resources required for an IJV's success may differ between regions of a single country. Choosing the best partner helps determine the ideal mix of skills and resources, operating policies and procedures, and overall competitive viability of an IJV (Meyer et al., 2009a).

According to Ofori-Dankwa and Julian (2001), while most cross-country studies on partner selection demonstrate a relatively simple level of theoretical complexity (long endurance and high exclusivity),[1] our sub-national study captures a relatively high level of theoretical complexity (long endurance and low exclusivity). Cross-country studies usually emphasize core concepts such as institutional infrastructure and level of environment uncertainty (Hitt et al., 2004), which are described as a dichotomy between transition and developed economies – i.e. they have high exclusivity. Our sub-national study, on the other hand, focuses on a few competing concepts, which have low exclusivity. In this study, we leverage network theory and the institution-based view to accommodate these competing logics theoretically.

Empirically, a recent trend shows that MNEs begin to increase their growth rates in emerging economies by entering new regional markets beyond the largest cities that are

their traditional battleground (Atsmon et al., 2011; Tse, 2010). These initiatives make the study of location issues at the sub-national level imperative.

Our central theoretical issue therefore concerns the effects of sub-national institutional contexts (province-level comparisons in our context) on the relative values of different domestic firm network positions during the process of IJV partner selection (Chabowski et al., 2010). We contribute to the literature on partner selection in emerging economies though integrating both the social network and institution-based perspectives. Our contingency analysis suggests that in regions where the degree of marketization is high, centrally positioned domestic firms are more likely to be selected by foreign entrants as IJV partners. Conversely, in regions where the degree of marketization is low, domestic broker firms are more attractive IJV partners. Overall, our efforts are consistent with the recent call for extending the institution-based view in the international business arena (Björkman et al., 2007; Meyer and Nguyen, 2005; Peng et al., 2009) by evaluating macro-level institutions on the micro-level decision of partner selection (Roy, 2012; Roy and Oliver, 2009).

NETWORK POSITIONS: A STRUCTURAL LENS

A focus on network positions represents a structural lens on firms' networks. This should be differentiated from studies that leverage a relational lens, which emphasizes the ties of local firms to government or other business leaders (Li et al., 2008; Peng and Luo, 2000). For example, some studies found that managerial ties can be perceived as one of the most important high-quality attributes possessed by domestic firms that are highly valued by foreign partners during the process of IJV partner selection (Ahlstrom and Bruton, 2006). Our structural lens would entail a focus on network positions within a social structure (Koka and Prescott, 2008). While this is often done for studies in developed economies, few studies in emerging economies have invoked a structural approach (see Lin et al., 2009; Mahmood et al., 2011 for exceptions). We argue that an alternative and structural perspective can complement, extend, and enrich our understanding of this phenomenon in emerging economies.

First, some recent studies have begun to acknowledge the important role played by firms' network positions in an emerging economy (Mahmood et al., 2011). Firms' network structures and positions represent an alternative channel that allows critical resources to flow among market players. In many regions within large and complex emerging economies, the government maintains control over scarce resources such as locations, land, financial capital, and licenses (Peng, 2003). At the same time, a local firm's ability to obtain these resources from non-government organizations has been greatly increased due to the significant advancement and development of various business networks (Keister, 2009). These changes often motivate firms to secure premier network positions in order to better navigate the turbulent waters of institutional transitions. This situation is particularly salient in Chinese high-technology industries (our research setting), where the government's role has been transformed from a resource controller to more of a facilitator (Li and Zhang, 2007).

Second, a lack of focus on firms' network positions in prior research is largely due to methodological constraints. Researchers are unable to use the snowball method to obtain individuals' detailed network information, since this information is usually considered

confidential and managers are reluctant to disclose it (Peng and Luo, 2000, p. 491). One way to overcome this methodological constraint is to leverage objective measurements of the overall network structure as advocated by network scholars (Gulati, 1999). For example, domestic firms may be embedded within a network of interfirm arrangements such as alliance networks (Koka and Prescott, 2008; Lavie, 2007). Since the 1990s strategic alliances among domestic firms in emerging economies have been on the rise. This large number of strategic alliances creates an opportunity for researchers to capture and constitute an alliance network that can be used to objectively measure network structural properties (Lin et al., 2009; Yang et al., 2011).

INSTITUTIONS AND NETWORK POSITIONS

Network Centrality and Structural Holes

We focus on two key properties of domestic firms' alliance network structures, centrality and structural holes. These two network attributes have been documented in prior studies in emerging economies as important attributes of network structure (Lin et al., 2009). Our focus is on the *interplay* between these network positions and marketization as an important aspect of institutional development (Fan et al., 2007; Henisz et al., 2005) for eventual JV formations between foreign entrants and domestic firms.

Centrality. Within a domestic alliance network, a centrally positioned domestic firm can access a variety of resources and information by virtue of its position. Compared with peripherally positioned firms, centrally positioned domestic firms will receive additional information due to their larger number of connected partners (Freeman, 1979). Centrally positioned domestic firms can also triangulate information from different sources so that the quality of received information is higher (Burt, 1992).

Structural holes. Firms occupying a structural hole position – known as broker firms – may take advantage of the benefits by becoming more entrepreneurial. Bridging segregated clusters provides focal broker firms with more diverse and less redundant information (Burt, 1992). Compared with non-broker firms, broker firms can better access this information in a timely fashion (Koka and Prescott, 2008; Shi et al., 2009). Furthermore, broker firms can access additional localized and tacit knowledge regarding the local context via its brokerage position. Burt (2007, p. 123) argued that brokerage is essentially a local phenomenon, 'in which a broker finds advantage in the flow of information familiar to the broker'.

Sub-National Institutional Differences: Degree of Marketization in China

While the advantages of network structures mentioned above have been well documented in a Western context, the relative value of these network structures under different institutional contexts has remained unclear. In this study we examine the contingent value of network structures under different levels of marketization, which is an important characteristic within many emerging economies (Davies and Walters, 2004; Fan et al., 2007). Marketization is

defined as the degree of market-based mechanism development and other institutions in order to achieve more efficient market functioning (Cuervo-Cazurra and Dau, 2009; Fan et al., 2007; Henisz et al., 2005). Our working definition of marketization is consistent with the long-standing streams of research on institutions (North, 1990).

While the topic of within-country (sub-national) institutional differences is a traditional inquiry in the economic geography literature (Coughlin et al., 1991), it has only recently begun to appear in the international management literature (Chan et al., 2010; Meyer and Nguyen, 2005), which traditionally has focused on cross-country differences (Meyer et al., 2009a). Although sub-national institutional differences exist in developed economies (particularly in large ones such as the United States; Shaver and Flyer, 2000), these institutional differences are particularly salient (Chan et al., 2010) and qualitatively distinctive (Shenkar and von Glinow, 1994) in large emerging economies such as BRIC.

While large countries such as BRIC all demonstrate substantial sub-national variation, we focus on China as our empirical context for two reasons. First, China has a large number of sub-national regions (provinces) that demonstrate a significantly diverse institutional landscape (Chan et al., 2010). It is true that sub-national regional differences can be found in every large and complex country, such as Vietnam as documented by Meyer and Nguyen (2005) and the United States as investigated by Chan et al. (2010). 'In China, given its size, this holds even more so' (Tse, 2010, p. 19). In terms of informal institutions, 'provinces retain their distinct identities, with their own cuisines, customs, dialects, and sometimes languages' (Tse, 2010, p. 19). In terms of formal institutions, despite the nationwide implementation of corporate law and other market-related policies, sub-national differences are still pronounced. Huang and Sheng (2009) showed that China has significant within-country variation in political decentralization at the province level where the central government can exert different levels of control by appointing different provincial officials. This large set of regions that differs along formal and informal institutional dimensions makes our province-level comparisons of partner selection more comprehensive and systematic.

Second, relative to the literature on other BRIC countries, the literature on China is the most developed. In the past decades a number of studies have explored the network relationship in firms' strategic behaviours in China by adopting a relational view (Boisot and Child, 1996; Li and Zhang, 2007; Li et al., 2008; Peng and Luo, 2000; Zhou et al., 2008). Recent work has begun to explore the structural attributes of networks in the Chinese context (Mahmood et al., 2011). Our China focus will therefore help us make additional progress along this line of research.

In this paper we focus on the level of marketization of the province where domestic firms (as potential IJV partners) are headquartered. This is because province-level differences in marketization reflect local government deregulation efforts and efficient market level (Fan et al., 2007).

THE INTERACTION BETWEEN SUB-NATIONAL INSTITUTIONAL DIFFERENCES AND NETWORKING STRATEGIES

According to the institution-based view, a firm's strategic choice is an outcome of the interplay between institutions and organizations (Hitt et al., 2004; Hoskisson et al., 2000;

Table I. The institution-based preferences for IJV partners

	Partners with a high degree of centrality (centrally positioned firms)	Partners with a high level of structural holes (broker firms)
Panel A: Cross-country research		
In developed economies	Preferred (✔)	
In emerging economies		Preferred (✔)
Panel B: Within-country research		
In regions with a high degree of marketization within a country	Preferred (✔)	
In regions with a low degree of marketization within a country		Preferred (✔)

Peng et al., 2009). Firms make strategic choices in a 'choice-within-constraints' framework (Peng, 2003). Panel A in Table I draws on cross-country research to highlight a general theme in the IJV partner selection literature. In developed economies, partners with a high degree of centrality are generally preferred in developed economies (Kim and Higgins, 2007). In emerging economies, partners with a high level of structural holes are typically preferred – the key differences lie in the institutional differences between developed and emerging economies (Lin et al., 2009; Meyer and Peng, 2005; Peng, 2003; Yang et al., 2011).

Panel B of Table I moves from cross-country research to our context of within-country research. Extending the institution-based view (Peng et al., 2009), we argue that foreign entrants may choose domestic partners with different network properties in different regions that are characterized by various degrees of marketization. Specifically, we suggest that in regions where the degree of marketization is high, centrally positioned domestic firms are more likely to be selected by foreign entrants as IJV partners. Conversely, in regions where the level of marketization is low, foreign entrants are more likely to partner with broker firms. Our main theoretical arguments are based on two important mechanisms: (1) the knowledge or information access mechanism, and (2) the knowledge or information spillover mechanism.

Prior studies have acknowledged the importance of obtaining local knowledge in emerging economies (Anand and Delios, 2002; Meyer et al., 2009b; Quelch and Jocz, 2012). However, we argue that the contents and characteristics of local knowledge have widely different contributions towards a competitive advantage in different sub-national institutional environments. Content-wise, we further divide local knowledge into three components: (1) local market knowledge, (2) local cultural knowledge, and (3) local regulatory knowledge. These appear to be the top three considerations for MNEs entering emerging economies (Nielsen, 2003). Local market knowledge refers to market-specific knowledge such as information on market forecasts, consumer preferences, and supplier behaviours (Figueiredo and Brito, 2011; Mariotti and Piscitello, 1995). The more accurate and high quality this type of knowledge is, the more likely foreign firms will be able to achieve a competitive edge within the local market. Local cultural and

regulatory knowledge refers to information regarding how to adapt to the local environment and institutions such as local procedures and practice of law (Glaister and Buckley, 1997; Nielsen, 2003). This knowledge is usually informally and institutionally sensitive and embedded (Tan and Meyer, 2011). To a certain extent it is tacit and idiosyncratic in nature (Dhanaraj et al., 2004; Miller et al., 2008), and it is usually socially constructed within local environments.

A high degree of marketization within an emerging economy (in our context, one region within an emerging economy) usually indicates that the commodity and factor markets have achieved significant improvement, and that certain market intermediaries and legal frameworks similar to those in developed economies have been established (Peng, 2003; Peng et al., 2009). Domestic players have already been exposed to some general market-based rules (such as the necessity to improve product quality and reduce cost) in order to establish a competitive edge. We argue that accessing this high-quality and accurate local market knowledge is particularly important in this type of institutional environment.

For example, one of the key factors that establish a domestic firm's competitive advantage in the Chinese pharmaceutical industry is the need to have a drug approved for reimbursement by the local government. In regions such as Shanghai (an example of a highly marketized region), the procedure for submitting a reimbursement approval application is clearly stipulated by local authorities such as the Shanghai Food and Drug Administration (an indication of an established legal and regulatory framework). This information regarding procedures can be considered as general and common information since all domestic firms can easily access it. However, domestic firms differ widely in their ability to go beyond this general explicit information and to tap into the higher quality and more accurate market information required for specific strategic actions. Such information may be about drugs in which therapeutic area have a high likelihood for reimbursement approval and what type of drug product local doctors are more likely to prescribe to patients. Possessing such in-depth information will increase the accuracy of market forecasts and make domestic firms stand out from the competitive pool (relative to foreign entrants that typically lack this fine-grained information). Furthermore, possessing such crucial information may make leading domestic firms ideal IJV partners for foreign entrants.

Centrally positioned domestic firms are those that have a large network of industry peers that are similarly well-connected (e.g. other domestic pharmaceutical players in the above case). This allows centrally positioned domestic firms to access a large pool of customers, suppliers, and distributors that can supply critical and high-quality information regarding customer needs and supplier channels. By triangulating these sources of information in order to ultimately increase the accuracy and quality of information (Lin et al., 2009), centrally positioned domestic firms may have a higher likelihood of establishing their foothold and leadership within the marketplace. Therefore, such centrally positioned domestic firms may become attractive IJV partners for foreign entrants.

Further, a centrally positioned domestic firm's ability to acquire accurate market information may be significantly enhanced in well-developed (domestic) markets compared with underdeveloped (domestic) markets. A high degree of marketization implies

a high level of legal systems and market monitoring mechanisms. They safeguard the quality of information that a centrally positioned domestic firm receives from its partner firms (Li and Atuahene-Gima, 2002). In contrast, the ability of centrally positioned domestic firms to convey accurate market information is largely constrained in a region with a low degree of marketization. This is because it is difficult to monitor and evaluate partners' information and curb opportunistic behaviours (Lin et al., 2009).

Knowledge spillover is one of the most important concerns for foreign firms investing in emerging economies (Liu et al., 2010; Nielsen, 2003) where accessing technology is usually the top priority for local firms (Tatoglu and Glaister, 2000). We argue that in regions with a low degree of marketization, foreign firms are particularly reluctant to partner with a centrally positioned domestic firm because of the lack of sufficient market protection mechanisms. First, a centrally positioned domestic firm is more likely to have broad technological coverage due to its large number of well-connected industry peers. This may allow such firms to possess a sufficient absorptive capability for understanding, assimilating, and applying technological spillover from foreign firms once IJVs are formed (Sun and Lee, 2011). Second, centrally positioned domestic firms can also diffuse such technological knowledge to other local firms in a rapid manner due to their unique central positions within the local alliance network (Mahmood et al., 2011). This is particularly the case in our high-technology industry context where technological inno-vations make existing technology obsolete very quickly (Li and Atuahene-Gima, 2002), further increasing the incentive for centrally positioned domestic firms to spread the technology spillover from foreign partners.

In contrast, in regions where marketization is high this technology spillover may be curbed by well-established contract enforcement and intellectual rights protection mechanisms (Zhou and Poppo, 2010). In these regions the cost of knowledge spillover is greatly reduced and minimized. The benefits of selecting a centrally positioned domestic firm therefore may exceed the costs derived from the potential spillover concern. Therefore:

> *Hypothesis 1*: The degree of marketization in a province where domestic firms are headquartered positively moderates the relationship between a domestic firm's cen-trality within a domestic alliance network and its likelihood of selection by foreign entrants as an IJV partner. Specifically, centrally positioned domestic firms are more likely to be selected by foreign entrants as IJV partners in regions characterized by a high degree of marketization.

We argue that when an institutional environment is characterized by a low degree of marketization, accessing local cultural or regulatory knowledge becomes more important than accessing local market knowledge for two reasons. First, most transactions within these regions rely on relational exchanges rather than arm's-length transactions (Zhou et al., 2008). Second, in these regions that generally have lower income, consumers are more price-sensitive and less likely to be willing to pay a high price on product quality and service (Atsmon et al., 2011). In this context there is less value in foreign firms making accurate market forecasts and understanding consumer behaviour. In other words, the major effort of foreign firms is more likely to focus on acquiring and absorbing

local culture or regulatory knowledge that may help them better cope with the local institutional environment. Third, our interviews with senior executives also indicate that in high marketization regions, inter-city mobility and migration creates a more diverse culture, which makes a single or dominant local culture hard to emerge (and if it does emerge, it is less important).[2] Therefore, it is less valuable to pay attention to a particular idiosyncratic culture and social norms in these regions. The situation is exactly the opposite in regions with a low level of marketization.

Meanwhile, institutional voids prevent foreign firms from relying on the legal system as an efficient default option for the resolution of conflicts (Khanna and Palepu, 2010; Zhou and Poppo, 2010). For example, in Chinese regions where the degree of marketization is low, the product market is usually dominated by non-market forces and is often subject to local protection due to a lack of effective contract enforcement (Fan et al., 2007). Government efficiency is also quite low in these regions. For instance, the process of clearances required to run a new business is significantly longer in Chinese regions with a lower degree of marketization (Fan et al., 2007). These institutional failures result in sticky information transmission and localized 'rules of the game' that distort market competition. Our interview with a domestic industry expert further validates foreign firms' concerns regarding operating in these regions. One interviewee in the pharmaceutical industry pointed out:

> While the central government issues an insurance policy for all individuals, in those second-tier or third-tier cities, we found the percentage of coverage by the government is significantly lower than that covered by government in first-tier cities. This creates problems for us since many of our medicines cannot be placed in the hospital due to the low percentage of coverage on the list. Practices in second-tier and third-tier cities are often very different. The unclear local rules often dominate the whole process. We get things done by finding someone who is really a local pro. We take his/her words for granted and there is really no way you can draw on the legal system, which is largely symbolic.

Local cultural and regulatory knowledge is usually socially constructed within local vicinities (Miller et al., 2008; Tan and Meyer, 2011). This market space resembles the segmented social space model of Austrian economics where information is imperfect and incomplete (Burt, 1992). The advantage therefore accrues towards actors occupying brokerage positions. Burt (2007) argued that bridging structural holes is essentially a local phenomenon, and he further emphasized that this local information is only available to brokers who are familiar with the local vicinities. Foreign entrants that enter a sub-national region within an emerging economy may be forced to rely extensively on the supply of local cultural and regulatory knowledge from local firms (Nachum, 2000; Tse, 2010). Foreign entrants partnering with a domestic broker within these institutional contexts can therefore access localized rules of the game and secret rules of thumb that are unavailable to the general public and other market players. This localized knowledge regarding culture, values, and local rules can be extremely helpful in accessing favourable transactions with potential local parties (Nachum, 2000).

In Chinese regions with a low level of marketization, the local norms and practices, secret connections with local authorities, and many other non-market protection mechanisms are usually more important than any other factors. In these regions financial markets may be missing or dysfunctional, creating difficulty for foreign entrants attempting to secure proper financial capital from local banks. A domestic broker firm can therefore help foreign entrants search for alternative local investment venues in lieu of the missing financial intermediaries. Information regarding how, when, and where to find these investors is usually embedded within the local context as dictated by local norms and rules.

From the knowledge spillover perspective, in regions with a low level of marketization foreign firms may have less concern regarding spillover when they select a local broker as an IJV partner. A local broker is also usually specialized within a niche market (either technologically or geographically), and is less likely to overlap with a foreign firm within the similar technological domain (Lin et al., 2009). Consequently, a local broker firm may not have sufficient absorptive capability to understand the core technology, possibly spillover from foreign firms. Moreover, local brokers' unique network positions may not allow them to diffuse the technological spillover to other local firms as quickly as centrally positioned local firms can within the local alliance network. Further, this may be more difficult in the Chinese context, where information cannot be easily transmitted across disconnected sub-national regions due to a lack of national markets and inefficient market intermediaries (Chang and Xu, 2008).

In addition, the underlying mechanisms on the linkage between network structure and different knowledge characteristics need to be spelled out. In other words, why a local broker firm, compared with a centrally positioned firm, is more capable of accessing the cultural/political information in the local market. This is because a local broker usually links with fewer alters than a centrally positioned local firm. If the number of alters around the local broker increases, the broker's brokerage advantage may decrease over time due to the increased possibility that these alters may connect by themselves (Shi et al., 2009). So an optimal strategy for the broker is to maintain a certain number of alters. A broker can spend more time to interact and socialize with each alter in the local context, which helps the broker to gain a deep understanding of the highly sensitive and localized cultural/political knowledge (Laursen et al., 2012). This indicates that brokers are more capable of obtaining such knowledge than centrally positioned firms. On the other hand, centrally positioned firms are capable of accessing market knowledge since they can use the breadth of the information from different alters in order to validate the accuracy and improve the quality of the market knowledge (Figueiredo and Brito, 2011). Overall:

Hypothesis 2: The degree of marketization in a province where domestic firms are headquartered negatively moderates the relationship between a domestic firm's structural holes within the domestic alliance network and its likelihood of selection by foreign entrants as an IJV partner. Specifically, domestic firms that bridge structural holes are more likely to be selected by foreign entrants as IJV partners in regions characterized by a low degree of marketization.

METHODOLOGY

Research Setting

We focused on the electronics and information technology industries in China as identified by the Industry Classification Guide of Listed Companies issued by the China Securities Regulatory Commission (CSRC) in 2001. These two industries are primarily driven by foreign direct investment (FDI). Both industries account for 68 per cent of the revenue and 64 per cent of the total FDI profits in China (Xiao and Tsui, 2007). Approximately one-third of China's exports are concentrated within these two industries.

We selected these two industries for two additional reasons consistent with our theoretical framework. First, among all Chinese industries these two have some of the most open FDI policies, including a significant number of IJVs (Xia et al., 2008). Second, there have been a sufficient number of alliances within the industry to allow a large sample study capable of identifying a domestic alliance network and measuring firms' structural positions within the network. Since the late 1990s the inflow of FDIs has provided domestic firms with numerous IJV opportunities (Zhang et al., 2010).

Sample and Data Collection

For the domestic alliance network we focused on equity-based alliances, since they require a more serious resource commitment than non-equity-based alliances. Alliance data were collected from a leading data provider in China, WIND Data Services. Similar to the SDC Platinum database, the WIND database has reasonably consistent and complete coverage on alliance activities, and has been used in recent research (Lin et al., 2009; Yang et al., 2011).

Following Rowley et al. (2000), we constructed the domestic alliance network by incorporating all firms within the electronics and information industries and identified a total of 187 domestic firms. We then identified 84 focal firms (listed on either the Shanghai or Shenzhen Stock Exchanges) with relatively complete financial information from WIND that were involved with a total of 191 domestic alliances from 2001 to 2005 (inclusive). We also obtained 73 IJV formation events with 69 foreign partners from WIND among these 84 domestic firms during these five years.[3]

Information regarding sub-national (provincial level) marketization was provided by the National Economic Research Institution (NERI). Domestic firms' patent information was collected from China's State Intellectual Property Office.[4] Domestic firms' CEO profiles were obtained from the 'Profile of Directors and Senior Managers' section of each firm's annual reports. Foreign partners' local market experience data were collected from foreign partners' annual reports, Lexis-Nexis, and the Dow Jones News Retrieval Service. We obtained data on country-level institutional indicators from various editions of the *World Competitiveness Yearbook* (2001 to 2005). The 'Fortune Global 500' online was used to capture Fortune Global 500 membership.[5]

Variables

Number of new foreign partners. Our interest is examining the likelihood of domestic firms being selected as IJV partners by foreign entrants. This likelihood significantly increases when there are a large number of new foreign partners that select domestic firms as their local partners. Specifically, we counted the number of new foreign partners that have chosen a local Chinese firm as a JV partner during a specific year.

Alternatively, a simple way of operationalizing our dependent variable is to use a binary variable of whether or not domestic firms are selected as IJV partners by foreign entrants. However, this will generate inefficient results since information regarding the number of new foreign partners is ignored. Nevertheless, as a robustness check we also tested our hypotheses using a binary variable.[6]

Network centrality. We calculated degree centrality within the domestic alliance network using UCINET 6 (Borgatti et al., 2002)[7] after first constructing the symmetric (non-directional) matrix for each year (Wasserman and Faust, 1994). The formula we employed follows Freeman (1979, p. 221). A given point, p_k, can at most be adjacent to $n - 1$ other points in a graph. The maximum of $C'_D(p_k)$ is therefore $n - 1$. Then:

$$C'_D(p_k) = \frac{\sum_{i=1}^{n} a(p_i, p_k)}{n - 1} \tag{1}$$

is the proportion of other points adjacent to p_k. This measurement takes the size of network into consideration, and therefore makes the comparison of relative centrality for nations from different networks possible.[8]

Structural holes. We measured structural holes as constraints using the routine ('Network . . . Ego Network . . . Structural Holes') in UCINET (Borgatti et al., 2002). The constraint formula was developed by Burt (1992, p. 54):

$$P_{ij} + \sum_{q} P_{iq} P_{jq}, q \neq i, j \tag{2}$$

where P_{ij} refers to the strength of direct ties from firm i to firm j, and $\sum_{q} P_{iq} P_{jq}$ equals the sum of the indirect ties strength from firm i to firm j via all firm q. We then calculated hole access as one minus the constraint score if the constraint is non-zero, and zero for all other cases since a zero score indicates that the firm is not connected to any others within the network (Zaheer and Bell, 2005). Therefore, the higher the score on holes access, the richer an individual firm is in terms of structural holes.

Degree of marketization. While there are a variety of independent indexes measuring institutional environments, most these measurements are at the country level (Cuervo-Cazurra and Dau, 2009; Kane et al., 2007; Morley et al., 1999). Our measurement was

derived from the province-level index of marketization developed by the NERI (Fan et al., 2007). Marketization usually includes the adoption of the following four elements: regulatory separation (separation of the regulatory authority from the executive branch); depoliticization (reduced political influence on the regulatory authority); liberalization (of most product markets); and privatization of state-owned enterprises (SOEs) (Henisz et al., 2005). By following these elements the NERI index provides an overall assessment of marketization at the provincial level. This overall index is accessed via five different categories: government and market forces; development of non-SOEs; development of commodity markets; development of factor markets; and development of market intermediaries and a legal environment. Each category is also further divided into several sub-categories. This index has been used extensively in finance and economics (Chen et al., 2011), and has recently been introduced to the management literature (Gao et al., 2010; Schotter and Beamish, 2011). Since the score achieved by each province changes over time, our marketization index is time-variant.

Control Variables

(1) *Firm size.* Prior studies have found that firm size is associated with the ability to mitigate the uncertainty caused by underdeveloped institutional regimes in emerging economies (Tong et al., 2008). We calculated this variable as the natural logarithm of the total number of firm employees (Contractor and Kundu, 1998).

(2) *Firms' past performance.* A local firm's past performance is an indicator of its ability to make financial contributions to an IJV (Ariño et al., 1997). We measured this variable as the averaged return on assets during the previous year.

(3) *Firms' innovation capability.* A local firm's innovation capability reflects its experience with both technological application and the potential for new technology development (Nielsen, 2003). We measured this variable using the logarithmic form of the number of patents filed in China each year.

(4) *Firms' ratio of independent board directors.* Good corporate governance usually reflects the degree to which firms' operations are transparent (Haunschild and Beckman, 1998), which is particularly important in China since foreign partners are concerned with appropriation and coordination due to underdeveloped market monitoring mechanisms (Roy and Oliver, 2009).

(5) *Domestic firms' international alliance experience.* A local firm's international alliance experience is related to its ability to effectively communicate and collaborate with foreign partners (Glaister and Buckley, 1997). We measured this variable using the difference between the selected year and the year when the first alliance was established.[9]

(6) *Ownership of the domestic firms.* Luo (1997) argued that SOEs are more likely to contribute towards the local market expansion of IJVs than non-SOEs due to the formers' preferential government treatment.

(7) *Industry dummies.* Our industry context can be further divided by two sub-industries – the electronics industry and the information technology industry. Luo (1997) and Sun et al. (2012) argued that in emerging economies such as

China, industries differ widely by their structure imperfections and government support.

(8) *CEO overseas experience* and (9) *Education*. One of the key characteristics foreign partners search for is a potential local partner's professionalism (Ariño et al., 1997). Local firm CEOs who have a Western mentality and are familiar with Western-style managerial skills are more likely to be preferred by foreign partners (Liu et al., 2010).

(10) *Political ties*. Ties with the government are often associated with greater resource support from the government (Peng and Luo, 2000). This usually signals a local firm's ability to satisfy host government requirements, as well as the possession of regulatory permits (Roy and Oliver, 2009). We measured this variable by determining whether or not the CEO of a domestic firm was or is an official of the central government, local government, or military.

(11) *Foreign partners' local market experience*. Similar to (5), local firms also prefer to ally with foreign partners with an existing local market presence. We measured this using the difference between the year a firm forms an IJV with domestic firms and the first entry year.

(12) *Foreign partners' perceived capabilities*. Foreign partners' perceived capabilities are an important selection criterion for local firms in emerging economies (Tatoglu and Glaister, 2000). We measured this variable using foreign partners' memberships in the Fortune Global 500. Since the Fortune Global 500 group uses a common set of criteria across different countries, there is strong enthusiasm and envy in China for Fortune Global 500 firms.

(13) *Country institutional distance*. The country of origin of FDI affects the institutional distance between both the host and home countries (Estrin et al., 2009). Following Gaur and Lu (2007), we used a Euclidean distance calculation based on country-level indicators related to the regulative and normative aspects of institutional environments in order to construct the institutional distances between the foreign partner's headquarters country and our focal country (China).

(14) *Year dummies* are controlled too.

Estimation Strategy

Since the dependent variable is a count variable (the number of foreign partners the focal firm has), it ranges from zero to a certain positive number. This is non-negative and makes it inappropriate for us to use standard multiple regression. A Poisson regression initially seems to be a good choice since it is explicitly designed for count dependent variables. However, a Poisson regression assumes that the mean and variance of the counts are equal. For most social-science data the variance likely exceeds the mean, resulting in the problem of overdispersion and tending to bias the estimated standard errors downward (Haunschild and Beckman, 1998). We therefore used a general linear model that incorporates ordinal logistic analysis. We used the GENMOD procedure in SAS.

We had multiple observations for each firm over the years. It is possible that each observation may not be independent, and this could lead to residuals that are not

independent within each firm. We addressed this using a *class* statement and *repeated* measurement in the GENMOD procedure that allowed us to model correlated data. We also suggest that firms' domestic alliance network positions and local partner side interactive variables should have a lag effect on their strategic behaviour. We therefore lagged all independent variables and most control variables by one year except for the foreign partner side variables in the regression analysis.

RESULTS

Table II presents the descriptive statistics. The average variation inflation factor (VIF) of 1.49 is lower than the threshold level of 10, suggesting little problem with multicollinearity. The only slightly high VIF are centrality (2.19) and structural holes (2.08), which are also reflected in the slightly high correlation between these two measurements ($\gamma = 0.374$). We therefore tested the interaction effect for structural holes and centrality separately in order to avoid any potential multicollinearity (Model 5 for centrality and Model 6 for structural holes in Table III).

Table III shows results of the ordinal logistic regression when we use the marketization index as a measurement for the degree of marketization. Model 1 is the base model. In Models 2, 3, and 4, we added network centrality and structural holes individually and jointly. In Models 5, 6, and 7, we further tested the interaction effect between network properties and marketization. Hypothesis 1 suggests that the degree of marketization will positively moderate the relationship between network centrality and the likelihood of domestic firms being selected by foreign entrants. Both Models 5 and 7 support Hypothesis 1. The standardized coefficient of the interaction between network centrality and marketization is 0.124, and is significant at the 0.01 level (Model 5). Controlling for all other factors, the odds of Y (being selected by N number of foreign partners, for N = 1, 2, 3, or 4 per year) are predicted by our model to increase by a factor of 1.132 when network centrality is increased by one unit.[10] Hypothesis 1 is therefore supported. Similarly, Models 6 and 7 indicate that the degree of marketization negatively moderates the relationship between structural holes and the likelihood of domestic firms being selected by foreign entrants. Hypothesis 2 is therefore also supported.

Next, following Aiken and West (1991), we explored significant two-way interactions as reported in Table IV. For each significant interaction we calculated the simple slopes for network centrality and structural holes as the likelihood of being selected by foreign partners and their standard errors at three levels (mean, one standard deviation above, and one standard deviation below the mean) of the second predictors (i.e., the degree of marketization) as suggested by Cohen and Cohen (1983). We then conducted *t*-tests on the values of the simple slopes divided by their standard errors. Table IV indicates that the positive relationship between network centrality and the likelihood of being selected by foreign partners is stronger when a domestic firm's headquarters is in provinces characterized by a high degree of marketization.

We found similar results for the interaction effect between structural holes and the degree of marketization. In Table IV the coefficient of structural holes in provinces with a high degree of marketization is negative ($\beta_{\text{structural holes} \times \text{high degree of marketization}} = -0.364$, $p < 0.05$), while it becomes positive in provinces with a low degree of marketization

Table II. Descriptive statistics and Pearson correlation matrix (number of observations = 420)

	Mean	SD	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 Number of foreign partners	0.19	0.59	0	4	1																		
2 Firm size	7.23	1.20	4.09	11.09	0.055	1																	
3 Performance	0.26	11.65	−135.38	27.93	0.094	0.127*	1																
4 Patents	0.30	0.53	0	2.11	−0.040	0.342*	0.096	1															
5 Industry	0.67	0.47	0	1	0.123*	−0.368*	−0.056	−0.149*	1														
6 Independent board ratio	0.26	0.13	0	0.50	−0.234*	−0.020	−0.178*	0.205*	−0.005	1													
7 CEO overseas experience	0.15	0.36	0	1	−0.038	−0.093	0.054	0.019	0.012	−0.040	1												
8 CEO overseas education	0.05	0.21	0	1	−0.053	−0.038	0.014	−0.005	−0.045	−0.075	0.292*	1											
9 Institutional distance	0.19	0.55	0	2.39	0.105*	−0.107*	0.048	−0.040	−0.035	0.012	−0.075	−0.086	1										
10 Local firms' foreign experience	2.01	2.37	0	7	0.041	0.137*	−0.010	0.098	−0.065	0.217*	0.062	0.044	−0.104*	1									
11 Foreign firms' local market experience	1.72	5.89	0	39	0.032	−0.009	−0.036	0.021	−0.118*	−0.004	0.057	0.043	−0.041	0.217*	1								
12 Fortune 500 membership	0.05	0.22	0	1	0.075	−0.020	−0.054	0.047	0.040	0.050	0.154*	0.071	−0.022	0.077	0.631*	1							
13 SOE	0.73	0.44	0	1	0.094	0.232*	0.207*	0.112*	−0.235*	−0.149*	0.099	0.013	−0.050	0.263*	0.037	−0.030	1						
14 Political ties	0.17	0.38	0	1	−0.001	−0.044	0.030	−0.008	0.040	−0.018	−0.035	−0.098	−0.002	−0.092	−0.104*	−0.037	−0.040	1					
15 Marketization index	7.55	1.69	2.95	10.41	−0.016	0.203*	−0.024	0.220*	0.030	0.351*	0.100	−0.014	−0.032	0.285*	0.151*	0.142*	−0.099*	0.058	1				
16 Network centrality	0.33	0.78	0	6	0.327*	0.107*	0.026	−0.028	−0.117*	−0.250*	−0.042	−0.049	−0.003	−0.101*	−0.008	−0.030	0.042	−0.035	−0.068	1			
17 Structural holes	0.28	0.45	0	1	0.278*	0.016	−0.007	0.028	0.152*	−0.161*	−0.091	−0.050	0.035	−0.056	−0.023	−0.026	0.009	0.011	0.008	0.374*	1		
18 World bank index (city)	0.90	0.11	0.66	1.09	0.045	0.241*	−0.008	0.130*	−0.117*	0.032	0.032	0.039	0.035	0.159*	0.056	0.101	−0.022	0.037	0.716*	0.036	0.003	1	
19 World bank index (province)	0.86	0.10	0.64	1.01	0.088	0.204*	0.063	0.148*	−0.006	0.036	0.218*	0.043	−0.008	0.163*	0.079	0.088	0.058	0.012	0.779*	0.041	0.042	0.889*	1

* p < 0.05.

Table III. Ordinal logistic regression analysis by general linear models (using the marketization index: province level)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Control variables							
Firm size	0.401**	0.305*	0.394**	0.315*	0.309*	0.426**	0.354*
Performance	−0.002	0.002	−0.001	−0.001	−0.001	0.002	0.003
Patents	−0.148	−0.037	−0.166	−0.056	−0.047	−0.144	−0.066
Industry	1.237***	2.275***	1.104**	2.145***	2.299***	1.125**	2.148***
Independent board ratio	−4.180*	−2.867	−3.463†	−2.876	−2.854	−3.595†	−2.868
Institutional distance	0.559*	0.727*	0.606*	0.722*	0.722*	0.638*	0.715*
Local firms' foreign experience	0.189**	0.231**	0.190*	0.229**	0.233**	0.193**	0.226**
Foreign firms' local market experience	−0.030	−0.025	−0.039	−0.029	−0.026	−0.039	−0.029
Fortune 500 membership	1.946*	1.938†	2.232*	2.045†	1.964†	2.104*	1.963†
SOE	0.192	0.245	0.266	0.263	0.249	0.137	0.162
CEO political ties	0.175	0.419	0.357	0.441	0.417	0.298	0.389
CEO overseas experience	−0.441	−0.245	−0.136	−0.18	−0.252	−0.137	−0.179
CEO overseas education	−1.131	−0.597	−0.988	−0.612	−0.591	−0.984	−0.612
Marketization index	−0.037	−0.013	−0.073	−0.024	−0.038	−0.033	−0.023
Main effect							
Network centrality		1.153***		0.997***	0.994**		0.985**
Structural holes			0.506**	0.451*		0.394*	0.445*
Interaction effect							
Network centrality × marketization index (h1)					0.124**		0.112*
Structural holes × marketization index (h2)						−0.205*	−0.309†
Year effect	Included	Included	Included	Included	Included	Included	Included
Intercept 1	−7.681***	−9.716***	−8.365***	−9.714***	−9.629***	−10.666***	−11.239***
Intercept 2	−7.254***	−9.233***	−7.927***	−9.236***	−9.145***	−10.215***	−10.753***
Intercept 3	−6.503***	−8.334***	−7.146***	−8.352***	−8.238***	−9.415***	−9.851***
Intercept 4	−4.832***	−6.414***	−5.367***	−6.440***	−6.321***	−7.609***	−7.934***
N	420	420	420	420	420	420	420
Log likelihood	347.59	330.53	340.27	321.10	326.68	335.68	318.15

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table IV. Results of standard error and t tests for simple slopes of two-way interactions including network properties and marketization

| | Network centrality | | | | Structural holes | | | |
	Simple slope	SE	t test	Intercept	Simple slope	SE	t test	Intercept
Marketization								
High	1.376	0.466	2.95**	−11.405***	−0.364	0.151	2.64*	−11.512***
Mean	0.985	0.357	2.75**	−11.562***	0.445	0.195	2.28*	−11.607***
Low	0.756	0.276	2.73**	−11.735***	1.423	0.616	2.31*	−11.728**

* p < 0.05; ** p < 0.01; *** p < 0.001.

($\beta_{\text{structural holes} \times \text{low degree of marketization}} = 1.423$, p < 0.05). These results clearly indicate that brokers are valuable candidates for foreign entrants in provinces where the degree of marketization is low. However, in provinces where the degree of marketization is well developed, foreign entrants tend to avoid brokers.

Furthermore, while we use ordinal logistic regression to fit our model, we also conduct the same analysis using other regression models in order to enhance the robustness of our results. For example, we have tried the traditional OLS model, binomial logistic regression model and Tobit model. The results are qualitatively consistent. Thus, only results from ordinal logistic regression are reported.

DISCUSSION

Contributions

In our view, two contributions emerge. First, our study contributes to the management literature by extending the institution-based view (Björkman et al., 2007; Meyer and Peng, 2005; Peng, 2003; Peng et al., 2009) and evaluating macro-level institutions on the micro-level decisions of IJV partner selection (Roy and Oliver, 2009). Our central finding is that the institutional environments at sub-national levels of an IJV's host country are indeed important in determining partner selection in an emerging economy. Our results resonate with prior research stressing the importance of a partnership's institutional context in determining partner selection decision (Delios and Henisz, 2003; Roy, 2012; Roy and Oliver, 2009). While this line of research usually focuses on country-level institutional environments, our focus on the sub-national institutional environment can generate new insights for MNC managers when they plan within-country expansion (Meyer et al., 2011; Ofori-Dankwa and Julian, 2001; Tse, 2010).

Second, our study provides an alternative perspective on a firm's network relationship as an IJV selection criterion in emerging economies. Scholars have traditionally adopted a relational view and emphasized that in emerging economies local partners' political connections are an important and favourable attribute that foreign partners tend to value (Ahlstrom and Bruton, 2006; Siegel, 2007). By shifting the research focus from a relational to a structural perspective of networks, our study complements this line of

research. By analysing and visualizing domestic firms' network structures, foreign entrants can increase the quality of their partner selection, and consequently increase the odds of successful IJV cooperation.

In fact, political connections do not show significant positive signs across all of our models (see Table III). In a post-hoc analysis we also include the interaction effect between a CEO's political ties and the degree of marketization. We do not find a significant effect across all seven models.[11] This raises an interesting question: 'Why don't political connections matter in China?' Research in accounting indicates that firms with political connections are less likely to disclose their financial information (Bhattacharya et al., 2003; Chen et al., 2011). This may cause information asymmetry between local firms and foreign investors. This is particularly true in China where the local (provincial) government may provide support for local firms (who are politically connected) in order to shield them from market monitoring mechanisms such as investor demands for transparency (Chen et al., 2011). Some foreign firms may be hesitant to choose a politically connected local firm in China due to the concern of information opacity that may confound the due diligence process during partner selection. These above arguments further reinforce and validate our key focus on network positions as selection criteria in the China context since alliance networks usually reveal better information concerning local firms.

Managerial Implications

In the past many MNEs have operated in a relatively homogeneous environment within many developed economies. This assumption certainly does not hold in large and complex emerging economies such as BRIC. In China, MNEs have accumulated great experience competing in coastal regions such as Shanghai, Guangzhou, and Dalian. But MNEs have yet to dive deep into underdeveloped inland regions within the country. Indeed, in China approximately 70 per cent of the consumers are located in regions with less-developed institutional regimes (Prahalad, 2004). Institution bases in these regions differ from those along the coast. Overall, coastal regions, due to a high degree of marketization, have been transformed to resemble more of the institutional structures of more developed economies, whereas inland regions may still fit the institutional stereotype of 'emerging economies' used in traditional cross-country research (see Table I).

The strategic implications are profound. In the next decade, new consumers and innovations will likely surge in these regions that have been the traditional blind spots for foreign entrants. These regions may no longer be perceived as trivial or less strategic (Tse, 2010). Foreign entrants need to tap into the best partners within these regions, 'which is based on deep understanding of and integration with the local environment' (London and Hart, 2004, p. 15). The significant heterogeneity of sub-national institutional contexts thus creates a competitive landscape where *there is no one-size-fits-all networking strategy for foreign entrants* (Atsmon et al., 2011).

Specifically, MNE executives need to formulate distinctive regional partner selection strategies within emerging economies. For two reasons, this will not be easy. First, the majority of the FDI in emerging economies during the past decade has focused on the largest cities within these economies. MNE executives have been formulating partner

selection strategy within these regions under the assumption that institutional environments are homogeneous in emerging economies. In order to move beyond these regions, executives must change their mindsets and reformulate regional strategies based on the new assumption that the institutional environments of these regions may vary (Meyer and Nguyen, 2005; Tse, 2010). Second, MNEs need to learn new 'tricks.' Executives must modify the routines and competencies regarding partner selection previously developed for use in emerging economies – or more accurately, in high marketization regions within emerging economies. In the next round of growth in second-tier and third-tier regions, strong training programmes regarding the institutional idiosyncrasies of different regions at the sub-national level rather than at the country level are a must.

Our study also carries important implications for policymakers who are concerned with regional market reform. Policymakers in the host government at the regional (provincial) level can also attempt to make local firms' network traits available to foreign entrants in order to attract more FDI.

Limitations and Future Research Directions

Our measurement of the marketization index opens up some questions that cannot be readily answered with the current data. For instance, this index is a coarse measurement that includes several aspects of institutional development including government intervention, development of factor markets, and development of market intermediaries and a legal environment. These aspects may moderate the networking strategy via different mechanisms. Future studies employing finer-grained data can allow us to detect and examine these nuances.

Meanwhile, our study complements prior research on managerial ties in emerging economies. An interesting extension, however, would be to investigate the interplay between political ties and network structures under different institutional environments. It is possible that in regions that are characterized by a low degree of marketization, political ties and network structures are *complements* (i.e. each enhances the value of the other), while they may become *substitutes* in highly marketized regions. Beyond China, exploring the sub-national institutional differences in other emerging economies, such as Brazil, India, and Russia, will be fascinating. Clearly more research is needed.

Furthermore, our study's primary focus is on antecedents of partner selection (Tallman and Shenkar, 1994). Within IJV research two other important areas of inquiry include the outcomes of IJV such as the performance consequence of an IJV (Makino and Delios, 1996), and specific management issues such as control and conflict (Yan and Gray, 1994). Future research can examine the interplay between sub-national institutional disparity and IJV performance or IJV management control or conflict.

CONCLUSION

The prior research on networking strategy in emerging economies may have overemphasized the relational view of networks while underexploring the structural properties of the local alliance networks domestic firms are embedded within. We argue that both network centrality and structural holes positions within a domestic alliance network can

be valuable for foreign entrants interested in searching for IJV partners within an emerging economy. However, this argument depends on the nature of institutions – specifically, the degree of marketization in our study. As international management researchers and practitioners increasingly pay attention to sub-national (intra-country) institutional differences, we expect the intriguing interplay among sub-national institutional contingencies, network positions, and IJV partner selection to become of greater interest in the future.

ACKNOWLEDGMENTS

NOTES

[1] Theoretically, Ofori-Dankwa and Julian (2001) suggested that theoretical perspectives differ by the level of complexity on two dimensions: (1) relative exclusivity (whether a particular theory emphasizes the use of only one core concept or several core concepts), and (2) relative endurance (the extent to which the core concepts of a particular theory are presented as relatively stable and unchanging or as unstable and changing).

[2] For example, in Shanghai, a high marketization region, the indigenous Shanghainese culture, featuring Shanghainese as a dialect, is now less important in Shanghai, because numerous non-Shanghainese-speaking people have come to work and settle in this region. Likewise, in Shenzhen, another high marketization region, almost everybody is a migrant who came recently. There is hardly a noticeable indigenous Shenzhen culture.

[3] Some foreign entrants, such as Microsoft, have two or more IJVs with multiple local partners in China; one IJV event may engage two or more partners.

[4] http://search.sipo.gov.cn/sipo/zljs/.

[5] http://money.cnn.com/magazines/fortune/global500/2008/.

[6] This approach generates similar results as reported in the tables. Results are available upon request.

[7] UCINET is a social network analysis software that allows for the computational aspects of analysis, including calculating various measures (e.g., centrality, brokerage) among others (Borgatti et al., 2002). UCINET has been used extensively in network research across different management domains, including organization theory (Burt, 2007) and strategy (Zaheer and Bell, 2005), to mention a few.

[8] As a robustness check, we also employ the eigenvector centrality measure. The eigenvector centrality captures not only the centrality of focal firms but also the centrality of its partners within the domestic alliance network. A local firm obtains a higher value of eigenvector centrality by being connected to a group of partners that are themselves well connected. The formula we employ follows Bonacich (1987) and Jensen (2003).

$$C(\alpha, \beta) = \alpha \sum_{k=0}^{\infty} \beta^k R^{k+1} 1$$

where α is a scaling factor that normalizes the measure, β is a weighting factor, R is a relational matrix which reflects the alliance relations among domestic firms, and 1 is a column vector of ones. Since both centrality measures generate similar results, we only report degree centrality in the paper.

[9] We also employed a count-based experience measure – the number of international alliances. No significant differences are found.

[10] We take the following form to calculate the odds ratio:

$$Odds = \frac{Odds\left[Y \geq a\right] when\ X_{centrality} = i+1}{Odds\left[Y \geq a\right] when\ X_{centrality} = i} = \exp(0.124) \sim 1.132$$

[11] Results are available upon request.

REFERENCES

Ahlstrom, D. and Bruton, G. D. (2006). 'Venture capital in emerging economies: networks and institutional change'. *Entrepreneurship Theory and Practice*, **March**, 299–320.

Aiken, L. S. and West, S. G. (1991). *Multiple Regression: Testing and Interpreting Interactions*. Newbury Park, CA: Sage.

Anand, J. and Delios, A. (2002). 'Absolute and relative resources as determinants of international acquisitions'. *Strategic Management Journal*, **23**, 119–34.

Ariño, A., Abramov, M., Skorobogatykh, I., Rykounina, I. and Joaquim, V. (1997). 'Partner selection and trust building in West European-Russian joint ventures'. *International Studies of Management & Organizations*, **27**, 19–37.

Atsmon, Y., Kertesz, A. and Vittal, I. (2011). 'Is your emerging-market strategy local enough?'. *McKinsey Quarterly*, **April**, 1–13.

Bhattacharya, U., Daouk, H. and Welker, M. (2003). 'The world price of earning opacity'. *Accounting Review*, **78**, 641–78.

Björkman, I., Fey, C. F. and Parks, H. J. (2007). 'Institutional theory and MNC subsidiary HRM practices: evidence from a three-country study'. *Journal of International Business Studies*, **38**, 430–46.

Boisot, M. and Child, J. (1996). 'From fiefs to clans and network capitalism: explaining China's emerging economic order'. *Administrative Science Quarterly*, **41**, 600–28.

Bonacich, P. (1987). 'Power and centrality: a family of measures'. *American Journal of Sociology*, **92**, 1170–82.

Borgatti, S. P., Evereff, M. G. and Freeman, L. C. (2002). *UCINET 6 for Windows*. Harvard, MA: Analytic.

Burt, R. S. (1992). *Structural Holes: The Social Structure of Competition*. Cambridge, MA: Harvard University Press.

Burt, R. S. (2007). 'Secondhand brokerage: evidence on the importance of local structure for managers, bankers, and analysts'. *Academy of Management Journal*, **50**, 119–48.

Chabowski, B. R., Hult, G. T. M., Kiyak, T. and Mena, J. A. (2010). 'The structure of *JIBS*'s social network and the relevance of intra-country variation: a typology for future research'. *Journal of International Business Studies*, **41**, 925–34.

Chan, M. C., Makino, S. and Isobe, T. (2010). 'Does sub-national region matter? Foreign affiliate performance in the U.S. and China'. *Strategic Management Journal*, **31**, 1226–42.

Chang, S. J. and Xu, D. (2008). 'Spillovers and competition among foreign and local firms in China'. *Strategic Management Journal*, **29**, 495–518.

Chen, C. J. P., Ding, Y. and Kim, C. (2011). 'High-level politically connected firms, corruption, and analyst forecast accuracy around the world'. *Journal of International Business Studies*, **41**, 1505–24.

Cohen, J. and Cohen, P. (1983). *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*. Hallstale, NJ: Lawrence Erlbaum.

Contractor, F. J. and Kundu, S. K. (1998). 'Modal choice in a world of alliances: analyzing organizational forms in the international hotel sector'. *Journal of International Business Studies*, **29**, 325–57.

Coughlin, C. C., Terza, J. V. and Arromdee, V. (1991). 'State characteristics and the location of foreign direct investment within the United States'. *Review of Economics and Statistics*, **73**, 675–83.

Cuervo-Cazurra, A. and Dau, L. A. (2009). 'Promarket reforms and firm profitability in developing countries'. *Academy of Management Journal*, **52**, 1348–68.

Davies, H. and Walters, P. (2004). 'Emergent patterns of strategy, environment and performance in a transition economy'. *Strategic Management Journal*, **25**, 347–64.

Delios, A. and Henisz, W. J. (2003). 'Political hazards, experience, and sequential entry strategies: the international expansion of Japanese firms, 1980–1998'. *Strategic Management Journal*, **24**, 1153–64.

Dhanaraj, C., Lyles, M. A., Steensma, H. K. and Tihanyi, L. (2004). 'Managing tacit and explicit knowledge transfer in IJVs: the role of relational embeddedness and the impact on performance'. *Journal of International Business Studies*, **35**, 428–42.

Estrin, S., Baghdasaryan, D. and Meyer, K. E. (2009). 'The impact of institutional and human resource distance on international entry strategies'. *Journal of Management Studies*, **46**, 1171–96.

Fan, G., Wang, X. L. and Zhu, H. P. (2007). *Marketization Index in China: The Regional Process Report of 2006*. Beijing: Economic Science Press (in Chinese).

Figueiredo, P. N. and Brito, K. (2011). 'The innovation performance of MNE subsidiaries and local embeddedness: evidence from an emerging economy'. *Journal of Evolutionary Economics*, **21**, 141–65.

Freeman, L. C. (1979). 'Centrality in social networks: conceptual clarification'. *Social Networks*, **1**, 215–39.

Gao, G. Y., Murray, J. Y., Kotabe, M. and Lu, J. (2010). 'A 'strategy tripod' perspective on export behaviors: evidence from domestic and foreign firms based in an emerging economy'. *Journal of International Business Studies*, **41**, 377–96.

Gaur, A. S. and Lu, J. W. (2007). 'Ownership strategies and survival of foreign subsidiaries: impacts of institutional distance and experience'. *Journal of Management*, **33**, 84–110.

Geringer, J. M. (1991). 'Strategic determinants of partner selection criteria in international joint ventures'. *Journal of International Business Studies*, **22**, 41–62.

Glaister, K. W. and Buckley, P. J. (1997). 'Task-related and partner-related selection criteria in UK international joint venture'. *British Journal of Management*, **8**, 199–222.

Gulati, R. (1999). 'Network location and learning: the influence of network resources and firm capabilities on alliance formation'. *Strategic Management Journal*, **20**, 397–420.

Haunschild, P. R. and Beckman, C. M. (1998). 'When do interlocks matter? Alternate sources of information and interlock influence'. *Administrative Science Quarterly*, **43**, 815–44.

Henisz, W. J., Zelner, B. A. and Guillén, M. F. (2005). 'The worldwide diffusion of market-oriented infrastructure reform, 1977–1999'. *American Sociological Review*, **70**, 871–97.

Hitt, M. A., Ahlstrom, D., Dacin, M. T., Levitas, E. and Svobodina, L. (2004). 'The institutional effects on strategic alliance partner selection in transition economies: China vs. Russia'. *Organization Science*, **15**, 173–85.

Hoskisson, R. E., Eden, L., Lau, C. M. and Wright, M. (2000). 'Strategy in emerging economies'. *Academy of Management Journal*, **43**, 249–67.

Huang, Y. and Sheng, Y. (2009). 'Political decentralization and inflation: sub-national evidence from China'. *British Journal of Political Science*, **39**, 389–412.

Jensen, M. (2003). 'The role of network resources in market entry: commercial banks' entry into investment banking, 1991–1997'. *Administrative Science Quarterly*, **48**, 466–97.

Kane, T., Holmes, K. R. and O'Grady, M. A. (2007). *2007. Index of Economic Freedom: The Link between Economic Opportunity and Prosperity*. Washington DC: Heritage Foundation.

Keister, L. A. (2009). 'Organizational research on market transition: a sociological approach'. *Asia Pacific Journal of Management*, **26**, 719–42.

Khanna, T. and Palepu, K. (2010). *Winning in Emerging Markets*. Cambridge, MA: Harvard Business School Press.

Kim, J. W. and Higgins, M. C. (2007). 'Where do alliances come from? The effects of upper echelons on alliance formation'. *Research Policy*, **36**, 499–514.

Koka, B. R. and Prescott, J. E. (2008). 'Designing alliance networks: the influence of network position, environmental change, and strategy on firm performance'. *Strategic Management Journal*, **29**, 639–61.

Kwon, J.-W. (2012). 'Does China have more than one culture?'. *Asia Pacific Journal of Management*, **29**, 79–102.

Lau, C. M. and Bruton, G. D. (2008). 'FDI in China: what we know and what we need to study next'. *Academy of Management Perspectives*, **22**, 30–44.

Laursen, K., Masciarelli, F. and Prencipe, A. (2012). 'Regions matter: how localized social capital affects innovation and external knowledge acquisition'. *Organization Science*, **23**, 177–93.

Lavie, D. (2007). 'Alliance portfolios and firm performance: a study of value creation and appropriation in the U.S. software industry'. *Strategic Management Journal*, **28**, 1187–212.

Li, H. and Atuahene-Gima, K. (2002). 'The adoption of agency business activity, product innovation, and performance in Chinese technology ventures'. *Strategic Management Journal*, **23**, 469–90.

Li, H. and Zhang, Y. (2007). 'The role of managers' political networking and functional experience in new venture performance: evidence from China's transition economy'. *Strategic Management Journal*, **28**, 791–804.

Li, J. J., Poppo, L. and Zhou, K. Z. (2008). 'Do managerial ties in China always produce value? Competition, uncertainty, and domestic vs. foreign firms'. *Strategic Management Journal*, **29**, 383–400.

Lin, Z., Peng, M. W., Yang, H. and Sun, S. L. (2009). 'How do networks and learning drive M&As? An institutional comparison of China and the United States'. *Strategic Management Journal*, **30**, 1113–32.

Liu, X., Lu, J., Filatotchev, I., Buck, T. and Wright, M. (2010). 'Returnee entrepreneurs, knowledge spillovers and innovation in high-tech firms in emerging economies'. *Journal of International Business Studies*, **41**, 1183–97.

London, T. and Hart, S. L. (2004). 'Reinventing strategies for emerging markets: beyond the transactional model'. *Journal of International Business Studies*, **35**, 350–70.

Lu, J. and Ma, X. (2008). 'The contingent value of local partners' business group affiliations'. *Academy of Management Journal*, **51**, 295–314.

Luo, Y. (1997). 'Partner selection and venturing success: the case of joint ventures with firms in the People's Republic of China'. *Organization Science*, **8**, 648–62.

Mahmood, I. P., Zhu, H. and Zajac, E. J. (2011). 'Where can capabilities come from? Network ties and capability acquisition in business groups'. *Strategic Management Journal*, **32**, 820–48.

Makino, S. and Delios, A. (1996). 'Local knowledge transfer and performance implications for alliance formation in Asia'. *Journal of International Business Studies*, **27**, 905–27.

Mariotti, S. and Piscitello, L. (1995). 'Information costs and location of FDIs within the host country: empirical evidence from Italy'. *Journal of International Business Studies*, **26**, 815–41.

Meyer, K. E. and Nguyen, H. V. (2005). 'Foreign investment strategies and sub-national institutions in emerging markets: evidence from Vietnam'. *Journal of Management Studies*, **42**, 63–93.

Meyer, K. E. and Peng, M. W. (2005). 'Probing theoretically into Central and Eastern Europe: transactions, resources, and institutions'. *Journal of International Business Studies*, **36**, 600–21.

Meyer, K. E., Estrin, S., Bhaumik, S. K. and Peng, M. W. (2009a). 'Institutions, resources, and entry strategies in emerging economies'. *Strategic Management Journal*, **30**, 61–80.

Meyer, K. E., Wright, M. and Pruthi, S. (2009b). 'Managing knowledge in foreign entry strategies: a resource-based analysis'. *Strategic Management Journal*, **30**, 557–74.

Meyer, K. E., Mudambi, R. and Narula, R. (2011). 'Multinational enterprises and local contexts'. *Journal of Management Studies*, **48**, 235–52.

Miller, S. R., Thomas, D. E., Eden, L. and Hitt, M. (2008). 'Knee deep in the big muddy: the survival of emerging market firms in developed markets'. *Management International Review*, **48**, 645–65.

Morley, S. A., Machado, R. and Pettinato, S. (1999). *Indexes of Structural Reform in Latin America. Serie Reformas Economicas 12*. Santiago: ECLAC.

Nachum, L. (2000). 'Economic geography and the location of TNCs: financial and professional service FDI to the USA'. *Journal of International Business Studies*, **31**, 367–85.

Nielsen, B. B. (2003). 'An empirical investigation of the drivers of international strategic alliance formation'. *European Management Journal*, **21**, 301–22.

North, D. (1990). *Institutions, Institutional Change, and Economic Performance*. New York: Norton.

Ofori-Dankwa, J. and Julian, S. D. (2001). 'Complexifying organizational theory: illustrations using time research'. *Academy of Management Journal*, **26**, 415–30.

Peng, M. W. (2003). 'Institutional transitions and strategic choices'. *Academy of Management Review*, **28**, 275–96.

Peng, M. W. and Luo, Y. (2000). 'Managerial ties and firm performance in a transition economy: the nature of a micro-macro link'. *Academy of Management Journal*, **43**, 486–501.

Peng, M. W., Sun, S. L., Pinkham, B. and Chen, H. (2009). 'The institution-based view as a third leg for a strategy tripod'. *Academy of Management Perspectives*, **23**, 63–81.

Prahalad, C. K. (2004). *The Fortune at the Bottom of the Pyramid: Eradicating Poverty through Profits*. Philadelphia, PA: Wharton School Publishing.

Quelch, J. A. and Jocz, K. E. (2012). *All Business Is Local: Why Place Matters More than Ever in a Global, Virtual World*. New York: Portfolio.

Rowley, T., Behrens, D. and Krackhardt, D. (2000). 'Redundant governance structures: an analysis of structural and relational embeddedness in the steel and semiconductor industries'. *Strategic Management Journal*, **21**, 369–86.

Roy, J.-P. (2012). 'IJV partner trustworthy behavior: the role of host country governance and partner selection criteria'. *Journal of Management Studies*, **49**, 332–55.

Roy, J.-P. and Oliver, C. (2009). 'International joint venture partner selection: the role of the host-country legal environment'. *Journal of International Business Studies*, **40**, 779–801.

Schotter, A. and Beamish, P. W. (2011). 'General manager staffing and performance in transitional economy subsidiaries: a subnational analysis'. *International Studies of Management & Organizations*, **41**, 55–87.

Shaver, J. M. and Flyer, F. (2000). 'Agglomeration economies, firm heterogeneity, and foreign direct investment in the United States'. *Strategic Management Journal*, **21**, 1175–93.

Shenkar, O. and von Glinow, M. A. (1994). 'Paradoxes of organizational theory and research: using the case of China to illustrate national contingency'. *Management Science*, **40**, 56–71.

Shi, W., Markoczy, L. and Dess, G. G. (2009). 'The role of middle management in the strategy process: group affiliation, structural holes, and Tertius Iungens'. *Journal of Management*, **35**, 1453–80.

Siegel, J. (2007). 'Contingent political capital and international alliances: evidence from South Korea'. *Administrative Science Quarterly*, **52**, 621–66.

Sun, S. L. and Lee, R. P. (2011). *Boost Innovation from International Alliance Network Embeddedness: Evidences from Chinese Firms*. Atlanta: Consortium for International Marketing Research.

Sun, S. L., Peng, M. W., Ren, B. and Yan, D. (2012). 'A comparative ownership advantage framework for cross-border M&As: the rise of Chinese and Indian MNEs'. *Journal of World Business*, **47**, 4–16.

Tallman, S. B. and Shenkar, O. (1994). 'A managerial decision model of international cooperative venture formation'. *Journal of International Business Studies*, **25**, 91–113.

Tan, D. and Meyer, K. E. (2011). 'Country-of-origin an industry FDI agglomeration of foreign investors in an emerging economy'. *Journal of International Business Studies*, **42**, 504–20.

Tatoglu, E. and Glaister, K. W. (2000). 'Strategic motives and partner selection criteria in international joint ventures in Turkey: perspectives of Western firms and Turkish firms'. *Journal of Global Marketing*, **13**, 53–92.

Tong, T. W., Reuer, J. J. and Peng, M. W. (2008). 'International joint ventures and the value of growth options'. *Academy of Management Journal*, **51**, 1014–29.

Tse, E. (2010). *The China Strategy*. New York: Basic Books.

Wasserman, S. and Faust, K. (1994). *Social Network Analysis*. New York: Cambridge University Press.

Wright, M., Filatotchev, I., Hoskisson, R. E. and Peng, M. W. (2005). 'Strategy research in emerging economies: challenging the conventional wisdom'. *Journal of Management Studies*, **42**, 1–33.

Xia, J., Tan, J. and Tan, D. (2008). 'Mimetic entry and bandwagon effect: the rise and decline of international equity joint venture in China'. *Strategic Management Journal*, **29**, 195–217.

Xiao, Z. X. and Tsui, A. S. (2007). 'When brokers may not work: the cultural contingency of social capital in Chinese high-tech firms'. *Administrative Science Quarterly*, **52**, 1–31.

Xu, D. and Meyer, K. E. (2012). 'Strategy research in emerging economies after Wright et al. (2005)'. *Journal of Management* Studies, doi: 10.1111/j.1467-6486.2012.01051.x.

Yan, A. and Gray, B. (1994). 'Bargaining power, management control, and performance in United Stated-China joint ventures: a comparative case study'. *Academy of Management Journal*, **37**, 1478–517.

Yang, H., Sun, S. L., Lin, Z. and Peng, M. W. (2011). 'Behind M&As in China and the United States: networks, learning, and institutions'. *Asia Pacific Journal of Management*, **28**, 239–55.

Zaheer, A. and Bell, G. G. (2005). 'Benefiting from network position: firm capabilities, structural holes, and performance'. *Strategic Management Journal*, **26**, 809–25.

Zhang, Y., Li, H., Li, Y. and Zhou, L. (2010). 'FDI spillovers in an emerging market: the role of foreign firms' country origin diversity and domestic firms' absorptive capacity'. *Strategic Management Journal*, **31**, 969–89.

Zhao, Z., Anand, J. and Mitchell, W. (2005). 'A dual networks perspective on inter-organizational transfer of R&D capabilities: international joint ventures in the Chinese automotive industry'. *Journal of Management Studies*, **42**, 127–60.

Zhou, K. Z. and Poppo, L. (2010). 'Exchange hazards, relational reliability, and contracts in China: the contingent role of legal enforceability'. *Journal of International Business Studies*, **41**, 861–81.

Zhou, Z., Poppo, L. and Yang, Z. (2008). 'Relational ties or customized contracts? An examination of alternative governance choices in China'. *Journal of International Business Studies*, **39**, 526–34.