Sub-National Differences and Entry Mode Performance: Multinationals in East and West China

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Abstract

We compare the influence of entry mode choice on subsidiary performance in two developmentally-differentiated regions of a developing host country. Analysis of 113 subsidiaries located in two provinces of China indicates that wholly owned subsidiaries (WOSs) outperform joint ventures (JVs) in the developed region, whereas JVs outperform WOSs in the less-developed region. However, the smaller performance gap between WOSs and JVs in the developed region indicates that the magnitude of influence of entry mode choices on performance varies across sub-national regions. Firms must therefore be more discriminating in formulating entry strategies to regionally heterogeneous countries.

Key Words: Chinese context, entry mode selection, financial performance, sub-national heterogeneity
INTRODUCTION

The impact of multinationals’ entry mode choices on their performance across different sub-national regions of a host country is not well understood. Prior studies seldom consider the relationship between sub-national heterogeneity and mode choice. Using data on foreign investments in China, a rapidly developing host country exhibiting wide disparity in regional development, we set out to examine sub-national variation in the way mode choice influences subsidiary performance.

Given its importance to scholars, managers, and policy-makers, a mature literature on foreign market-entry strategy has amassed, with contributions from management, international business, and marketing (e.g., Anderson & Gatignon, 1986; Erramilli & Rao, 1993; Harzing, 2002). Indeed, Shaver (2013) questions the need for more entry mode studies, as potential contributions are becoming increasingly marginal, but Hennart and Slangen (2015) identify several directions future entry mode studies might take, such as investigating the mode decision-making process.

Most entry mode studies define the nation-state as the geopolitical unit subject to entry and exit (e.g. Shi, Ho, & Siu, 2001). However, nation-states are not internally homogeneous entities with regard to location-specific factors influencing firm structure and performance (Cheng & Kwan, 2000). Sub-national regions within a nation-state may possess very different political, economic and cultural attributes, leading to variation in the performance of a given entry mode by sub-national location (Beugelsdijk & Mudambi, 2013). In consequence, multinationals’ entry mode preferences depend on their targeted sub-national location (Meyer & Nguyen, 2005; Shapiro, Tang, & Ma, 2007; Goodman, 2013; Li & Xie, 2011; Pan & Chi, 1999; Wu, Muller-Kahle, Arora, & Leseane, 2013). Collectively, these studies suggest that the wholly-owned
subsidiary (WOS) mode is preferred by multinationals in relatively developed sub-national regions while the joint venture (JV) is selected in less developed sub-national regions.

However, a direct test of how mode choice impacts subsidiary performance at the sub-national level has not been attempted. Acknowledging sub-national heterogeneity with regard to the mode-performance relationship is theoretically important. First, it reveals how the performance of a given mode depends on location factors at the sub-national level. To illustrate, in less developed sub-national regions, JV mode is likely to be more profitable than WOS mode since with local partners’ help, foreign subsidiaries can overcome the uncertainty they encounter and develop better sense of what is happening (Luo & Tung, 2007), being well-positioned to develop competitive advantages and reap high performance. Furthermore, it serves as a context to reconcile inconsistent findings in prior single-country studies (e.g., Chen, 2012; Goodman, 2013). Beyond the theoretical realm, practitioners need confirmation that the mode choices suggested by prior studies (e.g., Meyer & Nguyen, 2005; Goodman, 2013) can actually help their firms perform better. In the current study, we focus on the WOS and JV modes in conformity with the many studies showing that the choice between them is critical to subsidiary performance (e.g., Brouthers, 2013; Hennart & Slangen, 2015). The WOS mode allows maximum control over operations in a host country and with local partners (Gomes-Casseres, 1990). The JV mode offers local knowledge, resources and enterprise networks which reduces risk exposure in the host country (Slangen & Van Tulder, 2009). We argue in developed sub-national regions, relatively free of uncertainty and complexity, the WOS mode is more profitable than the JV mode. Conversely, the JV mode outperforms a WOS in less developed sub-national regions, as it more efficiently and effectively taps into local resources. In addition, we hypothesize that the disparity between WOS and JV performance is smaller in developed regions than less developed regions.
because foreign subsidiaries using a JV mode may be drawing more on their partners’ product-specific technologies than their location-specific assets.

The hypotheses are tested using data from multinational investments in China, a country appealing as a destination for foreign direct investment (FDI) and one that exhibits a high degree of sub-national heterogeneity (Sun & Chai, 1998; Wu et al., 2013). We compare investments in two provinces, Shandong and Gansu located in China’s eastern and western regions respectively.

The remainder of the article is organized as follows. The next section reviews mode-performance studies and the literature on sub-national heterogeneity thereafter. We then formulate hypotheses, which are followed by a description of data and method. Results are then reported, then discussed, and the conclusion covers the study’s theoretical contribution, limitations, and practical implications.

ENTRY MODE-PERFORMANCE LINKAGE AND SUB-NATIONAL HETEROGENEITY

Entry Mode Selection and Subsidiary Performance
The performance implications of entry mode choices have been extensively studied (see Brouthers, 2013; Brouthers, 2002; Brouthers, Brouthers, & Werner, 2013; Brouthers & Hennart, 2007; Canabal & White 2008 for an excellent review; Martin, 2013; Tihanyi, Griffith, & Russell, 2005). These studies demonstrate the power of transaction cost and institutional theory to account for entry-mode choice, and establish a clear link between mode choice and subsidiary performance. Under different circumstances, some modes prove more profitable for multinationals than others. For example, Martin (2013) found that foreign subsidiaries adopting WOS mode perform better than those adopting JV mode. However, these studies focus on the performance effects of mode choices using
the nation at the unit of entry and they have produced mixed results (e.g., Schaaper, Mizoguchi, Nakamura, & Yamashita, 2011; Woodcock, Beamish & Makino, 1994; Gomes-Casseres, Jenkins, & Zámborský, 2018).

For instance, in China, Chang, Chung and Moon (2013) and Wu et al. (2013) found that improvement on Return on Assets (ROA) in WOSs greatly exceeded that of JVs. Yet, Chen (2012) found JVs more profitable than WOSs, speculating that this might be explained by a need for local complementary assets or less experienced entrants.

Foreign multinationals are seen to prefer a JV over a WOS where restrictions favour the state-held industries such as automobiles and telecommunications (Teng, 2004). Although insightful, these studies do not specify the sub-national locations in which foreign subsidiaries operate. Hence, it is possible that there were significant differences in the geographic distribution of WOSs and JVs within the studied host nation.

Accordingly, we argue that sub-national heterogeneity can act as a context in which mixed findings of mode choice on subsidiary performance can be reconciled.

We will draw on relevant literature on sub-national difference to develop our arguments for two reasons. First, the large body of literature can provide us with compelling evidence of why sub-national heterogeneity matters and so we can explain how it affects mode-performance relationship. Second, although prior entry mode studies (Brouthers, 2013; Martin, 2013) employ multiple theories (e.g., TCE, RBV, institutional theory) to test whether subsidiaries to evaluate the performance implications of mode choice, we did not use this approach. To do so requires primary data collection from managers of multinational firms, who are increasingly hesitant to participate for various reasons. Getting access to and (reliable) responses from corporate elites is notoriously difficult and costly (He and Huang, 2011). An alternative
is to use secondary data sources (He & Huang, 2011). Therefore, we base our study on a reliable secondary data source. This confines us to testing with variables included in the database.

**Sub-National Heterogeneity**

For the sake of convenience, a “sub-national region” can be understood as a unit of public administration, such as a province, state, district, or county, or as an aggregation of several such contiguous units. However, a distinctive sub-national region needs not coincide exactly with the boundaries of these politically-defined spaces. Thus, sub-national heterogeneity manifests in clear variation in political, economic and social attributes between different provinces/states or geographic areas (e.g., eastern and western regions in China). Promisingly, the past two decades has witnessed a spike in International Business (IB) studies recognising sub-national heterogeneity. These identify significant sub-national differences such as government policy (Nguyen, Le, & Bryant, 2013), intellectual property rights (IPRs) protection, market development (Yi, Chen, Wang, & Kafouros, 2015), and culture (Tung, 2008), to name a few. They influence important decisions, such as export strategy (Nguyen et al., 2013), executive pay (He and Fang 2016), and foreign market insidership (Monaghan, Gunnigle, & Lavelle, 2014). However, how sub-national heterogeneity plays a role in effectuating the impact of mode choices on subsidiary performance remains unknown. Note that Ma, Tong and Fitza(2013) proposed that sub-national heterogeneity varies across different nation-states, with some countries being relatively homogenous while others not. In the context of our study (i.e., China), sub-national heterogeneity has been considered to be fairly high (Chan, Makino & Isobe, 2010; Ma et al., 2013).
**Heterogeneity in Sub-national Political/Legal Dimension** Political or legal dimensions include transparency, favourability (Chan et al. 2010; Nguyen et al., 2013) and stability of government policy, openness of legal environment (Sun, Peng, Li & Tan., 2015) and intellectual property rights protection (Yi et al., 2015). With respect to transparency and favourability of government policies in China, developed provinces are more committed to improving policy transparency and favourability towards foreign entrants (Ma et al., 2013), decreasing their perceived uncertainty and facilitating the knowledge flow to support their location operations (Meyer & Nguyen, 2005; Nguyen et al., 2013). In contrast, due to their limited knowledge of how to deal with foreign entrants, governments in less developed provinces lack such experience to commit to foreign entrants, hindering knowledge flows (Meyer & Nguyen, 2005).

Stability of government policies refers to the pace at which policies change, contributing to the uncertainty that foreign subsidiaries perceive (Peng, 2003). In China, developed sub-national regions more often exhibit stable government policies towards foreign investment, allowing foreign subsidiaries to better predict government actions and adjust strategic plans accordingly (Delios & Henisz, 2003). On the contrary, the higher policy instability in less developed regions complicates foreign subsidiaries’ strategic decision making and presumably decreases their organizational effectiveness (Delios & Henisz, 2003). IPR protection may also vary sub-nationally. Yi et al. (2015) finds stronger IPR protection in developed regions in China, encouraging foreign subsidiaries to bring in superior technology. Less afraid of illegal knowledge appropriation by local competitors, MNEs can better commercialize their products or services (Li & Xie, 2011). By contrast, low IPR protection in less developed sub-national regions results in a higher probability of illegal appropriation of investor technology, which raises the cost of IPR protection (Yi et al., 2015). Taken together, political/legal attributes, consisting of the properties of government policy and IPR protection, have impact on
subsidiaries’ local operations by increasing or decreasing their perceived uncertainty, knowledge and information gained, and additional costs.

**Heterogeneity in Sub-national Economic Dimension**

Sub-national regions in China also differ in economic attributes, which include types of factors of production (Ma et al., 2013), market size and openness (Sun et al., 2015; Yi et al., 2015) and available agglomeration economies (Porter, 1998). The factors of production include types of intermediaries and common economic infrastructure (Ma et al., 2013; Yi et al., 2015). Intermediaries refer to universities, regional trade associations and research institutes (McEvily & Zaheer, 1999), whereas common infrastructure includes suppliers and labour force (McEvily & Zaheer, 1999). Sub-national regions with developed production factors act to compile and disseminate information to foreign entrants, concerning acquisition of new knowledge and updates of existing knowledge (Chan et al., 2010; Han, Jo, & Kang, 2016; McEvily & Zaheer, 1999), as well as choices of existing transaction partners (Nachum, 2000). This repository of knowledge allows foreign subsidiaries to reduce their local search costs (He, 2002) and develop their competitive capabilities (McEvily & Zaheer, 1999). In contrast, regions with less developed economic institutions fall short of providing abundant and valuable information to foreign entrants (McEvily & Zaheer, 1999), increasing their search costs and hindering their development of competitive capabilities (He 2002). However, such regions are often fuelled with natural resources which can facilitate certain types of productions, such as wind and tide (Li & Xie, 2011; Sun & Chai, 1998).

Second, market size and openness also vary across regions in China. Market size refers to the number of buyers and consumers in the local market (Buckley & Casson, 1998) while openness points out the extent to which foreign subsidiaries have freedom to access capital resources and mitigate the information asymmetry between subsidiaries and markets (Allen,
1993). Regions with large market size allow foreign subsidiaries to cultivate more potential consumer groups and presumably earn more benefits (Buckley & Casson, 1998) and such regions with high openness can help foreign subsidiaries access more information of their value from peers and other investors (Sun et al., 2015). Sub-national regions with small market size and low openness create more barriers for subsidiaries to access necessary information (La Porta et al., 2000).

Finally, agglomeration economies stem from the geographical clustering of a group of firms (Porter, 1998). In the cluster, firms can enjoy knowledge spillovers from others and a pool of specialized labour and input providers (Krugman, 1991). Recent studies have found that agglomeration can help foreign subsidiaries tap into local resources and access knowledge, gain legitimacy, and perform better (Ma et al., 2013; Zhou, Kautonen, Wang, & Wang, 2017). In addition, levels of agglomeration also vary (Fan & Scott, 2003; Zámborský, 2012). In China, developed sub-national regions tend to have high level of agglomeration while less developed regions do not (Fan & Scott, 2003). Therefore, foreign subsidiaries in developed regions can access more local resources and perform better while foreign subsidiaries in less developed regions encounter more barriers to the acquisition of knowledge.

Taken together, in developed Chinese sub-national regions where economic attributes are well established, foreign subsidiaries can access more knowledge, information, resources and consumer groups, thereby reducing transaction costs, increasing their production efficiency and effectiveness, gaining local legitimacy, and enhancing their productivity (Zhou et al., 2017). In less developed Chinese regions where economic attributes are relatively underdeveloped, foreign subsidiaries have limited access to the benefits as they could have acquired in developed regions (Zhou et al., 2017). However, they can obtain certain scarce resources from the less developed regions.
Heterogeneity in Sub-national Social and Cultural Dimension

Prior studies on social and cultural heterogeneity in different sub-national regions, which are relevant to foreign entrants, emphasize local social and/or cultural values which determine acceptable behaviours (Chan et al., 2010; Meyer & Nguyen, 2005; Tung, 2008). Values include rituals, religions, gender roles, parental authority, family importance (Inglehart & Baker, 2000), openness to change, and personal mindsets such as self-enhancement and conservatism (Venaik & Midgley, 2015). These values influence interpersonal trust (Fang, Worm, & Tung, 2008) and people’s attitudes towards work (Tung, 2008); all of which impact on local people’s engagement in business activities (Chan et al., 2010), subsidiary’s capability building and in turn their performance (Chan et al., 2010). For example, in FDI intensive regions in China (He, 2002), foreign subsidiaries encounter less cultural barriers to their operations because people there are more receptive to such “newness” (Park, Li & Tse, 2006). Yet, in some inland provinces, foreign subsidiaries are more likely to suffer obstacles due to peoples’ closed attitude towards them (Park et al., 2006). Taken together, foreign subsidiaries encounter more cultural barriers, which can be manifested in people’s attitudes towards their business, in less developed regions than do they in developed regions in China. The differences in such social cultural values across regions have impact on their business performance (Park et al., 2006).

To summarize, sub-national heterogeneity in China includes political, economic and cultural differences that may impact on subsidiary operations, productivity and performance. In developed sub-national regions, foreign subsidiaries perceive less uncertainty from government, gain more knowledge, resources and information, as well as encounter less cultural barriers. Given the heterogeneity between different sub-national regions, we argue that foreign subsidiaries’ managers can better utilize the advantages of WOS mode in developed regions and the advantages of JV mode in less developed regions.
MODE-PERFORMANCE RELATIONSHIP IN SUB-NATIONAL REGIONS

We argue that at least in China, the advantages of WOS mode may be better actualized in developed sub-national regions, which possess relatively transparent and clear political environment, better infrastructure, big market size, a larger customer base and an open culture (Shapiro et al., 2007). All of these attributes may decrease the uncertainty and complexity encountered by foreign subsidiaries (Chen, 2006). As such, foreign subsidiaries can feel more secure and certain, have access to more resources, and enjoy being in a relatively open and predictable environment (Chan et al., 2010; Ma et al., 2013). For instance, foreign subsidiaries with WOS mode are likely to cultivate a big consumer base given the large market size in these regions without dividing their outcomes with local partners. Also, the political, economic, and cultural environments of developed regions are more transparent and predictable (Shapiro et al., 2007; Sun & Chai, 1998). This may largely reduce foreign subsidiaries’ reliance on local partners, as that predictability and transparency give them more local knowledge and security.

In contrast, the advantages of JVs are less obvious since foreign subsidiaries can tap into local resources easily and spend much less effort in figuring out the high policy uncertainty in the local context (Fan & Scott, 2003; Yi et al., 2015). Also, the whole cultural environment toward foreign subsidiaries is open (Lenartowicz & Roth, 2001). Finally, foreign subsidiaries being in a partnership with local firms need to divide their profits. Thus,

Hypothesis 1: Foreign WOSs outperform JVs in developed sub-national regions.

We argue that at least in China, the advantages of JVs (such as access to local knowledge, resources and enterprise networks) may be better developed for foreign subsidiaries in less-developed sub-national regions. As discussed, less-developed sub-national regions increase subsidiaries’ high perceived uncertainty (Chan et al., 2010), limit their access to local
knowledge and resources, have small market size and potential (Fan & Scott, 2003), and a relatively inward-looking culture (Lenartowicz & Roth, 2001; Park et al., 2006). Foreign subsidiaries working in these regions therefore encounter low productivity and thus generate more operational costs than do foreign subsidiaries in developed sub-national regions in China (Chan et al., 2010; Cheng & Kwan, 2000). Yet, subsidiaries partnering with local firms can tap into local resources, gain legitimacy and overcome the uncertainty (Zhou et al., 2017). Also, local partners can assist foreign subsidiaries in acquiring local resources and familiarize them with the local conditions, such as suppliers’ distribution channels, functioning of government policies and consumers’ preferences. Thus foreign subsidiaries with JV mode can perform well.

Conversely, foreign subsidiaries that have adopted WOS mode may not be able to decrease the perceived uncertainty from government, access to local resources and overcome cultural barriers (Beamish & Banks, 1987). For instance, foreign subsidiaries need to work alone and deal with the high complexities and uncertainties from government, without being efficiently and effectively aware of how to cope well with such risks in China (Chen, 2006). Moreover, it may be more difficult for WOS mode to establish legitimacy and recognition in less-developed sub-national regions (especially from local government) than in developed regions, due to relatively restrictive policy and local protectionism imposed on foreign firms (Mohamad & Hoshino, 2013). Such legitimacy and recognition are crucial in less-developed sub-national regions in terms of obtaining superior performance than in developed ones (Mohamad & Hoshino, 2013). In addition, with strict policy and no help from local partners, foreign subsidiaries can get limited resources from local context and they may still be perceived by local consumers as out-group members (Ben-Ner et al., 2009). Finally, the level of market size and openness is low and the advantages of WOS mode cannot be effectively actualized, if not maximized (Beamish & Banks, 1987). As a result, subsidiaries with WOS
mode may not be as productive, cost-saving, efficient, effective, and profitable as foreign subsidiaries with JV mode. Taken together, we hypothesize:

Hypothesis 2: Foreign JV subsidiaries outperform WOSs in less developed sub-national regions.

We also expect that at least in China, the significance of mode choices to subsidiary performance varies across sub-national regions. That is, we expect the performance difference in mode choices is smaller in developed sub-national regions than in less developed regions. As noted, developed sub-national regions excel with regard to stability, transparency and favourability of government FDI policies, market size, infrastructure and level of resources possessed, and cultural openness (Chan et al., 2010; Ma et al., 2013). Based on such well-established business features, foreign subsidiaries with WOS mode can to a large extent actualize, if not maximize their benefits. This is because they can focus on the task of their capability building (Saxenian, 1994) without over-concerning the stability and uncertainty in the environment, utilizing the advantages of WOS mode.

In contrast, even though foreign subsidiaries with JV mode cannot fully actualize the advantages of this mode in this context (Yi et al., 2015), they can still reach a certain level of performance provided that the environment provides well-designed operational conditions. In addition, as evidenced in Luo and Tung (2007), in more stable and predictable environment, opportunistic behaviours are less likely happen. Foreign subsidiaries therefore face less local partners’ opportunistic behaviour, incur fewer operational costs, and are more likely to increase their productivity in such context. Therefore, the performance difference of mode choices is not very big in developed sub-national regions.

In less developed sub-national regions, however, we expect that entry mode matters more to subsidiary performance. As discussed, subsidiaries in this context will have to overcome
high uncertainty and gain legitimacy before they move a step further to achieve high performance (Chan et al., 2010; Cheng & Kwan, 2000). This makes the overcoming of uncertainty and gaining of legitimacy especially important for foreign subsidiaries. JV mode can provide such benefits, helping foreign subsidiaries gain both with local partners’ help (Slangen & Van Tulder, 2009), and as a result of that, achieve superior performance. On the contrary, foreign subsidiaries with WOS mode work alone and deal with the high complexities and uncertainties, without being efficiently and effectively aware of how to cope well with such risks (Chen, 2006). This increases the liability of foreignness that they suffer and incur their additional operational costs (Zaheer, 1995). As such, their performance is more likely to be much lower than performance of subsidiaries with JV mode.

In summary, the impact of entry mode on subsidiary performance in developed sub-national regions is lower because foreign subsidiaries face less uncertainty and instability and have more opportunities to capture local value. In less developed regions, mode choice should play a much larger role in performance because local partners’ assistance in dealing with high uncertainty is of great importance. Therefore we predict that:

Hypothesis 3: The impact of entry mode selection on subsidiary performance is smaller in developed sub-national regions than in less developed regions.

**METHODOLOGY**

**Research setting**

China is used as the setting to test the hypotheses as its disparity between the eastern and western provinces is significant and this context is therefore an appropriate setting for testing the hypotheses (Galvin, 2014). These divisions have been adopted by some researchers (e.g. Goodman, 2013; Shapiro et al., 2007) with regard to entry mode studies. Foreign subsidiaries
may encounter less perceived uncertainty in the eastern region because the eastern region possesses more open FDI policies, highly developed economies and a more open culture than the western region, and thus may save foreign entrants additional costs (Park et al. 2006). In contrast, foreign subsidiaries in western region may encounter high uncertainty and charge more additional costs (Park et al., 2006).

Shandong Province and Gansu Province, from the eastern and western region of China respectively, were used as the setting to test the hypotheses. Shandong Province shows all the characteristics of provinces in eastern region while Gansu Province has all the western regions characteristics. For political stability and FDI policies, since it is hard to obtain provincial statistical data within China, prior studies create ordinal variables to indicate whether provincial government has high level of corruption level (Ma and Delios 2010) or has implemented FDI-friendly policy (Ma & Delios, 2010; Ma et al., 2013). For instance, Ma and Delios (2010) use locations to serve as a proxy for the friendliness of FDI policy. They coded friendless as 1 if multinationals invest in a special economic zone, 2 if in coastal cities, 3 if in a coastal open economic zone, 4 if in a provincial capital city and 5 otherwise. In this sense, Shandong Province can be categorized as 3 while Gansu province as 5 (Ma & Delios, 2010). In addition, the total value of import and export in Shandong Province in 2015 is 240,607 million US dollars while the total value in Gansu is 7952 million US dollars (National Bureau of Statistics of China, 2016). We therefore believe government in Shandong Province has implemented more friendly FDI policies and have higher political stability than government in Gansu Province.

Further, both provinces also differ in their economic development, market size and cultural openness. Prior academic studies found that in China, developed sub-national regions (eastern region in China) are also economically developed, have higher market size and open culture
than less developed sub-national regions (western region in China) (Ma et al., 2013; Yi et al., 2015). Statistically evidence shows that in 2015, the total value of GDP produced by Shandong Province 63002.33 (100 million RMB) while Gansu Province has contributed 6790.32 (100 million RMB) (National Bureau of Statistics of China, 2016). At the same year, Shandong Province has a population of about 9.8 million but Gansu Province has about 2.6 million people (National Bureau of Statistics of China, 2016). In addition, Chan et al. (2010) argued that regional cultures affect interpersonal trust, work values, attitudes toward work and social capital. Overall, this evidence has led us to conclude that Shandong Province has most or all the characteristics of developed sub-national regions while Gansu Province is a reasonably good representation of less developed regions in China.

**Data**

This study presents findings from the secondary analysis of data provided by two provincial government departments, Shandong Provincial Industry and Commerce Administration (SPICA) and Gansu Provincial Industry and Commerce Administration (GPICA). Foreign enterprises must submit their annual financial reports to the two departments, which at the end of each year will submit the annual reports to the Chinese National Industry and Commerce Administration (CNICA), a central government office. That is, the data publicised by CNICA consists of the statistics reported by provincial administrative departments. Thus we have reasons to believe that the data from the two sub-national departments is legitimate. However, as the data publicized by the central government is a total statistics of foreign firms (e.g., how many foreign JVs have been established in China this year) and the relevant details of each firm is not available, we were not able to obtain these details from the CNICA. Despite that, although the data publicized by CNICA does not permit readers to collect firm-level
information because of protection of business confidentiality, readers can obtain a broad overview of foreign investment situation in China and its provinces.

We explained our research intentions to our government sources and requested that they collect as many observations as possible and provide relevant information relevant to the sampled firms as comprehensive as they could, because we do not know what the database contains. Sources were asked to use random sampling strategy with number generators to prevent selection bias. We stressed that sampling should comply with government policy and regulations, but these are not transparent and might result in unidentified non-disclosures. This analysis used the full extent of the data our sources could disclose. Sampling bias is not obviously a distortion in the data, but we are unable to devise corrective strategies without reference to the original databases from which data was drawn.

For confidentiality reasons, firm-level characteristics only could be accessed and firm names are not specified). According to Cooper, Schindler and Sun (2006), and Meeker and Escobar (2014), access to business confidential information requires scholars to be ethical in terms of not disclosing such information to others. In addition, it might be necessary to camouflage the firms’ real names which are under investigation to protect their private information, such as profits (Cooper et al., 2006). Note that we specified that Independent and control variables data should lag that relating to firm performance by a year so that estimation of causality to some extent can be expected.

We not follow the example of prior entry mode studies that depend on primary data collection from managers of multinational firms, (cf Brouthers, 2013; Martin, 2013). Managers are increasingly hesitant to participate in such studies. Getting access to, and reliable responses from, corporate elites is notoriously difficult and costly, and validity and reliability depends on obtaining responses from all the members of upper echelon groups (He & Huang, 2011). We
adopt a more pragmatic approach, and base our study on a reliable secondary data. However, this confines us to testing with variables included in the database.

**Measures**

**Dependent Variable**

This study examined the performance effect of the entry mode choices in different sub-national regions. In keeping with the tradition in international business research where a quarter of studies use profits/profitability (Hult et al. 2008), we adopted net profits (unit. Renminbi: RMB) as the measure of firm performance for both provinces. One concern of this measure is that many internationalized firms concentrate on long-term goals (increasing market share) rather than short-term objectives such as obtaining high sales and profits (e.g., Anderson & Gatignon, 1986). However, research literature on foreign firms in China suggests that survive in the long-run is difficult for foreign firms, because of the great uncertainty and complexity they face (e.g., Johnson & Tellis, 2008); many reap short-term profits by utilizing advantages of newness and then exit from the Chinese market (e.g., Johnson & Tellis, 2008). In this sense, we believe that profit measure is appropriate in that it helps foreign multinationals reap benefits.

**Independent Variable**

The decision under scrutiny is the choice between the WOS and JV modes of foreign market entry. We employ a binary variable as the appropriate measure with “1” assigned to a WOS mode and “0” to a JV. In so doing we follow the recommendation of (Pan & Chi, 1999).

In testing the hypotheses, we included several control variables measured at firm, industry and country level that may impact on subsidiary performance. Subsidiary age can affect performance since long-lived subsidiaries are more familiar with local conditions, more flexible in dealing with external environment is measure and therefore more likely to perform
better (Delios & Beamish, 2001). We measured age as the number of operational years since the subsidiary was established in China. We also controlled for subsidiary size, which is measured by the logarithm of number of employees. The bigger the subsidiary size, the more resources that subsidiary has and the higher performance is expected (Delios & Beamish, 2001).

In addition, subsidiaries working in different industries can also obtain different levels of performance, as certain industries may be more stable or more favoured by local government. Industry is measured based on SIC2 code and entered as a dummy. Moreover, we controlled for parent country of-origin. We code subsidiaries from Hong Kong, Macau or Taiwan as “1”, and otherwise “0” as subsidiaries from regions which are part of China have more knowledge of local conditions, which facilitate their operations and subsequent performance (Chen, 2012).

**Statistical estimations**

A Heckman two-stage model is the commonly employed to model for entry mode performance implications. It allows for correction to self-selection (Shaver, 1998), whereby managers choose a mode on the strength of unobservable characteristics that maximise performance. The resulting endogeneity assumes the form of omitted variables rather than measure errors or simultaneous causality (Basele, 2008). An uncorrected estimator such as Ordinary Least Square (OLS) will generate inconsistent results under these conditions, in biasing estimates of mode choice on performance (Martin, 2013).

We first use probit to model the binary choice of entry mode, WOS mode and JV mode in our case. We used one-year lagged firm age and size, important predictors of entry mode choice (Delios & Beamish, 2001), as the antecedents of the binary choice between WOS and JV mode. The regression analysis yields the inverse Mills ratio as the self-selection parameter (labelled as $\lambda$), which is then included in the second-stage. As there is no reason to assume that the self-selection parameter $\lambda$ is the same for both mode choices, we performed this
analysis for each, generating a set of coefficients per mode in order to include a self-correction parameter in the second stage. Finally, we evaluate the performance implications of each mode by multiplying each set of coefficients by the vector of firm attributes, to compare the performance of each mode.

\[
\text{Performance}_{\text{WOS}} = \beta_0 X + \beta_\lambda \lambda + u
\]

\[
\text{Performance}_{\text{JV}} = \beta_0 X + \beta_\lambda \lambda + u,
\]

where \( X \) is the vector of independent variables and \( \lambda \) is from the probit estimate of whether or not entry is by WOS mode. \( U \) is the error term. This Heckman Two-Stage Model was repeated for both provinces. After generating and controlling for the self-selection parameter, we used OLS regression to regress performance on other variables, as the dependent variable is continuous by nature.

In testing Hypothesis 3 which examines the significance of entry mode choices to performance in different sub-national regions, we compare the coefficients of mode choices in the two regions.

RESULTS

Descriptive Analysis

Table 1 presents information for mode choices in each province. In Shandong Province, US firms dominate the sample and show a preference for the WOS mode. This conforms to the theoretical prediction that in a developed market, foreign firms with strong capabilities are more likely to select the WOS mode to maximize their performance (Goodman, 2013). In Gansu Province, subsidiaries with JV mode are mainly from adjacent territories (i.e., Hong Kong and Taiwan), which demonstrates that geographically proximate multinationals are more familiar with the local environment and accordingly adapt their mode choices.
(Goodman, 2013). In Shandong, WOSs tend to be bigger than JVs, while the opposite is true in Gansu. In Shandong where market size is high and institutions are stable, larger subsidiaries with higher capabilities can better optimize profits. Yet, in Gansu where local institutions are less stable, it might be that big-sized subsidiaries vis-a-vis small-sized ones are more likely to partner with local firms to protect internal resources from being leaked to others.

Table 2 and 3 present the descriptive statistics and correlation matrix for the key variables in each province. It shows that the correlation between any two variables and pair-wise correlations are not excessive. We also checked multicollinearity and normality and found no violation. The homoscedasticity assumption is, however, violated so we employed robust standard error to solve this problem.

Regression Analysis and Hypotheses Testing

Table 4 reports the results of OLS regression with Heckman-Two Stage Model for Shandong Province. Model 1 is the baseline model with all variables but does not include self-selection parameter. Model 2 adds the self-selection parameter $\lambda$, which is statistically significant ($p < 0.05$). This suggests that multinational managers purposefully select those mode choices that can help their subsidiaries perform better. However, the marginal significant effect ($p < 0.1$) of mode choices on performance weakens but does persist marginally after controlling for the self-selection. This indicates that self-selection does have an impact on both mode selection and performance, but the effect of entry mode choices on performance is to some extent independent of the self-selection issue. Model 3 and 4 present the performance model results for firms that choose to enter by WOS mode. The significant coefficient estimates (Model 3 $p < 0.1$ and Model 4 $p < 0.05$) indicate that the predicted performance for firms that enter by WOS is greater than the predicted performance for all
firms with equivalent observable characteristics if they had selected to enter by WOS mode. In other words, unobservable characteristics that affect entry mode choice also affect performance.

To test hypothesis 1, the model estimates in Model 3 and 4 of Table 3 can be used to assess the superiority of one entry mode versus the other. Following Shaver (1998), we multiplied the non-firm coefficient estimates in Model 3 by the vector of firm attributes for the subsample of WOS mode. It allows us to calculate whether or not an entry is predicted to performance. The predicted performance for WOS mode is 62538 (i.e., average predicted value of performance) and is reported on the top left cell of Table 5. In addition, we assessed the predicted performance of foreign entries by JV had they entered by WOS. We did this by multiplying the coefficient estimates in Model 3 by the vector of firm attributes for the subsample of JV. We found that the predicted performance is 7418.35 (top right cell of Table 5).

We employed the JV estimates (Model 4) in the same manner to assess the predicted performance of JV mode and the predicted performance of WOS entries had they entered by JV mode. We multiplied the estimates of JV performance by the vector of firm attributes for JV mode, and it reveals a predicted performance of 224.07 (bottom right cell of Table 5). The predicted performance of WOS entries had they entered by JV is 1189.00 (bottom left cell of Table 5).

These estimates allow us to compare the predicted performance between WOS mode and WOS mode had they entered by JV mode. The left column of Table 6 indicates that entries by WOS mode are significantly more likely to perform better than if they had chosen to enter by JV mode (62538 versus 1189, $p=0.024$). The interpretation is that foreign investments that chose to enter by WOS mode performs better than if they had chosen to enter by JV mode. Similarly, the right-hand column of the table indicates that the firms that entered by JV mode
perform worse than if they had entered by WOS mode (7418.35 versus 224.08, \(p=0.047\)). Therefore, H1 is supported.

Table 6 reports the results of OLS regression with Heckman-Two Stage Model for Gansu Province. Model 5 is the baseline model without the inclusion of self-selection parameter. Model 6 adds the self-selection parameter \(\lambda\) but the results still hold \((p < 0.05)\). This also suggests that self-selection does have an impact on both mode selection and performance, but the effect of entry mode choices on performance is to some extent independent of the self-selection issue. To test hypothesis 2, we employed the same procedure. The significant estimates \((p < 0.05)\) in Model 7 and 8 indicate that the predicted performance for firms that choose to enter by JV mode is greater than the predicted performance for all firms with equivalent observable characteristics if they had selected to enter by JV mode. The left column of Table 7 indicates that entries by WOS mode perform significantly worse than if they had chosen to enter by JV mode \((106.44 \text{ versus } 5449.85, \ p=0.035)\). The interpretation is that foreign investments that chose to enter by WOS mode performs worse than if they had chosen to enter by JV mode. Similarly, the right-hand column of the table indicates that the firms that entered by JV mode perform better than if they had entered by WOS mode \((836479 \text{ versus } 16334.08, \ p=0.018)\). Thus H2 is supported.

To test hypothesis 3, we compare the coefficients of entry mode choices after controlling for the self-selection parameter. Model 2 and 6 provide such evidence. The coefficient of mode selection in Gansu is larger than that in Shandong, and both are statistically significant \((p < 0.05)\). This is consistent with Hypothesis 3, namely the significance of mode choice is smaller in developed sub-national regions than in less developed ones. Therefore H3 is supported.

**DISCUSSION**
This study examines the effect and significance of entry mode choices to subsidiary performance in different *sub-national* regions in a host country. It tests the propositions that subsidiaries with WOS mode outperform subsidiaries with JV mode in developed regions; foreign subsidiaries with JV mode outperform subsidiaries with WOS mode in less developed regions. Mode choice is more significant to multinationals in less developed regions than in developed regions. Our results support these propositions, indicating that the influence and the direction of the association between entry mode choices and financial performance differ across sub-national regions. These findings have some important implications for entry mode research, sub-national heterogeneity literature and investment decisions.

With respect to the contribution, first, we go beyond prior studies (e.g., Goodman, 2013; Meyer & Nguyen, 2005) which test the antecedents of mode by examining the performance implications of mode choices at sub-national level. To our knowledge, our study serves as the first study investigating mode-performance relationship at the sub-national level. The key implication and theoretical contribution that our study makes is the direction and the influence of the association between entry mode choices and financial performance across subnational regions. By direction we mean whether WOSs perform better than JVs in developed regions while JVs have higher performance in less developed regions. By influence we mean whether the impact of entry mode selection on subsidiary performance is smaller in developed sub-national regions than in less developed regions. This means entry mode matters more to subsidiary performance in less developed regions than in developed regions. Overall, sub-national heterogeneity alters the effect of mode selection on subsidiary performance.

Moreover, we move beyond few studies examining entry mode at sub-national level by suggesting that the theoretically suggested mode choices (i.e., WOS mode in developed regions while JV mode in less developed regions) by prior studies (e.g., Goodman, 2013;
Meyer & Nguyen, 2005) can in fact be beneficial to subsidiary performance. This study thus directly respond to Goodman’s (2013) and Wu et al.’s (2013) call for more entry mode studies at sub-national level.

Our finding that WOSs outperform JVs in the developed sub-national regions in China is consistent with Chen (2012). However, Chen (2012) does not focus on sub-national regions. Hence, our study goes beyond prior studies by reconciling inconsistent findings of mode-performance relationship.

Furthermore, we reconcile mixed findings regarding the effect of entry mode selection on subsidiary performance, using China as the reference host. Some scholars have found that JVs outperform WOSs in China (e.g., Chen, 2012) while others suggest the opposite (e.g., Wu et al., 2013). Factors such as international experience, the presence of local complementary assets (Chen, 2012) and subsidiary industry (Teng, 2004) have been cited as influential in reconciling the mode-performance relationship. A recent study by Chang et al. (2013) tests the influence of industry. Our study proposes that sub-national heterogeneity, in terms of regional development, can also play a part (Chen 2012; Martin, 2013; Wu et al. 2013).

This study also contributes to literature on subsidiary performance by enriching our understanding of the antecedents to subsidiary performance. Prior studies have largely overlooked the contextual effect of the relationship between sub-national effects and subsidiary performance. Indeed, some scholars (Beugelsdijk & Mudambi, 2013; Chan et al., 2010; Ma et al., 2013) stress the need to explore conditions impacting on the effect of strategic decisions on subsidiary performance. Our findings directly address that call by indicating that sub-national location influences the outcome of multinational strategy (i.e., entry mode selection) in terms of subsidiary performance. In doing so our findings make a unique contribution to the literature
on subsidiary performance by suggesting a new interaction effect, namely sub-national location and entry mode selection, as the antecedents to subsidiary performance. This suggests that subsidiary performance involves complicated strategic decisions and variations in host country context that need to be carefully investigated.

Finally, we add to the general picture of studies on mode-performance by suggesting that previous findings that there is a most profitable mode choice are too simplistic. Rather, mode-performance linkage can vary across a single nation-state or across different sub-national regions. Therefore our study concludes that it is geographical variations within a single host country determine different mode-performance relationships.

Limitations, future directions and practical implications

This study has some limitations that suggest future research directions. First, this study relies on relatively few observations and variables collected. We acknowledge this limitation and suggest that the representativeness and generalization of the findings have to be interpreted with caution. Future studies may fruitfully examine such effect by collecting more observations and variables interacting with managers through localized types of connections, such as use of Guanxi in China and that of Blat in Russia, which gives scholars additional possibility to collect ideal information (Michailova & Worm, 2003).

The second limitation is the selected choices of entry mode. That is, the study draws on only the most popular two choices, WOSs and JVs (Brouthers & Hennart, 2007). Managers of multinationals have other alternatives, and more mode choices should be included in the future to reflect this reality.

Third, in countries where regions are broadly similar, regions might differ from one another in only a subset of developmental dimensions. In these cases, it would be important to use higher resolution measures of sub-national variation in development. However, since our sample is China, where sub-national heterogeneity is high and eastern regions are much
more developed than western regions in across all dimensions (Ma et al., 2013), we found it 
safe to use a more holistic term. Our findings may be indicative of trends between other east 
and west regions in China. Future studies using other national settings can examine how 
multinational managers weigh different sub-dimensions with respect to their mode selection.

Fourth, to observe long-term effects of mode choices on performance, future studies might 
attempt a longitudinal study using panel data. Finally, future studies may provide novel insights 
in seeking to replicate our findings focussing on firms from emerging markets. No study has 
directly examined emerging MNEs’ mode choices at sub-national level in a host country and 
the performance implications mode choices have in that region. Our findings yield several 
policy implications. To maintain local attractiveness for FDI, regions should attend to local 
infrastructural development, and institutional governance, reduce foreign investment taxes 
where feasible, encourage labour mobility, and be attentive to investor’s need for specialised 
local knowledge. This could encourage foreign multinationals with advanced technologies and 
know-how to enter via a higher value WOS (Ang, Benischke, & Doh, 2015).

For managers the key practical implication is the suggestion that sub-national location-
specific advantages and disadvantages need to be assessed in overseas investment decisions. 
It is also worth noting that we reproduce the finding of Brouthers (2013) and Brouthers et al. 
(2003) that theoretically derived mode choices do seem to help subsidiaries perform better. It 
is likely that China’s development will lead to a rising prominence of western and northern 
provinces. China’s eastern regions’ share of inwards FDI fell from about 90% in 1992-2002 
to about 70% in 2012 (Granneman & van Dijk, 2015). Moreover, McKinsey predicts about 
40% of China’s middle class will come from these provinces by 2022 (Barton, Chen & Jin, 
2013). Multinationals entry mode and other strategies in China should be responsive to 
differences between these regions and eastern provinces.

**CONCLUSION**
Prior studies on entry mode, over the last three decades have largely ignored whether the impact of entry mode on subsidiary performance may vary at sub-national level. With samples from two developmentally-differentiated regions in China, our study fills this gap by demonstrating that different mode choices vary in profitability across sub-national regions, and their magnitude of impact also differs across regions. A further contribution is that it is insufficient to investigate entry mode at national level as done by prior studies; sub-national regions, instead, also matter to multinationals’ mode selection and subsidiary performance in a host country. Overall, our study contributes to entry mode research and provides valuable suggestions to managers in practice.

References


**Appendix**

**TABLE 1. DATA SUMMARY FOR FOREIGN SUBSIDIARIES IN SHANDONG AND GANSU**

<table>
<thead>
<tr>
<th>Provinces</th>
<th>Shandong Province</th>
<th>Gansu Province</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry mode</td>
<td>51 WOSs</td>
<td>30 JVs</td>
</tr>
<tr>
<td>Countries of Origin</td>
<td>US: 21; Japan: 6; Germany: 9; Hong Kong: 6; Canada: 3;</td>
<td>Germany: 3; Italy: 3; Japan: 3;</td>
</tr>
</tbody>
</table>
“1”; otherwise coded as “0”.

<table>
<thead>
<tr>
<th>Industry names</th>
<th>Mauritius: 3; Virgin Islands of Great Britain: 3</th>
<th>Hong Kong: 9; Canada: 3; US: 3; Taiwan: 3; Ukraine: 3</th>
<th>Taiwan: 1; Denmark: 2; Germany: 1; Switzerland: 1; Arab: 1; Thailand: 2; Label “Not from Hong Kong, Taiwan, and Macau”: 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm age (numerical form)</td>
<td>From 6 to 10 years, almost evenly distributed</td>
<td>From 6 to 10 years, almost evenly distributed</td>
<td>More than 10 years (inclusive): 10; Less than ten years: 5</td>
</tr>
<tr>
<td>Number of employees (numerical form)</td>
<td>Less than 100 (inclusive): 24; More than 100 (exclusive): 27</td>
<td>Less than 100 (inclusive): 27; More than 100 (exclusive): 3</td>
<td>More than 1000: 2; 100-999: 5; 10-99: 8</td>
</tr>
<tr>
<td>Performance (numerical form)</td>
<td>Net profits (RMB)</td>
<td>Net profits (RMB)</td>
<td>Net profits (RMB)</td>
</tr>
</tbody>
</table>

**TABLE 2. DESCRIPTIVE STATISTICS AND CORRELATIONS FOR SHANDONG**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>S.D</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net profits (Million)</td>
<td>4.818</td>
<td>20.700</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country of Origin</td>
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<td>-0.086</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Size</td>
<td>1.841</td>
<td>0.500</td>
<td>0.422</td>
<td>-0.131</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Age</td>
<td>9.111</td>
<td>4.523</td>
<td>-0.071</td>
<td>0.174</td>
<td>-0.125</td>
<td>1.000</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 3. DESCRIPTIVE STATISTICS AND CORRELATIONS FOR GANSU

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>S.D</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net profits (Million)</td>
<td>4.938</td>
<td>7.899</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country of Origin</td>
<td>0.406</td>
<td>0.499</td>
<td>-0.204</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Size</td>
<td>5.066</td>
<td>1.455</td>
<td>0.405</td>
<td>-0.047</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Age</td>
<td>9.156</td>
<td>7.269</td>
<td>-0.203</td>
<td>-0.080</td>
<td>0.474</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Entry Mode</td>
<td>0.469</td>
<td>0.507</td>
<td>-0.457</td>
<td>0.371</td>
<td>-0.142</td>
<td>-0.117</td>
<td>1.000</td>
</tr>
</tbody>
</table>
### TABLE 4. RESULTS FOR SHANDONG

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3 (WOS)</th>
<th>Model 4 (JV)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(6.765)</td>
<td>(7.244)</td>
<td>(8.554)</td>
<td>(2.544)</td>
</tr>
<tr>
<td>Industry Dummies</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td>Firm Size</td>
<td>24.133*</td>
<td>-2.616</td>
<td>-5.887</td>
<td>4.540</td>
</tr>
<tr>
<td></td>
<td>(11.020)</td>
<td>(0.590)</td>
<td>(4.831)</td>
<td>(3.150)</td>
</tr>
<tr>
<td>Firm Age</td>
<td>-0.806+</td>
<td>-6.896</td>
<td>-7.162*</td>
<td>1.100*</td>
</tr>
<tr>
<td></td>
<td>(0.551)</td>
<td>(4.270)</td>
<td>(4.088)</td>
<td>(0.883)</td>
</tr>
<tr>
<td>Entry Mode</td>
<td>11.929*</td>
<td>7.976+</td>
<td>-86.932*</td>
<td>11.871*</td>
</tr>
<tr>
<td></td>
<td>(11.404)</td>
<td>(6.487)</td>
<td>(56.947)</td>
<td>(8.888)</td>
</tr>
<tr>
<td>Correction for self-selection ($\lambda$)</td>
<td>-89.278+</td>
<td>111.608*</td>
<td>-20.371*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(50.437)</td>
<td>(68.654)</td>
<td>(15.382)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-39.765**</td>
<td>93.368*</td>
<td>-20.371*</td>
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<tr>
<td></td>
<td>(25.617)</td>
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<tr>
<td>N</td>
<td>81</td>
<td>81</td>
<td>50</td>
<td>31</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.211</td>
<td>0.262</td>
<td>0.248</td>
<td>0.344</td>
</tr>
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</table>

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1, two-tailed test, robust standard errors in parentheses; Industry dummies included.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7 (WOS)</th>
<th>Model 8 (JV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country of orgin</td>
<td>1.101</td>
<td>2.072</td>
<td>1.060</td>
<td>4.551</td>
</tr>
<tr>
<td></td>
<td>(0.352)</td>
<td>(1.637)</td>
<td>(0.599)</td>
<td>(0.077)</td>
</tr>
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<td>Industry Dummies</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td>Firm Size</td>
<td>1.862+</td>
<td>-14.212</td>
<td>-3.478</td>
<td>5.058</td>
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<td></td>
<td>(1.079)</td>
<td>(11.942)</td>
<td>(2.626)</td>
<td>(3.278)</td>
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<tr>
<td>Firm Age</td>
<td>-0.109</td>
<td>-2.014</td>
<td>-0.502</td>
<td>52.776</td>
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<td></td>
<td>(0.240)</td>
<td>(2.609)</td>
<td>(0.499)</td>
<td>(37.601)</td>
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<tr>
<td>Entry Mode</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.378)</td>
<td>(3.776)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correction for self-selection (λ)</td>
<td>47.111*</td>
<td>57.711*</td>
<td>688.222+</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(36.891)</td>
<td>(37.668)</td>
<td>(58.927)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-0.431**</td>
<td>-111.307*</td>
<td>-25.195*</td>
<td>276.825*</td>
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<td></td>
<td>(0.659)</td>
<td>(51.268)</td>
<td>(5.528)</td>
<td>(80.574)</td>
</tr>
<tr>
<td>N</td>
<td>32</td>
<td>32</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.417</td>
<td>0.431</td>
<td>0.660</td>
<td>0.468</td>
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</table>

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1, two-tailed test, robust standard errors in parentheses; Industry dummies included.
### TABLE 6. PREDICTED VALUES FROM PROBIT MODELS FOR SHANDONG

<table>
<thead>
<tr>
<th></th>
<th>Firms with WOS mode (N=50)</th>
<th>Firms with JV mode (N=31)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predicted performance estimates from the performance model of WOS entries</td>
<td>62538.01</td>
<td>7418.35</td>
</tr>
<tr>
<td>Predicted performance estimates from the performance model of JV entries</td>
<td>1189.00</td>
<td>224.07</td>
</tr>
</tbody>
</table>

### TABLE 7. PREDICTED VALUES FROM PROBIT MODELS FOR GANSU

<table>
<thead>
<tr>
<th></th>
<th>Firms with WOS mode (N=15)</th>
<th>Firms with JV mode (N=17)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predicted performance estimates from the performance model of WOS entries</td>
<td>106.44</td>
<td>16334.08</td>
</tr>
<tr>
<td>Predicted performance estimates from the performance model of JV entries</td>
<td>5449.85</td>
<td>836479.12</td>
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### TABLE 8 SUMMARY OF RESULTS

<table>
<thead>
<tr>
<th>Hypotheses No.</th>
<th>IV</th>
<th>DV</th>
<th>Significance</th>
<th>Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H1</strong> (in developed region)</td>
<td>WOS v.s JV</td>
<td>Performance</td>
<td>p &lt; 0.05</td>
<td>+</td>
</tr>
<tr>
<td><strong>H2</strong> (in less developed region)</td>
<td>JV v.s WOS</td>
<td>Performance</td>
<td>p &lt; 0.05</td>
<td>+</td>
</tr>
<tr>
<td><strong>H3</strong></td>
<td>Magnitude of entry mode selection effect on subsidiary performance</td>
<td>Regional development</td>
<td>N/A</td>
<td>-</td>
</tr>
</tbody>
</table>