Institutional open access at home and outward internationalization

Sunny Li Sun  
*University of Missouri - Kansas City, sunsli@umkc.edu*

Mike W. Peng  
*University of Texas at Dallas, mikepeng@utdallas.edu*

Ruby P. Lee  
*Florida State University, rlee3@cob.fsu.edu*

Weiqiang Tan  
*Hong Kong Baptist University, wqtan@hkbu.edu.hk*

This document is the authors' final version of the published article.  
Link to published article: [http://dx.doi.org/10.1016/j.jwb.2014.04.003](http://dx.doi.org/10.1016/j.jwb.2014.04.003)

**Recommended Citation**  
INSTITUTIONAL OPEN ACCESS AT HOME AND OUTWARD INTERNATIONALIZATION

Sunny Li Sun  
Henry W. Bloch School of Management,  
University of Missouri - Kansas City  
5110 Cherry Street  
Kansas City, MO 64110-2499  
sunsli@umkc.edu

Mike W. Peng *  
Naveen Jindal School of Management  
University of Texas at Dallas  
Box 830688, SM 43  
Richardson, TX 75083-0688  
mikepeng@utdallas.edu

Ruby P. Lee  
College of Business  
Florida State University  
Tallahassee, FL 32306-1110  
rtlee3@cob.fsu.edu

Weiqiang Tan  
School of Business  
Hong Kong Baptist University  
Kowloon, Hong Kong  
wqtan@hkbu.edu.hk

Accepted by Journal of World Business

April 2014

* Corresponding author

Earlier versions of this article were presented at the Academy of International Business (San Diego, June 2009) and the University of Texas at Dallas (June 2009). We thank Greg Dess, Seung-Hyun Lee, Zhiang (John) Lin, Livia Markoczy, and Eric Tsang for helpful comments. This research was supported in part by the National Science Foundation (CAREER SES 0552089) and Kemper Summer Research Grant from Bloch School of Management, UMKC. All views are those of the authors and not necessarily those of the NSF.
INSTITUTIONAL OPEN ACCESS AT HOME AND
OUTWARD INTERNATIONALIZATION

Abstract

While voluminous research has focused on the impact of host country institutions on foreign entrants, the rise of outward internationalization of firms from emerging economies is challenging this research stream. Limited work has been done to investigate a crucial question: How do home country institutions influence firms from emerging economies to engage in outward internationalization? Inspired by North’s insights on institutional open access, we develop an institution-based framework highlighting intra-country (sub-national) regional differences within a large emerging economy. Specifically, we argue that greater institutional open access in a particular region of a home country—in the areas of legal environment openness and financial market openness—leads to greater outward internationalization of local firms headquartered in that region. Further, tenure of that region’s governor moderates such relationships in different ways. Our multilevel analysis with 5,239 observations (company-years) finds that institutional open access is indeed behind some Chinese firms’ outward internationalization.

Keywords: Institutional open access, internationalization, institutional transitions, institution-based view.
A voluminous literature suggests that host country institutions affect the inward internationalization of foreign entrants (Chacar, Newburry, & Vissa, 2010; Dunning & Lundan, 2008; Holmes et al., 2013; Luo & Peng, 1999; Meyer et al., 2009; Yang, Tipton, & Li, 2011). To the extent that any internationalization move involves at least two countries (host and home), then, what about the impact of home country institutions on firms that internationalize? Until recently, the literature had largely ignored this question, because the typical foreign entrants studied are multinational enterprises (MNEs) from developed economies (DE) and the pro-outward internationalization policies adopted by home country governments in DE are taken for granted (Peng, Wang, & Jiang, 2008). However, with significant outward internationalization by firms from emerging economies (EE), a new theory needs to start filling this gap (Guillén & García-Canal, 2009; Luo and Tung, 2007; Mathews, 2006; Peng, 2012).

In response, we develop an institutional open access framework to highlight the effect of home country institutions on the internationalization of firms, especially those from EE. Institutional open access means advancement in formal rules that enables market forces to access opportunity via competition (North, Wallis, & Weingast, 2009). Such market-supporting institutional environments may reduce transaction costs, encourage individuals and firms to enter complex transactions, and facilitate impersonal exchange that is based on market efficiency rather than personal networks or political power (Peng, 2003; Young et al., 2014).

While governments in many EEs have set country-level policies to facilitate such institutional open access, considerable intra-country (sub-national) regional differences exist in large emerging economies such as Brazil, Russia, India, and China (BRIC) (Chabowski et al., 2010; Hoskisson et al., 2013). Such variations within a country allow us to extend the institution-based view from cross-country comparisons to intra-country (inter-region)
comparisons by concentrating on the institutional differences among different regions within a
country (Chan, Makino, & Isobe, 2010; Chang & Xu, 2008; McDermott, Corredoira, & Kruse,
2009; Meyer & Nguyen, 2005; Shi, Sun, & Peng, 2012). Against this backdrop, we address a
previously underexplored question: What institutional variables facilitate open access in the
home region within an EE such that local firms from that region can increase their outward
internationalization?

Overall, we endeavor to contribute to the literature in three ways. First, extending the
institution-based view (Ahuja & Yayavaram, 2011; Peng et al., 2008, 2009; Wright et al., 2005),
we identify two types of institutional open access—legal environment openness and financial
market openness, which may facilitate outward internationalization. In other words, we offer an
alternative theoretical framework centered on institutional open access (North et al., 2009) to
explore how institutional advancement at home shapes the progress of domestic firms’ outward
internationalization (see Figure 1).

[Figure 1]

Second, while inter-regional differences within a large EE have been investigated by a small
number of studies (Atsmon, Kertesz, & Vittal, 2011), the emphasis has been on how domestic
firms survive or exit (Chang & Xu, 2008; Lebedev & Peng, 2014), how foreign firms enter
(Meyer & Nguyen, 2005; Shi et al., 2012, 2014b), and how foreign firms’ affiliates perform
(Chan et al., 2010). None has probed the link between inter-regional differences and the outward
internationalization of local firms. We not only theorize about this link, but also offer the first set
of large-sample empirical evidence, using two dimensions of openness at the regional (provincial)
level from China to substantiate our case. Third, we highlight the continuing importance of
political influence (Shi, Markoczy, & Stan, 2014a), by revealing the moderating role played by
the tenure of regional governor in affecting the relationship between institutional open access in a region and outward internationalization undertaken by firms from that region.

THE DEBATE OF HOME COUNTRY INSTITUTIONS BEHIND OUTWARD INTERNATIONALIZATION

While the literature has paid a great deal of attention to host country institutions (Deng, 2009; Meyer et al., 2009; Meyer & Sinani, 2009; Xia, Tan, & Tan, 2008; Yang et al., 2011), scholars begin to recognize that institutions adopted by the home country cannot be taken for granted to explain the internationalization of EE firms (Cuervo-Cazurra & Dau, 2009; Cui & Jiang, 2010; Del Sol & Kogan, 2007; Luo & Tung, 2007; Witt & Lewin, 2007). These findings thus promote an interest in probing the role played by home country institutions behind outward internationalization (Dau, 2012; Del Sol & Kogan, 2007; Lee & Weng, 2013; Liu, Lu, & Chizema, 2014; Luo & Wang, 2012). Two contrasting arguments have emerged, which can be summarized as an “escape” view and a “fostering” view.

The “escape” view argues that outward FDI from EE is in part an escape response to a burdensome home country institutional environment (Witt & Lewin, 2007). Through this “dark” lens on institutional constraints, some scholars argue that EE firms’ primary motivation to go abroad is not to leverage their competitive advantages, but to avoid a number of competitive disadvantages incurred by home country institutions (Boisot & Meyer, 2008; Child & Rodrigues, 2005; Hoskisson et al., 2013; Peng, Sun, & Blevins, 2011). Luo and Tung (2007, p. 482) identify the “pull factor” of EE MNEs that “use outward investments as a springboard to acquire strategic assets needed to compete more effectively against global rivals and to avoid the institutional and market constraints they face at home” (added italics). The important evidence on this “escape”
view is capital round-tripping (Wei, 2005). For example, Chinese outward FDI stock in the Cayman Islands and the British Virgin Islands (BVI) is more than that in the US, the UK, and Germany combined. In turn, together the Cayman Islands and the BVI’s FDI stock in China is more than that from the US, the UK, and Germany combined (Peng et al., 2011).

The “fostering” view suggests a facilitating role of advanced institutions that promotes firms’ outward internationalization (Wan & Hoskisson, 2003). Viewed from this “bright” lens of institutional impetus, firms do not necessarily react to institutional constraints, but strategically explore institutions as opportunities (Jonsson & Regnér, 2009; Martin, 2014). It means that EE MNEs may leverage government intervention as a positive “push factor” behind their internationalization (Goh & Wong, 2011). The high level of government support in the privileged access to raw materials, low-cost capital, and subsidies may help EE firms as they embark on internationalization (Buckley et al., 2007; Cui & Jiang, 2010; Luo, Xue, & Han, 2010; Morck, Yeung, & Zhao, 2008; Rui & Yip, 2008).

Since this debate mainly focuses on country-level institutions, we believe that one way to help resolve this debate is to probe into institutional differences between regions within an EE (Chabowski et al., 2010; Chan et al., 2010; Shi et al., 2012). Within one country, some institutions in some regions may facilitate more outward internationalization, and some institutions in other regions may be so constraining that they push firms to go out in search of “greener pastures.” By comparing intra-country regional differences, we may solve this dilemma between an “escape” view and a “fostering” view on the outward internationalization of EE firms. Next, we develop an institutional open access framework centered on regional differences.

INSTITUTIONAL OPEN ACCESS ON OUTWARD INTERNATIONALIZATION
Building on North (1990, 2005), North et al., in a seminal new book, argue that “social orders are characterized by the way societies craft institutions that support the existence of specific forms of human organization, the way societies limit or open access to those organizations, and through the incentives created by the pattern of organization” (2009, p. 1). Institutional open access means advancement in formal rules that empowers individuals the right to engage in a variety of economic (as well as political and social) activities, and affords firms the right to develop their own strategies such as internationalization. Economic development and growth are generally correlated with institutional open access (Acemoglu & Robinson, 2012).

Historically, long-distance trade benefited from an early institutional open access that fostered arm’s-length transactions and law-based, impersonal exchange (North, 1990). Modern firms’ internationalization engages in more complex transactions in the global value chain and calls for more support from sophisticated contractual, organizational, and legal systems (Morck et al., 2008; Peng, 2003). Extending North’s insights to the domain of internationalization, we develop an institutional open access framework with multidimensional institutional research. We emphasize two dimensions of openness that promote local firms’ internationalization: (1) legal environment openness and (2) financial market openness. As shown in our theoretical framework (Figure 1), these two dimensions of openness not only broadly define the protection from political intervention (North et al., 2009), but also ensure competition-based market entry and support impersonal economic relationships (Chang & Xu, 2008; Peng, 2003; Young et al., 2014; Zhou & Peng, 2010). They provide fertile ground on which the competitive capabilities of EE firms in outward internationalization can be nurtured (Martin, 2014). In addition, the tenure of a province’s governor, which influences the implementation of regional policies, is likely to influence the efficacy of institutional openness on local firms’ internationalization.
While laws are enacted at the country level, its enforcement and financial market openness are typically undertaken at the regional and local levels (Atsmon et al., 2011; Pistor & Xu, 2005). In large EE such as BRIC, the rules and regulations at the regional level tend to be diverse, creating a great deal of inter-region differences (Chang & Xu, 2008; Kwon, 2012; McDermott et al., 2009). For example, substantial sub-national regional differences are found in Russia (Lebedev & Peng, 2014) and Vietnam (Meyer & Nguyen, 2005). “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 market-supporting policies and laws, sub-national differences in economic freedom are still pronounced (Shi et al., 2012, 2014a). Given the uneven development of nationwide markets in finances, talents, and strategic factors, many Chinese firms still rely strongly on their headquarters regions (provinces) to access supportive political resources, favorable financial backing, and top talents (Chan et al., 2010; Shi et al., 2012, 2014a). As a result, institutional open access at the regional (provincial) level is crucial.

Pushing this line of logic further, we argue that these inter-region differences in institutional open access in terms of (1) legal environment and (2) financial market within one country may directly influence the outward internationalization of local firms headquartered in different regions.

**Legal Environment Openness**

---

1 While we focus on EE, it is important to note that significant sub-national regional differences exist in large DE, such as the United States (Chan et al., 2010) and Italy (Laursen, Masciarelli, & Prencipe, 2012). Our focus on EE is justified because, according to Chan et al. (2010), “the effects of sub-national regions are far stronger in China than they are in the United States, thus suggesting that regional differences are more critical in their explanatory power for firm performance in emerging economies than they are in developed economies” (p. 1226).
A core characteristic of institutional open access is that entry and competition are protected and regulated through legal systems (Acemoglu & Robinson, 2012; North et al., 2009; Peng, 2003). A legal system, including laws, rules, and regulations, is one of the most important attributes of a country’s governance infrastructure. Although EEs are often criticized for inadequate property rights and ineffective laws, some EEs—and importantly for the purposes of our study, some regions within EE (such as Shanghai and Beijing in China)—have made significant progress in offering firms a more legally protective environment (Cuervo-Cazurra & Dau, 2009; Dikova & van Witteloostuijn, 2007). Based on North et al.’s (2009) focus on “how the political system defines property rights, enforces contracts, and creates the rule of law necessary for market” (p. 110), we suggest that legal environment openness can be observed in four interrelated aspects: (1) the rule of law and its enforceability, (2) firm and investor rights protection, (3) property rights enforcement, and (4) consumer rights protection.

The rule of law acts as constraints for political power and reduces the entry barriers erected by vested interests. Individual firms can then choose to produce, trade, and purchase what is needed without being forced by their government to do so. Such open access reflects "the ability to train, hire, promote, and discipline members of the bar and judiciary" under a predictable rule of law (Fukuyama, 2011, p. 451). Such effective rule of law protects contracts and reduces opportunistic behavior (Zhou & Poppo, 2010). Legal rights help entrepreneurs use the corporate form to maximize profits and limit liabilities (Micklethwait & Wooldridge, 2005), and protect investors and creditors from expropriation (La Porta et al., 2000).

Property rights refer to a set of legal arrangements that protects an individual’s rights to use, control, transfer, and receive benefits from a property owned. In EE, intellectual property rights (IPR) protection is typically weak. It leads to some meager innovations and technology transfers
(Khoury & Peng, 2011). An increase in consumer rights is another signal of legal environment openness that is “impartial for all citizens” (North et al., 2009, p. 110). To protect consumers against unfair trade practices and treatments (think of the poisoned milk in China), they need to be made aware of their rights.

In the context of promoting outward internationalization, the rule of law and its enforceability help facilitate transactions and resolve disputes (Zhou & Poppo, 2010) and help EE firms extend their business overseas. Legal rights protect local firms in making their own decisions and allow them to be entitled to their profits and losses, thus fueling their outward internationalization. Investor rights protection helps EE firms access capital and credit. In addition, property rights (especially IPR) enforcement reduces the risk of expropriation and encourages EE firms’ long term investment in tangible and intangible assets that are crucial for internationalization (Khoury & Peng, 2011; Meyer et al., 2009; Young et al., 2014). Finally, the protection of consumer rights increases the competitive advantage of local firms whose strength lies in customer orientation and product quality, not in cut-throat price competition. Consequently, firms that excel in quality and respect consumer needs and rights may be more survivable in foreign markets, especially in DE (Yamakawa et al., 2013). Conversely, firms that lack these capabilities may have a hard time surviving overseas. For example, the toy recall crisis in the United States pushed many shoddy Chinese suppliers out of market. Therefore, when local law and its enforcements are more progressive to openness, the focal firm with headquarters in this region may become more confident to make an internationalization decision.

When the legal environment in EE becomes increasingly as open as in DE (Hoskisson et al., 2013), local firms in EE may feel less intimidated by their lack of familiarity with the rules of the game abroad. Local firms that are used to competing and thriving in a more legally open
environment may become more comfortable while venturing out to tackle overseas markets, especially in DE (Del Sol & Kogan, 2007). In theoretical terms, we suggest that the institutional distance between DE and EE with an open legal environment is shorter in comparison with the institutional distance between DE and EE without such an open legal environment (Xu & Shenkar, 2002). Shorter institutional distance promotes more internationalization by increasing the success rate of cross-border mergers and acquisitions (M&As) (Dikova et al., 2010; Sun et al., 2012) and the survivability of overseas subsidiaries (Gaur & Lu, 2007). Therefore, when local rule of law and its enforcements are more progressive, the focal firm with the headquarters in this region will be more likely to increase its efforts in internationalization. Overall, we have:

*Hypothesis 1a. The degree of legal environment openness in a local firm’s headquarters region within a home country has a positive effect on this firm's decision on outward internationalization.*

*Hypothesis 1b. The degree of legal environment openness in a local firm’s headquarters region within a home country has a positive effect on this firm’s degree of outward internationalization.*

**Financial Market Openness**

There is a long research tradition on how firm strategy is shaped by the openness of financial markets and the information asymmetries between firms and financial markets (Allen, 1993; Levitas & McFadyen, 2009). Financial market openness refers to the extent to which EE governments allow firms to have freedom to access capital, supply investors with more diversified investment products, and mitigate the information asymmetries between firms and capital markets (Allen, 1993). By increasing open access for capital resources, local firms may be more likely to tap into the recent trend of globalization through foreign market expansion (La Porta et al., 2000; Peng & Su, 2014; Rajan & Zingales, 2003).

In countries with underdeveloped capital markets or weak creditor rights, MNE affiliates are
financed with less external debt and with more debt from parent companies at home through internal financing (Desai, Foley, & Hines, 2004). Because outward internationalization strongly relies on a firm’s financial resources in factor markets (Hoskisson et al., 2013), other things being equal, the stronger a firm’s ability to raise capital from its home country, the stronger its ability to survive and prosper overseas (Peng & Su, 2014).

However, EE firms often have difficulty expanding overseas because of the constraints from underdeveloped financial markets in their home country. For example, in 2007, the total value of tradable stocks in China (excluding those held by the government) was only 35% of GDP compared with 180% in the US at its peak in 2000.² Equities accounted for less than 20% of Chinese households’ total financial assets, compared with about half of those in the US. Only a small proportion of Chinese companies are publicly listed and even those that are listed still mainly rely on internal financing. Only 10% of total financing for investment in 2007 came from equities. Unlike high-performance firms in DE, high-performance private firms in China cannot count on raising capital from initial public offering (IPO)—prior to the early 2000s, IPO permits had been typically issued only to SOEs, but not to private firms. Only institutional open access in financial markets can reduce these concerns and give high-performance private firms opportunities to raise capital at home to support internationalization (Rajan & Zingales, 2003).

Empirical research has shown the importance of domestic financial conditions in reducing the cost of capital (La Porta et al., 1997) and stimulating international expansion (di Giovanni, 2005). Relative to private firms in China that often have difficulties accessing domestic financial markets, private firms in India enjoy better access to domestic financial markets, which enable them to raise capital to fund cross-border M&As (Sun et al., 2012). Shortening the institutional

The distance of financial market openness between EE and DE also helps local firms to access international venture capital (Gu & Lu, 2010; Guler & Guillén, 2010) and to cross-list overseas (Peng & Su, 2014). Overall, financial market openness may provide EE firms access to capital necessary to undertake overseas expansion projects that they may otherwise have to forego.

In addition, financial market openness is meaningful not only for firms, but also for investors and creditors (La Porta et al., 1997). “The openness of financial markets affects the capital allocation system” (Allen, 1993, p. 17). A closed financial market cannot provide enough information on the valuation of a firm (La Porta et al., 2000). On the contrary, a firm on an open financial market receives current and reliable information about its value from peer firms and investors. The valuation from a stock market may further signal the firm to change its strategies and to reset the clock of its major activities such as internationalization.

In EE, if the government permits more firms to access financial markets, investors may correspondingly receive more information about firms and have better capabilities in evaluating firms’ strategies such as internationalization. Unfortunately, even within the same country, regional differences exist and some regional governments such as those in certain provinces in China may be skeptical to grant more financial access to domestic firms and investors alike. In particular, regional government officials are responsible for the success and failure of firms that go public from their regions (Pistor & Xu, 2005). Further, there is an IPO quota system in place in China’s emerging stock markets since 1993. Although IPO permits are centrally issued by the China Securities Regulatory Commission (CSRC), provincial governments have the right to select viable firms to be listed in stock exchanges, which explains why a significant gap of financial market openness exists between regions. In addition, local investors can access more information of local firms from the same region, and then have more capabilities to evaluate the
internationalization strategy of local firms than investors from other regions. When a region has more open financial markets, the focal firm headquartered in this region can obtain more investors’ support in internationalization. Thus:

**Hypothesis 2a.** The degree of financial market openness of a local firm’s headquarters region within its home country has a positive effect on this firm’s decision on outward internationalization.

**Hypothesis 2b.** The degree of financial market openness of a local firm’s headquarters region within its home country has a positive effect on this firm’s degree of outward internationalization.

The Moderating Effect of Governor’s Tenure

To facilitate institutional open access, a regional (provincial) governor plays an important role in enforcing laws and regulations, and in cultivating the norms and values of market competition (Fukuyama, 2004; North, 2005). For example, a regional governor may not only ensure local firms to comply with rules and regulations, but also hold the government accountable to regional “parliaments, assemblies, and other bodies representing a broader proportion of the population” (Fukuyama, 2011, p.15). Consequently, we suggest that the tenure of a governor affects the impact of institutional openness on a firm’s degree of internationalization.

In China, regional (provincial) governor candidates are first nominated by the Communist Party of China (CPC), and then appointed by the regional assemblies of the People's Congress regularly held every five years since 1977 (Lan & Li, 2013). However, their tenure usually does not coincide with one five-year term or two five-year terms. This is because the CPC always rotates governors to other regions or other positions based on performance evaluation, in which regional economic growth rate is a key measure (Shi et al., 2014a; Wu et al., 2013). Therefore,

---

3 Although five years are one term, the CPC uses rotation as “a strategic instrument to control governors” (Zhang & Gao, 2008: 276). For example, President Xi Jinping (who assumed office in 2012) served as governor of Fujian province between 1999 and 2002 (two years short of his five-year term), and was then transferred to serve as governor of Zhejiang province between 2002 and 2007 (a full five-year term).
these governors “are held administratively and politically accountable for the success of businesses in their jurisdiction” (Shi et al., 2014a, p. 64), similar to state governors in the United States. However, because regional governors in China are not elected and are appointed by the central government, they are more powerful than state governors in the United States. Governors in China have significant latitude in terms of fiscal policies (such as taxation and expenditure) and industrial policies (such as strategic industry support), which significantly influence their regional economies and, subsequently, individual firms’ performance (Adams & Kenny, 1989).

In their early days of being in the office, regional governors in China usually initiate many investment projects to boost the regional GDP, especially in transportation infrastructure because such investment may drive up land prices that in turn increase the region’s revenues from land sales (Wu et al., 2013). However, when governors have a longer tenure in their positions, they may improve the government accountability because the latter may increase economic growth and social development in the long run (Coase & Wang, 2012).

How does a governor’s tenure affect the relationship between the legal environment openness and local firms’ outward internationalization? In the United States, a state governor may use gubernatorial power to review and recommend changes in the state’ administrative rules (Woods, 2004). Comparably, in China, a regional governor usually has seats at both national and provincial levels of the People's Congress (McGregor, 2010). But because the People’s Congress is typically a rubber stamp shop for party decisions, governors in China who are appointed by the CPC have more power to push things through than governors in the United States. Therefore, the longer a Chinese governor’s tenure, the stronger his/her influence on the legislative process (McGregor, 2010). More likely the governor can excise stronger power to enforce and implement the rule of law such that it can protect the legal environment openness in the region and to
strengthen its effects on firms’ strategy within the region. Therefore, firms that are located in such a region are likely to experience stronger institutional open access, thus increasing their incentives in developing firm-specific capabilities in internationalization. Accordingly:

**Hypothesis 3a.** A regional governor’s tenure positively moderates H1a. In other words, the longer a regional governor’s tenure, the stronger the positive impact of that region’s legal environment openness on the degree of outward internationalization undertaken by firms headquartered in that region.

The economic reforms in China since 1978 have liberalized regional economies with fiscal decentralization (Coase & Wang, 2012; Zhang & Gao, 2008). Regional governors have more fiscal power to stimulate local economies. One widely implemented policy is endowing factor market development to generate more economic opportunities (Hoskisson et al., 2013). Factor market development is essential to build firm-specific capabilities (Barney, 1986).

How does a governor’s tenure affect the relationship between financial market openness and local firms’ outward internationalization? We argue that financial market openness and other factor market development (e.g., labor markets, raw material markets, and other markets for entrepreneurial resources) complement each other to provide resources for internationalization. A regional governor who has been in his/her office for a longer period of time is likely to have more autonomy to develop appropriate factor markets, align divergent preferences, reduce information asymmetries in market development, and fill the gap between the central government/CPC policy and local needs (Zhang & Gao, 2008). Therefore, under a relatively stable political environment, thanks to a longer tenure of a governor, the positive impact of financial market openness on a local firm’s internationalization is likely to be reinforced. Thus,

**Hypothesis 3b.** A regional governor’s tenure positively moderates H2b. In other words, the longer a regional governor’s tenure, the stronger the positive impact of that region’s financial market openness on the degree of outward internationalization undertaken by firms headquartered in that region.
METHODS

Research Context

We use China as a setting to test our hypotheses for three reasons. First, China has undergone a series of major institutional transitions in the last decade. Since 1999, the central government has begun to encourage outward FDI by offering export tax rebates, foreign exchange assistance, and direct financial support (Luo et al., 2010). In 2001, China became a member of the World Trade Organization (WTO). Since then, the country has significantly improved its legal and regulatory environment in an effort to enhance institutional open access (Buckley et al., 2007), setting a stage for local firms to go abroad. As shown in Figure 2, China experienced substantial growth in exports and outward FDI between 2001 and 2005. Exports accounted for 35% of China's GDP in 2006 compared to 21% in 2000, demonstrating Chinese firms’ widespread outward internationalization.

[Figure 2]

Second, financial markets have also experienced significant reform and deregulation after 2000. Before 2000, CSRC usually only approved SOEs, not private firms, to go public. Only after China’s WTO entry in 2001 did CSRC also permit some high-performance private firms to list their shares.

Third, tremendous inter-region diversity exists in China. For example, some regions within China have used aggressive policies to attract inward FDI with great success, and other regions have fallen behind (Shi et al., 2012, 2014a, 2014b). Such regional variance enables us to examine FDI’s spillover effect and competition effect that mostly take place at the region level (Meyer & Sinani, 2009). Some regions have higher quality rule of law while some do not. Firms are not allowed to go public without the approval by the provincial government (Pistor & Xu,
Some regional governments are more permissive than others in permitting private firms to go through IPO. These regional differences enable us to examine the impact of differences of institutional open access within a country (Gao et al., 2010; Liu et al., 2014).

Overall, we believe that studying 31 regions (provinces) of China between 2001 and 2005 provides an appropriate context in which we can explore how multiple forms of institutional open access across regions at home can affect Chinese firms’ outward internationalization.

**Data and Sample**

Our sample was drawn from the companies listed on the Shanghai and Shenzhen Stock Exchanges (A shares) between 2001 and 2005 (inclusive). We excluded financial and insurance firms due to the peculiarity of their balance sheets, resulting 5,239 observations (company-years, after one year lag of all independent and control variables). We collected internationalization data from annual reports of the listed firms. Financial data came from the China Stock Market and Accounting Research (CSMAR) database. We collected data on wage, population, GDP, and FDI from *China Statistical Yearbooks* between 2001 and 2005.

**Dependent Variable**

*The Internationalization Decision.* Follow Tallman and Shenkar (1994), we measured the focal firm’s decision of outward internationalization as a dummy variable, which equals 1 if the firm is involved in export or overseas FDI and 0 otherwise.

*The Degree of Outward Internationalization.* Outward internationalization represents the extent to which a local firm is involved in international business. Two measures of internationalization are commonly used. The first is the ratio of foreign sales to total sales (FSTS). Such sales can be derived from exports, outward FDI-based production abroad, or both.

---

4 The CSMAR database is widely regarded as one of the most comprehensive and authoritative data sources of the publicly listed firms in China (Wang, Wong, & Xia, 2008).
This measure captures the extent of exposure to foreign markets. Another measure of internationalization is the ratio of the number of overseas subsidiaries to total subsidiaries (OSTS). This measure examines the scale and scope of subsidiaries across countries.

Although both measures are widely used, many studies have only used one of them. However, using a single indicator to represent the complexity of internationalization has been criticized, calling for a multidimensional construct for internationalization (Qian et al., 2010; Sullivan, 1994). In this study, following Contractor et al. (2003), we summed two eigenvector-weighted measures—(1) the ratio of FSTS and (2) the ratio of OSTS—to capture a local firm’s degree of outward internationalization (DOI).

**Independent Variables**

*Legal Environment Openness.* China’s regional disparities in economic, social, and political development are widely noted (Chan et al., 2010; Shi et al., 2012). Focusing on the regional (provincial) differences, Fan, Wang, and Zhu (2007a) at the National Economic Research Institute (NERI) developed an index to measure legal environment openness annually. Based on province-level data, the index captures (1) the development of market intermediaries using the ratio of the number of lawyers and registered accountants to population, (2) the protection of the legal rights of firms using both the reversed frequency of economic crimes normalized by GDP and managers’ rating on local firms and investor legal right protection in a countrywide survey conducted by NERI, (3) IPR enforcement using the total number of patents applied and approved adjusted by the number of engineers, and (4) consumer rights protection using the reversed frequency of consumer complaints received by the Consumer Association of China (adjusted by province GDP). We adopted Fan et al.’s (2007a) NERI index, which is a factor score of the above four spheres to indicate the legal environment openness of each province in which a firm
To further examine the reliability of our scale, we tested Cronbach’s alpha that indicates the degree to which our four items represent the unidimensional latent construct of legal environment openness. Alpha ranged from .62 to .73 and the scale is .72. We further performed factor analysis on the four items (see Appendix). A common factor emerged with factor loadings of at least .6 or above, suggesting a high level of internal consistency of our measure.

Financial Market Openness. Financial market openness refers to the extent to which domestic firms from an EE have competitive access to capital. Previous research has measured the market value of capitalization (di Giovanni, 2005; La Porta et al., 1997) or the number of firms listed on a stock exchange (Allen, 1993). Following di Giovanni (2005), we measured the level of financial market openness as the percentage of the amount of raised funds through IPOs in a focal province to the total amount of raised funds of listed firms on Shanghai and Shenzhen Stock Exchanges. While the stock exchanges are nationwide, IPO permits in China are issued on a province-by-province basis (Pistor & Xu, 2005). The provincial government has the authority to decide whether or not to grant certain local firms in their jurisdiction the permission to be listed. Thus, a high percentage of the amount of raised funds at the province level may be indicative of that province’s financial market openness.

Inward FDI Activities. We measured inward FDI with two indicators, annual FDI flow and FDI stock, which reflect short-run and the long-run influences, respectively. We calculated the amount of annual FDI flow received by each province adjusted by GDP at the province level.

---

5 The NERI’s index is widely used in accounting (Wang et al., 2008), corporate governance (Wu et al., 2009), strategy (Shi et al., 2012), and international business (Liu et al., 2014; Shi et al., 2014b).

6 Following Allen (1003), we also used an alternative variable to measure the level of financial market openness as the percentage of the number of listed firms from a focal province to the total number of listed firm on Shanghai and Shenzhen Stock Exchanges. The results are broadly consistent with those reported in our tables.
FDI stock was calculated by the total accumulation of inward FDI in a province in five years adjusted by GDP.

**Moderating Variable**

*Governor’s Tenure* It was measured by the difference between the year a regional governor was inaugurated and a focal year (Wu et al., 2013).

**Control Variables**

*Firm Age.* It was calculated based on a firm’s founding year.

*Firm Size.* Firm size was measured by a firm’s number of employees (log transformed).

*Innovation Capability.* A firm’s innovation capability likely affects its capability to compete globally. We measured innovation capability as the number of patents a firm filed at China’s State Intellectual Property Office during each studied year divided by the number of employees.

*Diversification.* Hitt, Hoskisson, and Kim (1997) found that product diversification influences a firm’s DOI and performance. To control for its possible effect on DOI, we included this variable, measured by Herfindahl index as

\[ HI = \sum_{i=1}^{M} P_i^2 \]

where \( P_i \) is the sales attributed to segment \( i \).

*Slack.* Organizational slack may help managers pursue internationalization by allowing greater financial discretion (Stan, Peng, & Bruton, 2014; Tan & Peng, 2003). We operationalized slack resources as a ratio of current equities to current liabilities.

*Capital Intensity.* Capital intensity affects a firm’s profitability and resource orchestration through strategic investment (Hoskisson et al., 2013), which may be related to DOI. We measured capital intensity as the ratio of capital expenses to total sales.

*Tangible Assets.* Tangible assets transferred to a firm’s foreign affiliates are found related to its DOI (Delios & Beamish, 1999). We used the tangible assets ratio (fixed assets/total assets on
a balance sheet) as a proxy.

**CEO Characteristics.** The upper echelon theory proposes that the attributes and mindsets of executives may be associated with internationalization strategies (Nadkarni & Perez, 2007). Following Fan, Wong, and Zhang (2007b), we collected CEO background data from the annual reports of each firm. We created a dummy variable, *CEO with Political Experience*, and coded it as “1” if a CEO was currently or formerly an official in either the central government, the local government, or the military, and “0” otherwise. We also traced CEOs’ overseas experience and created another dummy variable, *CEO with Overseas Experience*, to reflect whether he or she had worked for a foreign MNE, an international joint venture in China, an overseas subsidiary of a Chinese MNE, or educated abroad (including Hong Kong, Macau, and Taiwan). A CEO who had any international experience was coded as “1” and “0” otherwise.

**Business Group Affiliation.** Business group affiliation may help EE firms access more resources to facilitate growth (Tan & Meyer, 2010). We included a dummy variable: “1” if the focal listed firm is affiliated with a business group and “0” otherwise.

**SOE Status.** We created an *SOE Status* dummy: “1” if the focal firm is an SOE and “0” otherwise.

**Industry Effects.** Internationalization may vary from industry to industry, and incentive policies (such as export subsidies) may also vary from industry to industry. We followed the Industry Classification Guide of Listed Companies issued by CSRC in April 2001 to group our sample firms into 21 industries and create 20 dummy variables.

**Year Effects.** We created four dummy variables for the years 2002 to 2005 while the year 2001 serves as a baseline for comparison.

**Analytical Strategies**
To examine our hypotheses, we set DOI as a dependent variable to examine the direct effects of three main variables. There are two issues in our analysis. First, firms choose strategies based on their own firm-level attributes, industry conditions, and institutional environment. Their strategic choice is endogenous and self-selected (Dastidar, 2009). However, only a few studies have econometrically corrected for endogeneity. Internationalization is a result of self-selection and probably driven by unobserved strategic factors. To overcome such a sample selection problem (Heckman, 1979), we adopted a two-stage estimation strategy to assess the impact of institutional open access, industry-level attributes, and firm-level attributes on a firm’s internationalization (Dastidar, 2009; Gao et al., 2010).

We believe that the internationalization decision is structured in a two-stage process. In the first stage, a firm decides whether it wants to internationalize or not. In the second stage, the firm then decides how much it can go in internationalization. In these two stages, “the actual decision process may well have both simultaneous and sequential aspects, but a stepwise approach improves clarity and will be followed” (Tallman & Shenkar, 1994, p. 100). To model this two-stage process, we, in the first stage, created a binary variable, which equaled to “1” if a firm was involved in internationalization with DOI of above 0.1% and “0” otherwise. After a one-year lag for all the independent and control variables, our sample in the first stage was reduced from 6,085 to 5,239 observations. Then, we calculated the inverse Mills ratio (IMR) based on the results of the first stage Logit model of internationalization.

\[
\text{IMR} = \frac{\phi(Fit)}{\Phi(Fit)} \quad \text{if DOI } \geq 0.001 \quad \text{and} \quad \text{IMR} = \frac{-\phi(Fit)}{1-\Phi(Fit)} \quad \text{if DOI } < 0.001
\]

We acknowledge that a 0.1% DOI level represents a very low threshold for internationalization. But this measure is justified because (1) it literally captures the beginning stage of a lot of Chinese firms’ internationalization, and (2) it represents a nontrivial amount of revenues (by Chinese standards) overseas—if DOI ≥ 0.1%, at least US$262,500 of the revenues would come from overseas. In robustness tests, we also test models while raising the DOI level to 1% or 5%, and the results are broadly similar.
where \( \text{Fit} \) is the fitted value computed from the first-stage choice regression, \( \phi \) represents the probability density function of the normal distribution, and \( \Phi \) represents the cumulative distribution function of the normal distribution (Heckman, 1979).

In the second stage, we included the IMR derived from the first stage to construct our models. There are 1,965 observations that have DOI of at least 0.1% or above. After independent and control variables were lagged by one year, our sample size was reduced further to 1,532.

A second issue is that we need to differentiate the inter-region differences (the main arguments of our three hypotheses) and intra-region differences. Chinese firms are nested within a province. Due to differences in economic policy, culture, and history across provinces, the internationalization strategies of firms headquartered in the same province may share similarities (Tse, 2010). The sharing of the same provincial context may be a cause of dependency among observations. Methodologically, acknowledging the existence of an intra-region (intra-province) correlation is important because it changes the error variance in traditional linear regression models. This error variance represents the effect of all omitted variables and measurement errors, under the assumption that these errors are unrelated. Because of the existence of intra-region correlation, the assumption of independent observations in the traditional linear model is violated (Kreft & Leeuw, 1998). This violation may increase the probability of Type I error. To deal with such real-world problems, we applied multilevel analysis with random coefficients modeling (RCM) in two steps (Hitt et al., 2007).

We built our data under a two-level hierarchical structure. The first level is firm level, and the second level is region (province) level. Intra-region correlation refers to the proportion of variance in the outcome variable that is between the second-level units. It can be identified from intra-class correlation (ICC). The ICC shows how much of the variance of that dependent
variable at the firm level can be explained by independent variables at the region level (Cuervo-Cazurra & Dau, 2009). We calculated covariance parameter estimates and identified ICC values to be 0.14, suggesting that 14% of variation in internationalization is explained by intra-region correlation. A value of ICC above 0.10 indicates the importance of such correlation and multilevel analysis of RCM is necessary (Bliese & Ployhart, 2002).

Under the two-stage estimation strategy with a two-level hierarchical structure, we built RCMs in the first-stage Logit model using Stata V.10 with the “xtmelogit” command, and in the second-stage mixed regression with the “xtmixed” command. In RCMs, each region has the same independent variables and the same outcome, but with different regression coefficients. The models are linked together by a second-level model, in which the regression coefficients of the first-level models are regressed on the second-level independent variables (Kreft & Leeuw, 1998). As such, we can identify more robustly inter-region differences (the effect of institutional open access at the firm level) from intra-region correlations.

FINDINGS

Table 1 shows descriptive statistics. We address the potential collinearity problem by checking the variance inflation factor (VIF). None of the highest VIFs in all models is larger than 10. In addition, our coefficient estimates in all models are consistent in their directions in Tables 2 and 3, reducing the concern of any significant detrimental effects of multicollinearity.

[Tables 1, 2, and 3]

Table 2 reports the results of Logit models based on the first stage model estimation, which uses the internationalization decision as the dependent variable. These results illustrate a firm’s decision on internationalization. In Model 4, both legal environmental openness ($\beta = 0.141, p$
< .001) and financial market openness ($\beta = 2.409, p < .05$) have significant and positive effects on the choice of internationalization. Therefore, both H1a and H2a receive significant support.

Table 3 shows the results of mixed regression models in the second stage that uses DOI as the dependent variable to test the rest of our hypotheses. IMR derived from the first stage is included in all models. IMR is statistically insignificant in all models, indicating that endogeneity may be less of a concern. The negative coefficient of IMR means a downward bias in the estimated effect of DOI without the self-selection correction (Dastidar, 2009).

Specifically, Model 6 indicates that the level of legal environment openness of the province in which the focal firm is headquartered positively influences the firm’s DOI ($\beta = .016, p < .01$). These results suggest that legal environment openness is directly associated with DOI, supporting H1b. We adopt a similar approach to examine H2b. Model 7 shows that financial market openness has a significant and positive effect on a firm’s DOI ($\beta = .458, p < .01$). Model 8 includes legal environment openness and financial market openness in the regression analysis. Both coefficients are significant. Therefore, H1b and H2b are supported.

We further test the moderating effects of governor’s tenure on the relationship between legal environment openness and DOI and that between financial market openness and DOI. We find the moderating effects of legal environment openness is significant in Model 9 ($\beta = .014, p < .05$) and Model 11 ($\beta = .014, p < .05$). Plotted in Figure 3, these results thus support our H3a.

[Figure 3]

While the moderating effects of financial market openness is significant in Model 10 ($\beta = .737, p < .05$), it is insignificant in Model 11. H3b is supported to some extent. Model 11 suggests that the moderating effect of governor’s tenure on the relationship between legal
environment openness and DOI is more significant than the moderating effects on the relationship between financial market openness and DOI.

**DISCUSSION**

**Contributions**

Overall, at least three contributions emerge. First, we develop a new institution-based theoretical framework to explain the outward internationalization of firms from EE. Our results support North et al.’s (2009) insights on the importance of institutional open access. While the literature has voluminous coverage on host country institutions, our institutional open access framework has extended this research and argued that EE’s institutional open access at home—specifically, in the particular home region within a country—is an important but previously underexplored institution-based driving force behind some EE firms’ outward internationalization. Overall, our efforts have enriched the institution-based view (Ahuja & Yayavaram, 2011; North, 1990, 2005, North et al., 2009; Peng et al., 2008, 2009).

Echoing the “escape” view on the institutional misalignments (Witt & Lewin, 2007), some scholars focus on the institutional constraints that drive EE MNEs out of their home country (Luo & Tung, 2007). Using a large sample to test this claim for the first time, our findings do not support this view. In contrast, we find that a poor legal environment at home actually hampers firms’ outward internationalization. These findings support Young et al.’s (2014) recent argument that institutional weakness in EEs may hurt firms’ competitive advantage. Overall, our findings are more consistent with the “fostering” view (Wan & Hoskisson, 2003).

Second, we add empirical richness to the sparse literature on institutional differences among regions within an emerging economy. Large emerging economies such as BRIC have
tremendous institutional heterogeneity among regions within each country. Our findings open the door to further understand the variability and dynamics among different regions. To address the importance of institutional differences among regions, this study applies multilevel analysis with RCM using region level data (Hitt et al., 2007). There are two distinct benefits from using RCM in our setting: (1) RCM separates the variance in firm-level internationalization decisions explained by independent variables both at the firm level and the region level; and (2) RCM corrects for the distortion introduced by varying sample sizes across regions. Through this approach, we can capture sub-national institutional variation and its effects on local firms’ internationalization, thus significantly enriching international business research.

Third, we also identify two moderating effects of regional governor’s tenure in boosting internationalization of firms from that region with a large EE. We find the moderating effect of regional governor’s tenure on the relationship between legal environment openness and internationalization is more significant than its moderating effect on the relationship between financial market openness and internationalization (Model 11 in Table 5). The reasons may be: (1) China’s legal environment openness still lags behind firms’ internationalization pace and the enforcement of rule of law strongly relies on a governor’s capacity. It highlights the important role of the regional government (not only the role of courts) in protecting private property right and contracts to reduce transaction cost (North, 1990, 2005; Fukuyama, 2011; Young et al., 2014). (2) In the context of local firms' outward internationalization, the complementarity between financial market openness and governor’s tenure may be substituted by the government’s enforcement of the rule of law and guardianship of legal environment openness. This supports Fukuyama’s (2011, p. 460) contention: “we need, then, to disaggregate the political, economic, and social dimensions of development, and understand how they relate to
one another as separate phenomena that periodically interact.”

Managerial and Policy Implications

Our study also carries important business policy and public policy implications. Our findings not only encourage EE firms to adapt to the new “rules of the game” during institutional transitions, but also benefit MNEs in strategically leveraging the institutional variance within a host country (Peng, 2003, 2012). In addition, our findings encourage EE governments to build institutional capacity (Fukuyama, 2011; Hoskisson et al., 2013; Lee & Weng, 2013). In the case of supportive legal environment and financial market openness, having a relatively long and stable governor’s tenure, which can be viewed as a measure for regional institutional capacity, seems helpful in propelling the outward internationalization of firms from a particular region.

Limitations and Future Research

The limitations of our research suggest a series of promising future directions. First, although FSTS and OSTS are commonly used, they only represent two dimensions of DOI. Some studies assessing the relationship between international expansion and firm performance have used a multidimensional approach (Contractor et al., 2003; Qian et al., 2010). Our efforts to use OSTS as an additional measure of DOI partially alleviate the problems associated with using a single and relatively crude measure such as FSTS. Future researchers may want to include the ratio of foreign employees to total employees and the ratio of foreign assets to total assets.

Second, firms’ resources and capabilities may moderate the effects of open access (Peng, 2012; Yamakawa et al., 2013). Some firm-level variables, such as business group affiliation, SOE status, and CEO political experience, may interact with region-level variables (Rui & Yip, 2008; Martin, 2014). In a preliminary test, we find that both interactions of business group affiliation/SOE status and FDI stock have significant effects on internationalization (not reported
here). How business group affiliation and SOE status deal with FDI’s spillover effect and competition effects calls for further research (Tan & Meyer, 2011).

Third, how do Chinese firms adapt to institutional transitions? The institution-based view suggests that firms have to adapt to changing institutional structures for growth (Peng, 2003; Martin, 2014). Most internationalizing firms from China have successfully adapted to the institutional transitions at home. How they enter and adapt to the new and unfamiliar institutional environments abroad (Globerman & Shapiro, 2009; Hoskisson et al., 2013; Peng et al., 2011) as they deepen their international involvement will be a fascinating future direction.

Finally, an intra-country study such as ours inevitably suffers from the usual trappings associated with questionable cross-country generalizability. Inter-country studies (Cuervo-Cazurra & Dau, 2009; Meyer et al., 2009) or two-country comparative studies (Chan et al., 2010; Lin et al., 2009) can enhance the generalizability of our framework around the world. Among the limited number of comparative studies, US-China comparisons dominate (Chan et al., 2010; Lin et al., 2009). One interesting suggestion is to compare the outward internationalization strategies of Chinese and Indian firms—still an empirical gap in the literature that will be fascinating to explore (for exceptions, see Sun et al., 2012; Yamakawa et al., 2013).

CONCLUSION
Starting from a basic proposition that “institutions matter,” the institution-based view has just set out on the long road to achieving an understanding of what institutions matter. The rise of outward internationalization of firms from EE has enabled us to extend the institution-based view by developing and testing a new framework centered on institutional open access. The inclusion of institutions as independent variables in our open access framework thus enhances
our understanding of strategic choices such as outward internationalization. In conclusion, if this article can contain only one message, we would like it to be a sense that institutional open access at home is an important source behind some EE firms’ internationalization.

REFERENCES


Figure 1 Theoretical Framework

Rule-based Institutions

Legal Environment Openness

Financial Market Openness

H1a

Local Firm’s Decision on Outward Internationalization

H1b

H2a

Local Firm’s Degree of Outward Internationalization

Governor’s Tenure

H2b

H3a

H3b

Figure 2 Chinese Firms’ Exports and Outward FDI

Data Source: U.S. Department of Commerce; National Bureau of Statistics of China
Figure 3 The Moderating Effect of Governor's Tenure (H3a)
Table 1 Descriptive Statistics and Correlation Matrix

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Internationalization decision</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Degree of internationalization</td>
<td>0.096</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Legal environment openness</td>
<td>0.084</td>
<td>0.147</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Financial market openness</td>
<td>0.136</td>
<td>0.073</td>
<td>0.383</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Governor's tenure</td>
<td>-0.077</td>
<td>0.030</td>
<td>0.084</td>
<td>-0.094</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Firm size</td>
<td>0.166</td>
<td>-0.060</td>
<td>-0.139</td>
<td>0.005</td>
<td>-0.020</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Firm age</td>
<td>-0.057</td>
<td>0.079</td>
<td>0.236</td>
<td>0.030</td>
<td>-0.021</td>
<td>0.067</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Innovation capability</td>
<td>-0.002</td>
<td>0.040</td>
<td>0.091</td>
<td>0.022</td>
<td>0.027</td>
<td>-0.113</td>
<td>0.026</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Diversification</td>
<td>0.073</td>
<td>-0.057</td>
<td>-0.132</td>
<td>0.027</td>
<td>0.086</td>
<td>0.156</td>
<td>-0.362</td>
<td>-0.021</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Slack</td>
<td>-0.002</td>
<td>0.054</td>
<td>-0.028</td>
<td>0.049</td>
<td>-0.012</td>
<td>-0.166</td>
<td>-0.107</td>
<td>0.022</td>
<td>-0.032</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Capital intensity</td>
<td>-0.021</td>
<td>-0.055</td>
<td>-0.052</td>
<td>-0.001</td>
<td>0.000</td>
<td>-0.083</td>
<td>0.057</td>
<td>-0.036</td>
<td>-0.097</td>
<td>0.006</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Tangible assets</td>
<td>-0.048</td>
<td>-0.066</td>
<td>-0.130</td>
<td>-0.057</td>
<td>-0.016</td>
<td>0.332</td>
<td>-0.046</td>
<td>-0.063</td>
<td>0.072</td>
<td>-0.040</td>
<td>-0.049</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. CEO with political experience</td>
<td>-0.070</td>
<td>0.047</td>
<td>0.014</td>
<td>-0.029</td>
<td>-0.030</td>
<td>-0.035</td>
<td>-0.017</td>
<td>-0.019</td>
<td>-0.077</td>
<td>-0.011</td>
<td>0.018</td>
<td>0.008</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. CEO with overseas experience</td>
<td>-0.015</td>
<td>0.111</td>
<td>0.133</td>
<td>0.067</td>
<td>0.078</td>
<td>-0.065</td>
<td>0.060</td>
<td>-0.012</td>
<td>-0.028</td>
<td>0.025</td>
<td>0.043</td>
<td>-0.072</td>
<td>-0.076</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Business group affiliation</td>
<td>0.051</td>
<td>-0.013</td>
<td>0.020</td>
<td>0.032</td>
<td>0.076</td>
<td>0.141</td>
<td>-0.175</td>
<td>-0.031</td>
<td>0.228</td>
<td>-0.016</td>
<td>-0.038</td>
<td>-0.009</td>
<td>-0.032</td>
<td>0.032</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>16. SOE</td>
<td>0.044</td>
<td>-0.011</td>
<td>-0.040</td>
<td>0.001</td>
<td>0.049</td>
<td>0.160</td>
<td>-0.095</td>
<td>-0.027</td>
<td>0.304</td>
<td>0.050</td>
<td>-0.034</td>
<td>0.117</td>
<td>-0.028</td>
<td>-0.078</td>
<td>0.131</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Mean: 0.292 0.116 5.746 0.059 1.263 7.278 8.626 0.002 0.229 1.759 0.064 0.358 0.228 0.082 0.795 0.719

Standard deviation: 0.455 0.221 2.863 0.086 0.450 1.303 4.086 0.016 0.141 3.575 2.753 0.197 0.420 0.274 0.404 0.450

Correlations above |0.12| are significant at the 0.05 level.
<table>
<thead>
<tr>
<th>Predictor variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal environment openness (H1a)</td>
<td>0.165***</td>
<td>0.141***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.042)</td>
<td>(0.042)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial market openness (H2a)</td>
<td></td>
<td></td>
<td>3.037**</td>
<td>2.409*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(1.033)</td>
<td>(1.036)</td>
</tr>
<tr>
<td>Moderating variable</td>
<td>-0.300**</td>
<td>-0.325***</td>
<td>-0.270**</td>
<td>-0.298***</td>
</tr>
<tr>
<td>Governor's tenure</td>
<td>(0.093)</td>
<td>(0.092)</td>
<td>(0.093)</td>
<td>(0.093)</td>
</tr>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm size</td>
<td>0.288***</td>
<td>0.290***</td>
<td>0.289***</td>
<td>0.290***</td>
</tr>
<tr>
<td></td>
<td>(0.035)</td>
<td>(0.035)</td>
<td>(0.035)</td>
<td>(0.035)</td>
</tr>
<tr>
<td>Firm age</td>
<td>-0.025*</td>
<td>-0.026*</td>
<td>-0.024*</td>
<td>-0.025*</td>
</tr>
<tr>
<td></td>
<td>(0.011)</td>
<td>(0.011)</td>
<td>(0.011)</td>
<td>(0.011)</td>
</tr>
<tr>
<td>Innovation capability</td>
<td>4.921*</td>
<td>4.793*</td>
<td>4.789†</td>
<td>4.700†</td>
</tr>
<tr>
<td></td>
<td>(2.447)</td>
<td>(2.441)</td>
<td>(2.459)</td>
<td>(2.451)</td>
</tr>
<tr>
<td>Diversification</td>
<td>0.114</td>
<td>0.114</td>
<td>0.123</td>
<td>0.121</td>
</tr>
<tr>
<td></td>
<td>(0.318)</td>
<td>(0.318)</td>
<td>(0.318)</td>
<td>(0.318)</td>
</tr>
<tr>
<td>Slack</td>
<td>0.007</td>
<td>0.007</td>
<td>0.007</td>
<td>0.007</td>
</tr>
<tr>
<td></td>
<td>(0.010)</td>
<td>(0.010)</td>
<td>(0.010)</td>
<td>(0.010)</td>
</tr>
<tr>
<td>Capital intensity</td>
<td>-1.005</td>
<td>-0.997</td>
<td>-1.037</td>
<td>-1.022</td>
</tr>
<tr>
<td></td>
<td>(0.664)</td>
<td>(0.665)</td>
<td>(0.674)</td>
<td>(0.673)</td>
</tr>
<tr>
<td>Tangible assets</td>
<td>-0.700**</td>
<td>-0.676**</td>
<td>-0.701**</td>
<td>-0.679**</td>
</tr>
<tr>
<td></td>
<td>(0.237)</td>
<td>(0.237)</td>
<td>(0.237)</td>
<td>(0.237)</td>
</tr>
<tr>
<td>CEO with political experience</td>
<td>-0.243**</td>
<td>-0.242**</td>
<td>-0.239**</td>
<td>-0.239**</td>
</tr>
<tr>
<td></td>
<td>(0.089)</td>
<td>(0.089)</td>
<td>(0.089)</td>
<td>(0.089)</td>
</tr>
<tr>
<td>CEO with overseas experience</td>
<td>-0.053</td>
<td>-0.057</td>
<td>-0.047</td>
<td>-0.053</td>
</tr>
<tr>
<td></td>
<td>(0.133)</td>
<td>(0.133)</td>
<td>(0.133)</td>
<td>(0.133)</td>
</tr>
<tr>
<td>Business group affiliation</td>
<td>0.058</td>
<td>0.058</td>
<td>0.059</td>
<td>0.058</td>
</tr>
<tr>
<td></td>
<td>(0.096)</td>
<td>(0.096)</td>
<td>(0.096)</td>
<td>(0.096)</td>
</tr>
<tr>
<td>SOE status</td>
<td>0.279**</td>
<td>0.276**</td>
<td>0.284**</td>
<td>0.281**</td>
</tr>
<tr>
<td></td>
<td>(0.091)</td>
<td>(0.091)</td>
<td>(0.091)</td>
<td>(0.091)</td>
</tr>
<tr>
<td>Intercept</td>
<td>-0.777*</td>
<td>-1.348***</td>
<td>-0.943**</td>
<td>-1.399***</td>
</tr>
<tr>
<td></td>
<td>(0.359)</td>
<td>(0.382)</td>
<td>(0.360)</td>
<td>(0.379)</td>
</tr>
<tr>
<td>N</td>
<td>5239</td>
<td>5239</td>
<td>5239</td>
<td>5239</td>
</tr>
<tr>
<td>Group (Region)</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-3074.014</td>
<td>-3067.224</td>
<td>-3069.725</td>
<td>-3064.537</td>
</tr>
<tr>
<td>Wald Chi2</td>
<td>285.70</td>
<td>300.30</td>
<td>293.70</td>
<td>305.90</td>
</tr>
<tr>
<td>LR Test</td>
<td>699.10</td>
<td>643.31</td>
<td>620.09</td>
<td>604.12</td>
</tr>
</tbody>
</table>

Note: Year dummy and industry dummy variables were included. † p < .10; * p < .05; ** p < .01; *** p < .001
<table>
<thead>
<tr>
<th>Predictor variables</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
<th>Model 8</th>
<th>Model 9</th>
<th>Model 10</th>
<th>Model 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal environment openness (H1b)</td>
<td>0.016**</td>
<td>0.012*</td>
<td>-0.005</td>
<td>-0.008</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial market openness (H2b)</td>
<td>0.458**</td>
<td>0.328†</td>
<td>-0.644</td>
<td>-0.179</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal environment openness × Governor’s tenure (H3a)</td>
<td></td>
<td>0.014*</td>
<td></td>
<td>0.014*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial market openness × Governor’s tenure (H3b)</td>
<td></td>
<td>0.737*</td>
<td>0.475</td>
<td>(0.353)</td>
<td></td>
<td>(0.352)</td>
<td></td>
</tr>
<tr>
<td>Moderating variable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governor’s tenure</td>
<td>0.027†</td>
<td>0.020</td>
<td>0.029†</td>
<td>0.023</td>
<td>-0.063</td>
<td>-0.027</td>
<td>-0.093*</td>
</tr>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm size</td>
<td>-0.001</td>
<td>0.001</td>
<td>0.001</td>
<td>0.002</td>
<td>0.002</td>
<td>-0.011</td>
<td>0.004</td>
</tr>
<tr>
<td>Firm age</td>
<td>0.007***</td>
<td>0.007***</td>
<td>0.007***</td>
<td>0.007***</td>
<td>0.008***</td>
<td>0.007***</td>
<td></td>
</tr>
<tr>
<td>Innovation capability</td>
<td>0.260</td>
<td>0.197</td>
<td>0.222</td>
<td>0.183</td>
<td>0.163</td>
<td>-0.181</td>
<td>0.129</td>
</tr>
<tr>
<td>Diversification</td>
<td>0.064</td>
<td>0.074</td>
<td>0.066</td>
<td>0.074</td>
<td>0.077</td>
<td>0.087</td>
<td>0.077</td>
</tr>
<tr>
<td>Slack</td>
<td>0.004†</td>
<td>0.005*</td>
<td>0.004†</td>
<td>0.005*</td>
<td>0.005*</td>
<td>0.005*</td>
<td></td>
</tr>
<tr>
<td>Capital intensity</td>
<td>-1.375</td>
<td>-1.277</td>
<td>-1.390</td>
<td>-1.301</td>
<td>-1.404</td>
<td>-1.436</td>
<td>-1.470†</td>
</tr>
<tr>
<td>Tangible assets</td>
<td>-0.087†</td>
<td>-0.093*</td>
<td>-0.094*</td>
<td>-0.097*</td>
<td>-0.097*</td>
<td>-0.071</td>
<td>-0.104*</td>
</tr>
<tr>
<td>CEO with political experience</td>
<td>0.052**</td>
<td>0.050**</td>
<td>0.050**</td>
<td>0.048**</td>
<td>0.047**</td>
<td>0.055**</td>
<td>0.044**</td>
</tr>
<tr>
<td>CEO with overseas experience</td>
<td>0.078***</td>
<td>0.074***</td>
<td>0.078***</td>
<td>0.074***</td>
<td>0.073***</td>
<td>0.081***</td>
<td>0.073***</td>
</tr>
<tr>
<td>Business group affiliation</td>
<td>-0.046**</td>
<td>-0.046**</td>
<td>-0.046**</td>
<td>-0.045**</td>
<td>-0.045**</td>
<td>-0.047**</td>
<td>-0.044**</td>
</tr>
<tr>
<td>SOE status</td>
<td>-0.013</td>
<td>-0.008</td>
<td>-0.008</td>
<td>-0.006</td>
<td>-0.008</td>
<td>-0.014</td>
<td>-0.003</td>
</tr>
<tr>
<td>IMR</td>
<td>-0.023</td>
<td>-0.010</td>
<td>-0.009</td>
<td>-0.001</td>
<td>-0.003</td>
<td>-0.059</td>
<td>0.015</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.209***</td>
<td>0.103</td>
<td>0.158*</td>
<td>0.084</td>
<td>0.212*</td>
<td>0.302**</td>
<td>0.213*</td>
</tr>
<tr>
<td>N</td>
<td>1532</td>
<td>1532</td>
<td>1532</td>
<td>1532</td>
<td>1532</td>
<td>1532</td>
<td>1532</td>
</tr>
<tr>
<td>Group (Region)</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>71.981</td>
<td>76.863</td>
<td>75.513</td>
<td>78.505</td>
<td>79.524</td>
<td>40.977</td>
<td>82.923</td>
</tr>
<tr>
<td>Wald Chi²</td>
<td>58.35</td>
<td>68.49</td>
<td>66.23</td>
<td>71.96</td>
<td>74.05</td>
<td>104.20</td>
<td>81.40</td>
</tr>
<tr>
<td>LR test</td>
<td>319.35</td>
<td>322.54</td>
<td>313.91</td>
<td>315.71</td>
<td>320.43</td>
<td>306.81</td>
<td>312.40</td>
</tr>
</tbody>
</table>

Note: Year dummy and industry dummy variables were included. † p < .10; * p < .05; ** p < .01; *** p < .001

APPENDIX: Factor Loadings and Cronbach’s Alpha of Legal Environment Openness

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor Loadings</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. The number of market intermediaries (lawyers and accountants)</td>
<td>0.802</td>
<td>0.619</td>
</tr>
<tr>
<td>b. The protection of the legal rights of firms (the frequency of economic crimes, reverse-coded; and managers’ rating on local firms’ and investor legal rights protection in a countrywide survey conducted by NERI)</td>
<td>0.839</td>
<td>0.624</td>
</tr>
<tr>
<td>c. The enforcement of intellectual property rights (patents)</td>
<td>0.887</td>
<td>0.655</td>
</tr>
<tr>
<td>d. The protection of consumer rights (consumer complaints, reverse-coded)</td>
<td>0.588</td>
<td>0.732</td>
</tr>
<tr>
<td>Test scale</td>
<td></td>
<td>0.724</td>
</tr>
</tbody>
</table>