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Home Country Institutions and the Internationalization of State Owned Enterprises: A Cross-Country Analysis

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Abstract

National institutions shape the ability of civil society and minority shareholders to monitor and influence decision-makers in listed state owned enterprises (SOEs), and thereby their strategies of internationalization. We argue that the weaker are such controls, the more likely such decision makers pursue self-serving motives, and thus shy away from international investment. Listed SOEs' strategies will thus be more similar to those of wholly privately owned enterprises (POEs) when these controls are more effective. Building on Williamson's (2000) hierarchy of institutions, we examine how home country institutions exerting normative, regulatory, and governance-related controls affect the comparative internationalization levels of listed SOEs and POEs. Based on a matched sample of 153 majority state owned and 153 wholly privately owned listed firms from 40 different countries, we confirm that, when home country institutions enable effective control, the internationalization strategies of listed SOEs and POEs converge.

Keywords: state owned enterprises, internationalization, home country institutions, matched sample, Tobit regression.

Introduction

State owned enterprises (SOEs) differ from wholly privately owned firms (POEs),¹ for example in terms of their governance (Gedaljovic & Shapiro, 1998; Rodriguez et al., 2007); attitude to risk (Borisova et al, 2012; Garcia-Canal & Guillén, 2008); and access to resources (Morck et al., 2008; Wang, et al. 2012c). Yet, despite the increasing global role of SOEs (UNCTAD 2014; Bruton et al., 2015), the impact of the state as an owner on firms' internationalization remains underexplored.

We start from the proposition that the processes owners use to shape the strategies of their firms depend upon the institutional framework under which they operate. Hence, even firms with similar types of ownership may make different strategic choices when institutional contexts vary (Peng, et al., 2008; Xu & Meyer, 2013). Yet, *how* specific institutions affect the behavior of particular types of firms remains an insufficiently understood question in strategic management research (Bruton, et al., 2010; Holburn & Zelner, 2010; Murtha & Lenway, 1994; Peng, et al., 2008). We follow Williamson (2000: 608) in arguing that “ownership is not determinative but needs to be examined in conjunction with the support, or the lack thereof, of the mechanisms of governance”. Our research question is therefore: *Under what conditions – in terms of home country institutions – do state owners facilitate or constrain corporate strategies of internationalization?*

POEs are generally presumed to prioritize profit oriented motives such as shareholder wealth maximization. They invest overseas when international investments are expected to be in the long run more profitable than domestic alternatives (Dunning, 1993). On the other hand, fully state owned organizations, such as government departments, follow primarily political agendas. Our interest focuses on companies with a mixed ownership structure – an increasingly important phenomenon in international business (Bruton et al., 2015). If a state entity controls a majority (more than 50%) of the quoted equity, it has a decisive voice in company decision-making, and the firm qualifies as a “listed state owned enterprise” (listed SOE). Then it is subject to political as well as business interests, potentially faces principal-principal conflicts (Lubatkin et al., 2005; Young et al., 2008), and is likely

¹ We use this abbreviation strictly for wholly privately owned firms, namely firms without any state entity as an investor.

to pursue a wider range of corporate objectives (Benito et al., 2011; Estrin & Perotin, 1991). We thus compare the strategies of POEs without any state-ownership and listed SOEs. We do not consider and exclude from our empirical analysis firms with minority equity stakes held by the state.

Our theoretical lens is the institution-based view, which investigates how rules and regulations govern decision makers in businesses, and thereby influence firms' strategies (Peng et al., 2008; Kostova et al., 2008; Meyer & Peng, 2016). While researchers have recognized the importance of both home and host country institutions for international strategies, most empirical work has focused on host country characteristics (e.g., Delios & Henisz, 2003; Meyer et al., 2014) or the distance between home and host countries (e.g., Estrin et al., 2009a, Tihanyi et al., 2005). In contrast, the influence of home country institutions has been largely neglected (Henisz & Zelner, 2010; Morck et al., 2008).

We use Williamson's (2000) synthesis of 'new institutional economics' to explore the impact of home country institutions; he identifies institutions at three levels that shape managerial decision-making. These home country institutions moderate the direct impact of state ownership on internationalization, which may be positive or negative. We argue that the greater the extent to which decision makers in SOEs are subject to effective control through the institutional structure, the less SOEs are likely to deviate from profit-oriented motives. When controls through institutional structures are weak however, 'insiders' such as politicians, lobbyists and SOE decision makers and managers are more able to pursue personal goals, for example providing benefits for their supporters or extracting private rents (Faccio, 2006; Goldeng et al., 2008; Shleifer & Vishny 1994). These rents are normally (though not exclusively) identified and extracted domestically. However, the stronger are the institutional controls over these SOE insiders, the more SOE internationalization strategies will resemble those of POEs.

Our empirical analysis tests these predictions using a matched sample methodology (Dehejia and Wahba, 2002). Starting from a dataset comprising the World's 5000 largest listed firms, we identified all SOEs (of which there were 153), and then matched them with 153 POEs in the same dataset. We

find that the internationalization of SOEs is conditioned by the effectiveness of institutions at each of the three levels of the institutional hierarchy in constraining opportunistic behaviors.

We contribute to the management literature by advancing the institutional perspective to examine the acknowledged yet rarely systematically investigated relationship between home country institutions and MNE strategies (Meyer & Thein, 2014; Morck et al., 2008; Nielsen & Nielsen, 2010). Second, we extend the institutional perspective (Bruton et al., 2010; Peng et al., 2008; Khanna & Rivkin, 2001; Henisz & Zelner, 2010) by exploring how institutions affect an increasingly significant form of ownership, namely state ownership of listed firms (Bruton et al., 2015). To this end, we develop a theoretical framework of the interaction between national institutions and the strategies of SOEs. Third, we are one of the first to investigate how national context moderates the effects of ownership on firm internationalization strategies. While earlier studies suggest that ownership directly influences internationalization (Tihanyi, et al., 2003; Cui & Jiang, 2012; Garcia-Canal & Guillén, 2008), our empirical results show how this impact is conditioned by the institutional environment.

State Owners, Institutions and Internationalization

State Ownership

In this study, we follow Bruton et al. (2015) and study hybrid organizational forms; in particular listed SOEs, the majority ownership of which is in the hands of the state.² Such firms are estimated to own around 20% of the world's stock market capitalization (Economist, 2010) and hence play a growing role in both domestic and global business. Recent scholarly interest has been stimulated by the surge of Chinese SOEs becoming major international players in some industries (Chen & Young, 2010; Cui & Jiang, 2012; Morck et al., 2008; Ramasamy et al., 2012; Wang et al., 2012b; c). However, listed SOEs are a much wider phenomenon: they are common in many emerging economies, and play important niche roles in several West European countries (Goldeng et al., 2008; Knutsen, Rygh & Hvem, 2011). To explore how this important type of ownership interacts with home country contexts to influence internationalization, we first discuss the theoretical mechanisms by which ownership

² The state owns or runs many other organizations integrated into the state apparatus e.g. the courts, the police or the army, but these are neither commercial nor distinct from organs of the state apparatus.

impacts internationalization, before turning to the moderating role of institutions, our main interest in this study.

Ownership and Governance

Private firms focus on creating wealth by developing and exploiting strategic advantages in potentially profitable locations. The theory of the MNE suggests such potentially profitable opportunities to be associated with firm's possession of internationally transferable resources, also known as ownership advantages (Dunning, 1993) or firm-specific assets (Rugman, 1980). Such firm-specific advantages enable firms to sell in foreign markets by helping to overcome the liability of foreignness (Zaheer, 1995). When such resources can best be exploited internally rather than by arms' length transactions, firms establish subsidiaries abroad, rather than export or license their assets (Buckley & Casson, 1976). Resources that can be exploited internationally through direct investment include in particular technology and marketing related assets (Hitt et al., 2006; Kirca et al., 2010; 2012).

However, owners and management boards vary in their support for internationalization (Tihanyi, et al., 2003). There are three mechanisms through which the owners create incentives to invest internationally: (1) they set objectives, (2) they shape the governance structure, and (3) they appoint management teams that eventually design and implement their strategies.

The primary objective of POEs is the maximization of profits. However, state owners may introduce non-commercial motives into firm objectives (Estrin & Perotin, 1991).³ Governments can use SOEs to achieve a variety of desired policy outcomes. In a free market economy, SOEs tend to be restricted to specific areas where pure market outcomes are considered either inefficient or socially undesirable (Vickers and Yarrow, 1992), such as industries with natural monopolies or providing a socially-desired basic service. In other countries, the state plays a direct role in economic development, and strategically deploys SOEs to achieve such political objectives (Aharoni 1981; Li, Cui, & Lu, 2014; Wang et al., 2012b). In this view, state ownership addresses the market failures of

³ Given our focus on listed firms it seems reasonable to assume owners' attention to profit and share-holder wealth maximization. Nevertheless, we recognize that privately owned firms may also pursue non-profit related motives, including social goals such as triple bottom line. We thank an anonymous reviewer for reminding us of this.

under-development by enabling funding of key industrialization or infrastructure projects (George & Prabhu, 2000), or even by guiding the process of market driven economic development, as is the case in Singapore and China (Redding & Witt, 2009; Tipton, 2009).

The objectives of resolving market failure or promoting economic development both normally entail investments in the home economy; though development may be complementary with internationalization. However, apart from this and other special cases such as natural resource industries, the additional objectives for firms introduced by state-owners would reduce their propensity to invest overseas.

SOEs are also necessarily subject to more complex governance structures than POEs, which can create dysfunctional incentives for decision makers in SOEs. In particular, SOEs are subject to two mutually reinforcing agency conflicts; the first between the public and the government, and the second between the government and the SOE management (Rodriguez et al., 2007). Hence, elites in some countries can exploit these complexities in the governance of SOEs so as to divert resources for their own purposes, including for the extraction of rents (Acemoglu & Robinson, 2012). Such extractable rents are fostered for example by the dominant positions held by some SOEs within the domestic economy, and by domestic institutions providing them some degree of protection from competition and monitoring. For example, SOEs may create or maintain employment among politically influential groups, such as voters in critical political constituencies. Under such a scenario, the dual agency conflict in SOEs leads them to divert resources and rents into the hands of powerful insiders.

When state-ownership is mixed with private ownership in hybrid organizations such as listed SOEs, while the dual agency conflict may be reduced by the influence of minority private shareholders, a principal-principal conflict may emerge because private and state owners may pursue different objectives (Young et al., 2008). For example, the state may seek to create jobs in key political regions, or to hold down the prices of goods that have a significant effect on the budgets of political supporters, in direct conflict with the profit objective of private owners. Decision makers are left to resolve irreconcilable differences in objectives, and in practice some may be tempted to exploit

the conflict to their private benefit for example via rent seeking (Estrin and Perotin, 1991). Because conflicting objectives make it harder for the owners to specify targets and to monitor performance, this provides leeway for decision makers to pursue their personal gains. The mechanisms whereby company insiders can exploit these agency conflicts for private gain will be located primarily, though not exclusively, in the domestic economy.

The pattern of rent generation in the domestic economy has often been carefully constructed and protected by policy and regulation in favor of rent-seekers (Applebaum & Katz, 1987). Such mechanisms of rent appropriation are typically much harder to replicate in international activities than at home. For example, firms operating abroad will be subject to monitoring and control from local and international stakeholders, such as media (Globerman & Shapiro, 2003, Jensen, 2003; Meyer et al. 2014). Moreover, in host countries with less transparent monitoring, foreign SOEs would often lack the sorts of relationships or ties with local elites and networks that provide an important mechanism for rent extraction. We therefore conclude that decision makers in SOEs who are enabled to pursue private gain without being held adequately accountable to their owners are likely to exhibit a home country bias.

Third, owners appoint management teams that make key strategic decisions and implement strategies on their behalf. Research has shown that the demographic and team characteristics of top management teams influence firms' internationalization strategies (Nielsen & Nielsen, 2011). In particular, the international experience of managers is strongly associated with internationalization strategies (Sambharya, 1996; Tan & Meyer, 2010). Through the selection of individuals for leadership roles in a company, owners intentionally or unintentionally shape the firms' strategies. For example, where leaders of state enterprises are selected based on political criteria or as part of national political cadre development (as in China, see Brødsgaard, 2012) rather than their international business experience, these managers are likely to prioritize operating where they know the environment best, namely in the domestic market. Government entities as owners selecting managers on the basis of political capital are therefore likely to select leaders who are less inclined to internationalize.

The essence of these three arguments is that state ownership introduces the possibility of diversion of company resources from outcomes that would pertain under private ownership, introducing a bias in favor of domestic over overseas investments. The scale of this bias depends on the national institutions that constrain the power of managers relative to owners, and of the state relative to minority private shareholders. The more effectively that decision makers in SOEs are subject to monitoring and control, the more they will act similarly to private enterprises in a given situation. Specifically, strong controls will limit the ability of representatives of the state to impose objectives upon the SOE that (1) deviate from the interests of minority shareholders; (2) limit the ability of managers to exploit principal-principal conflicts to their own benefits; and (3) ensure that managerial qualifications rather than political alignment drive the selection of top management teams. If, on the other hand, institutional control mechanisms are weak, strategies of listed SOEs and POEs with respect for example to internationalization will diverge; SOE managers will use their insider power to pursue personal objectives to the detriment of profitability, such as displaying a home country bias.

Institutions and SOEs

To analyze the institutions that may constrain insiders from diverting companies' resources, we turn to the institutional perspective. Institutions as rules of the game are shaping the extent of agency conflict and the efficiency of governance structures and thus the mechanisms by which owners can influence the activities of firms (Aguilera & Jackson, 2003; Estrin & Prevezer, 2011; Filatotchev, Jackson & Nakajima, 2013; Wiseman, Cuervas-Rodriguez & Gomez-Mejia, 2012). Specifically, they shape the functioning of organizational hierarchies in both public and private sector organizations by creating the incentives faced by decision makers, which in turn vary between firms according to ownership structures.

To organize a wide range of possible rules, Williamson (2000) analyzes institutional systems by distinguishing institutions at three levels by the pace at which they change. Each level of institutions places constraints on the ones below and jointly they determine national and organizational resource allocation. What North (1990) terms informal institutions, that is the customs, cultural traditions and

religious norms underpinning a society, are seen as the deepest rooted and slowest changing institutions and therefore placed at the apex of Williamson's hierarchy.

At the second level are formal institutions; the codified rules that for example define property rights and ownership arrangements, and which are stable and effectively enforced. The third level, governance, represents the particular structures adopted by organizations and individuals to manage transactions. Institutions at all three levels affect corporate resource allocations to international operations by establishing constraints on company decision makers.

These three levels of institutions are closely inter-related. Thus, formal institutions are embedded in cultural settings because political, economic, and contractual rules are connected to peoples' perceptions of how things ought to be done. Culture is the "software of the mind" (Hofstede, 1991) and formal institutions are themselves "products of the dominant cultural value systems" (Hofstede, 2001: 34). As a result, the same formal institutions that exist in societies with different cultural values can produce different economic outcomes (North, 1990). Likewise, governance mechanisms are shaped by the law, while emergent governance practices over longer time periods become codified into legal documents. However, change is slower at higher than lower levels of institutions.

Institutions at all three levels jointly determine a firm's allocation of resources because they shape incentives for decision makers and hence their resource allocation decisions (Williamson, 2000). An important example of this principle concerns firm internationalization; institutions shape outward investment in firms because they set the incentives under which business leaders allocate resources to foreign operation (Buckley et al., 2007; Morck et al., 2008). In a firm with *both* state and private owners, such institutions influence to what extent insiders representing the state owners are subject to effective monitoring and control, and hence can freely implement self-serving strategies that deviate from those of the private shareholders. Generally, where institutions impose only weak controls, listed SOEs would pay more attention to insider-promoted objectives that are likely to be more domestically focused. Consequently, interactions between ownership structure and institutions determine listed SOEs' allocation of resources to international operations.

Hypothesis Development: Home Country Institutions

As argued above, our baseline assumption is that if appropriate incentives are provided, listed SOEs will make similar choices to those of listed POEs. In particular, they will similarly exploit their firm-specific advantages by internationalization. However, when institutional controls are weak or inadequate, listed SOEs' behavior will deviate from the strategies of POEs in a number of ways, notably through domestic rent seeking and hence the adoption of more domestically oriented strategies. Hence, the *direct* effect of state ownership on internationalization is subject to opposing forces, and may be positive or negative depending on the institutional environment.

Our hypothesis development explores the ways in which home country institutions, developed around the three levels proposed by Williamson (2000), *moderate* the relationship between state ownership of firms and internationalization. We commence with the highest level - informal institutions - before considering formal and governance institutions.

Informal Institutions: Normative Control

The highest and most stable level of institutions in Williamson's (2000) framework is informal institutions. According to North (1990: 37), these represent "*the cultural filter that provides continuity so that the informal solution to exchange problems in the past carries over into the present and makes those informal constraints important sources of continuity in long-run societal change*". Informal constraints are culturally-grounded and can thus not be changed through deliberate policies but are passed from one generation to the next and only change gradually in that process (Hofstede, 1991; 2001). They have an enduring impact on executive mindsets (Geletkanycz, 1997) and interpretation and response to strategic issues (Schneider & DeMeyer, 1991; Nielsen & Nielsen, 2013).

Informal institutions shape the ability of a society to monitor and control the state sector, including both political actors and decision makers in SOEs. When the authority of these elites is unconstrained by norms of control, they are more able to pursue self-serving objectives. Such informal, or normative, control arises in situations when societal norms enable individuals of lower status to raise grievances or complaints against those of higher status, with the normative expectation that such grievances or complaints will directly or indirectly influence those of higher status. Informal

institution of control over persons in authority can operate for example via the media, the internet, or elected representatives that hold the elites in the state sector accountable.

Informal institutions of control are inversely related to power distance, which refers to “*the extent to which the less powerful members of organizations and institutions ... accept and expect that power is distributed unequally*” (Hofstede, 1991:28). This, therefore, reflects the degree to which relationships of power, status and hierarchy are considered legitimate in a society. Thus, in high power distance societies, class divisions are typical, leading to the concentration of power and authority among select (elite) groups (Hofstede, 1980). In contrast, informal institutions of control are associated with challenges to power and status being considered legitimate; hence those in positions of authority can expect to be challenged, and especially so if they abuse their power.

The implications of this legitimacy of challenges to authority have been highlighted in studies of the impact of power distance on management practices. First, low power distance is associated with decentralized decision making and less authoritative leadership (Newman & Nollen, 1996) and with more ambiguous roles and responsibilities (Kirkman & Shapiro 1997). Consequently, the effectiveness of practices such as work involvement varies with power distance: in high power distance countries employees follow instrumental incentives, whereas symbolic values are more important to motivate employees in low power distance countries (Jiang et al., 2015). Second, low power distance facilitates the flow of ideas and innovations between ordinary staff members and top management and increases managerial attention to external cues, which in turn facilitates organizational responsiveness to the recognition of international opportunities (Geletkanycz, 1997; Levy, 2005). Hence, individuals of lower status have more opportunities to monitor and influence decision making with lower power distance.

These insights into the influence of national culture on organizations suggest two consequences. First, in societies with strong informal institutions of control, people in high status roles, such as listed SOE managers and associated elites, are more likely to be challenged within their organizations and by society as a whole. This will be especially true if they pursue private benefit at the expense of public interest. Thus, strong informal control norms create pressures for elites to justify their actions,

and reduce their ability to pursue personal agendas. Indeed, evidence suggests that low power distance countries are associated with less politico-social corruption (Basabe & Ros, 2005).

Second, when informal control norms are weak, the ambiguities of power structures, which tend to occur in listed SOEs because of principal-principal conflicts, are more likely to undermine the effectiveness of investment decisions. Thus, the importance of informal norms of control is not the same in listed SOEs and POEs: managers in POEs are aligned to owners' objectives through formal governance mechanisms such as stock market monitoring and share options and are more incentivized to eschew rent extracting activities. Moreover, the absence of principal-principal conflicts between the state and private owners reduces the possibilities for POE managers to exploit such conflicts. Hence, because of their more clearly defined governance structures, normative controls play a less important role in POEs.

In contrast, decision makers in listed SOEs face less clearly defined governance structures due to the extensive principal-agent and principal-principal conflicts noted above. With formal organizational structures vaguely defined, informal norms become more important (Peng et al. 2008). Hence, informal norms that give legitimacy to lower ranked members of a society, for example to challenge authority, are more important for the governance of listed SOEs compared to POEs. Listed SOEs operating within weak informal norms of control are more able and likely to use their power to pursue private benefits, opportunities for which mainly arise in the domestic context where they may enjoy preferential government relationships and protection. Hence, we expect ISOEs in contexts with strong informal institutions of control – the norms governing behaviors of persons in roles of authority – to invest relatively more into international operations:

H1: Stronger informal institutions of control will have a positive effect on (strengthen) the relationship between state ownership and internationalization.

Formal institutions: Regulatory control

At the second level of Williamson's (2000) hierarchy of institutions stand formal institutions. Formal institutions are the foundation for the efficiency of markets as they enable for the exchange of

information among actors, the monitoring of behavior, and the sanctioning of defection from cooperative endeavor (North, 1990; Olson 1996). Conversely, weaknesses of formal institutions such as property rights and rules of law are weak are often seen as primary cause of the persistence of institutional voids in emerging economies (Khanna & Palepu, 2000). Some of the voids thus created may be filled by SOEs (Estrin et al., 2009b; Vickers & Yarrow, 1992). The objectives of state ownership in such cases are, however, typically domestic, and hence lead us to expect less internationalization of operations than under wholly private ownership.

Moreover, a weak legal framework reduces the constraints on the pursuit of self-serving objectives, and increases the ability of insiders to exploit resources of SOEs for their own benefit. For example, weakly defined and enforced property rights make it easier for insiders to expropriate state owned assets for the private purposes of politicians or SOE managers (Friedman et al., 2003; Shleifer & Vishny, 2002). Similarly, in regimes of weak competition law, a small number of incumbent monopolies with strong political ties may benefit from protection such as import restrictions (Hillman & Hitt, 1999). At the same time, a weak rule of law is associated with higher levels of corruption, which tends to favor local firms vis-à-vis foreign investors (Habib & Zurawicki, 2002) and incumbent firms such as SOEs over start-ups (Bruno et al., 2013).

When formal institutions are weak, non-market capabilities, such as lobbying and government relationships, become more useful to firms because the government's role in the economy increases and performance becomes more reliant on government favors (Holburn & Zelner, 2010; Vishny & Shleifer, 1994). However, SOEs are in a better position to benefit from investment in such non-market capabilities, because they are more closely integrated with the political elite, though spending resources in this way holds their internationalization back relative to private firms (Boddewyn & Brewer, 1994). Their relative domestic advantages likely have developed in response to local regulations and policies (Applebaum & Katz, 1987) and cannot be easily leveraged into foreign markets. Especially SOEs that dominate their home market on the basis of institution-based competitive advantages will find it difficult to transfer these advantages to foreign countries.

In contrast, when formal institutions are well formulated and enforced, listed SOEs are subject to controls as specified in rules and regulation, in the same way as POEs. Specifically, equal treatment before consistently enforced laws disables some of the practices that give SOEs a competitive edge in certain home environments. Consequently, when controls through the legal system are strong, listed SOEs face institutional constraints more similar to POEs, and hence are likely to act more like POEs both at home and in their internationalization strategies. Hence, the better rules of law are formulated and enforced, the less that SOEs can exploit domestic regulatory gaps, and the more they resemble private firms in their international investment strategies:

H2: Stronger formal institutions of control will have a positive effect on (strengthen) the relationship between state ownership and internationalization.

Corporate governance institutions: Capital market controls

The third level of Williamson's hierarchy is governance, which include rules and regulations created by participants in the economy, such as business associations, private market regulation and the businesses themselves. Of these, the depth, liquidity and effectiveness of domestic capital markets arguably have the most significant impact on the behavior of firms. Capital markets serve both as benchmarks to assess corporate performance and as the basis for incentive schemes such as stock option plans that help in aligning managerial objectives with those of private investors (Fama & Jensen, 1983; Filatotchev & Wright, 2011). Hence, they address some of the agency problems that may lead listed SOEs to deviate from focusing on profits.

The literature identifies several benefits of capital market development for firm governance and performance. Rajan and Zingales (1998) find that financial development reduces firms' cost of external finance and promotes growth, while Levine and Zervos (1998) show that stock market liquidity and banking development positively impact on firms' growth, capital accumulation, and productivity improvements. The main mechanisms for these improvements relate to the way that stronger capital markets bring competitive market pressures to bear to address agency problems internal to firms (Estrin and Perotin, 1991). Thus, in more developed capital markets, share price

information contains more accurate signals about comparative managerial performance, which can be used to evaluate managers in a particular company relative to counterparts in comparable organizations. Hence, stock market analysts can monitor managerial performance and more easily identify deviations from wealth creating behavior. More developed capital markets also support the market for corporate control, one of the key governance mechanisms in a market economy (Shleifer & Vishny, 1998), and thus help address the agency problems by creating competition between managerial teams (Estrin et al, 2009b).

Listed SOEs are hybrid organizations with private minority shareholders. Relative to POEs, they face both principal-principal problems and agency difficulties between owners and managers. However, the impact of both can be reduced in more efficient capital markets via the above mechanisms. Thus, because listed SOEs are subject to the governance systems of *both* the state sector and the private capital market because private shareholders can act as a ‘check’ on state-appointed individuals (Dharwadkar, George & Brandes, 2000; Young et al., 2008). Yet, their ability to do so depends on the development and effectiveness of capital market institutions. For example, when capital market institutions require clear reporting requirements, minority shareholders can monitor managerial performance more effectively. Hence listed SOE decision makers’ pursuit of self-serving objectives become harder to conceal or implement. Moreover, with the increased transparency provided by advanced capital markets, listed SOEs are more likely to be performance benchmarked against private firms, which provides incentives to emulate their strategies (Estrin et al., 2009b). Improved governance institutions thus will lead the strategies of SOEs and private firms to become increasingly alike (Chen & Young, 2010; Wang et al, 2012a).

The managerial market is an important mechanism driving the incentive effects from capital markets to managerial behaviour. Managers’ careers may involve shifts in jobs between state owned and private firms as capital markets become more developed and the two sectors begin to converge. When listed SOEs operate in an isolated bubble, behind opaque information and reporting arrangements, managers’ incentives relatively favor the pursuit of private benefits. However, if information about their behavior is expensive to gather and evaluate, then the gains from rent taking

are higher and the risks of punishment are lower. As capital markets develop, the requirements to provide information and the ability to evaluate it through benchmarking rise. Thus, managers diverting resources for private benefit will be penalized by capital markets through a lower evaluation of their managerial performance reducing their prospect for advancement through the managerial labor market.

Hence, institutions of governance constrain the personal objectives that politicians or SOE managers may pursue at the expense of minority shareholders. Those constraints are tighter when capital markets are more developed, leading listed SOEs to act more like comparable POEs, for example with respect to internationalization. This effect is reinforced by the generation of resources with more developed capital markets. When capital markets are underdeveloped, firms must rely disproportionately on internally generated funds, which may be insufficient to support expensive internationalization strategies. As capital markets become more developed, they become deeper and more liquid, providing access to additional capital resources for firms at lower cost. This relaxation of the financial constraints on investment, including international investment provides a second reason for the development of governance institutions to increase the propensity of listed SOEs to internationalize relative to private firms:

H3: Higher levels of corporate governance control will have a positive effect on (strengthen) the relationship between state ownership and internationalization.

To sum up, we propose that the allocation of resources by listed SOEs to international operations is moderated by the configuration of institutions in the country from which they originate. In particular, we argue that institutions shape the incentives for managers who allocate resources, and hence influence the extent to which listed SOEs differ in their international investments from POEs. Our central proposition is that *where institutions provide little control over insiders leading listed SOEs, they will be less internationalized than POEs. Yet, the more that institutions enable such control, the less the difference, and hence the more internationalized will be listed SOEs.*

We test this proposition through three hypotheses motivated by Williamson's (2000) hierarchy of institutions. Societies characterized by informal institutions enabling strong normative control (H1), formal institutions securing effective legal control law (H2) and governance institutions enabling capital market control (H3) moderate the effect of state ownership on internationalization. While theory tells us that the institutions at each level are highly correlated, they have different implications for policy and managerial practice. Figure 1 below shows the conceptual model upon which our empirical analyses are conducted.

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

Methodology

Sample and data

The initial sample for this study was drawn from the *Worldscope* database and includes the world's 5000 largest firms based on sales in 2010. This sampling was purposeful as we sought to include all large publicly listed enterprises (regardless of ownership) in order to ensure a comprehensive but representative population of firms from a variety of countries and industries with both private and public ownership structures in order to maximize variability in our data. *Thomson One Banker* was the source for firm level data, except for the ownership data, which came from the *Orbis* database. Country level data was obtained from the *World Bank* and *Hofstede* (1980; 2001). This dataset contained 153 *state-owned enterprises*⁴, defined as entities where the state has a majority ownership stake i.e. more than 50% of equity were held directly or indirectly by a state entity. Thus, given the relatively small subsample of SOEs and the potentially idiosyncratic nature of such firms, we created a matched sample of 153 wholly privately owned firms (POEs). We used the propensity-score matching in order to ensure that SOEs and POEs were as similar as possible with regards to a number of observable characteristics. Specifically, we matched each treatment firm (i.e. SOE) with a control firm (i.e. POE) based on firm size (total sales) and industry affiliation (3-digit SIC). We performed matching without replacement on the basis of the propensity score (for more details on this method, see Dehejia and Wahba, 2002), which is estimated using a probit regression where the dependent

⁴ We triangulated data from Thompson and Orbis databases to identify listed firms with more than 50% state ownership. In addition, we consulted the 2010 annual reports to ensure validity.

variable is the treatment dummy and the controls were the above mentioned variables. Our final dataset thus contains 153 listed SOEs and 153 POEs all of which are publicly listed (Table 1). The matching enables us to minimize the structural differences between ISOEs and POEs that exist in particular with respect to the industries within which they operate (UNCTAD, 2013). Other variations are controlled for in the conventional way by introducing control variables in the regression analysis.

*** *Table 1 about here* ***

Variables and measures

The dependent variable, firm *degree of internationalization* was measured as foreign assets to total assets (FATA) (Kwok & Reeb, 2000), as we are primarily interested in the allocation of resources to international operations, and hence foreign direct investments. Our focal moderating variables are measured as follows: informal institutions of control (Hypothesis 1) was operationalized by the inverse of Hofstede's power distance score (1991; 2001).⁵ Formal institutions of control (Hypothesis 2) were measured by the *rule of law* index of the Worldwide Governance Indicators (Kaufmann, Kraay & Mastruzzi, 2010). Rule of law encompasses factors related to contract enforcement and the protection of property rights. Finally, governance institutions (Hypothesis 3) were proxied by the value of the capital market, proxied by market capitalization adjusted for size of the economy. We follow standard practice in therefore defining market capitalization the sum of quoted share prices times the number of shares outstanding on the market normalized by GDP. Market capitalization is the most commonly used proxy for institutional development of capital markets (World Bank, 2010). *SOE* is a dummy variable taking the value of one if the firm is a listed state owned by the above mentioned definition, and zero otherwise. In robustness tests we also explored the impact of allowing a continuous measure of state ownership among listed firms, and found substantively the same results.

Control variables

Following previous studies, we included a number of country, industry and firm-level variables as controls. First, we controlled for two aspects of the home economy that may influence firm internationalization, namely the country's economic development in terms of *GDP per capita* (Delios

⁵ Since the power distance scores (PD) are in the range between zero and 120, we defined normative control as 120-PD.

& Henisz, 2003; Stoian, 2013) and its *currency reserves* (Goh & Wong, 2011). Currency reserves is the total reserves, including holdings of monetary gold, special drawing rights, reserves of IMF members held by the IMF, and holdings of foreign exchange under the control of monetary authorities (World Bank, 2010). Next, we included industry level control variables, measured based on 3-digit SIC codes, to capture industry characteristics influencing firm internationalization (UNCTAD, 2013; Wiersema & Bowen, 2011). *Industry concentration* is an indication of the number and relative power of firms in an industry. It was measured as the percentage of sales accounted for by the top four firms within a global industry. *Industry growth* was measured as the annual compound growth rate, calculated by taking the 10th root of the total percentage growth rate over a ten year period for the global industry (Dean & Meyer, 1996). We also controlled for *resource-based industries*, operationalized as a dummy variable for industries with SIC codes smaller than 1500.

As firm level controls, *product diversification* was measured using the entropy measure of firm diversification (Hoskisson et al., 1993; Palepu 1985). The entropy values were calculated with the formula $\sum p_i \ln(1/p_i)$ where P is the percentage of segment sales of the total firm sales and (1/P) is used as a weight to account for the importance of each business segment. We moreover controlled for *firm size*, measured as the logarithm of the firm's assets, and for *firm age*, measured as 2010 minus the year of foundation. As the firm's own resources and capabilities constitutes a key driver of internationalization (Kirca et al., 2012), we also included *R&D intensity*, measured as R&D expenditures as a percentage of sales, in the analysis. However, since this variable was missing for a relatively large proportion of the sample, we followed prior research (e.g. Singh, 2008) and coded all missing values of R&D with 0 and also added a dummy *R&D presence* indicating whether data on R&D was available or not.

Table 2 provides descriptive statistics (means and standard deviations) and correlations between the variables in our regression analysis. Not surprisingly, the rule of law is correlated with both power distance (.83) and GDP per capita (.83). Therefore, we conducted variance inflation factor (VIF) analyses to assess multicollinearity. The analyses generated 7.50 as a highest value, which is below the recommended benchmark of 10 (Hair et al., 1995).

*** Table 2 about here ***

Analysis

Given the nature of our sampling, our dependent variable (degree of internationalization) is subject to left-censoring. Some of the world's largest firms are purely domestic and thus have zero degree of internationalization. Therefore, we used a Tobit (Tobin, 1958) model to estimate our equations while accounting for the left-censoring of our data. Conventional regression techniques, like OLS, can provide inconsistent parameter estimates when applied to data that include a large proportion of limit observations; it may yield a downwards-biased estimate of the slope coefficient and an upwards-biased estimate of the intercept (Greene, 2003: 764).

Results

Table 3 provides our main results of the Tobit estimations. Model 1 shows the base equation with all the control variables. Models 2 to 7 report the analyses for each of our moderating variables; first we report the main effect model followed by the interaction effect as recommended by Andersson, Cuervo-Cazurra and Nielsen (2014). While inclusion of all interaction effects in the same model would have been preferable, particularly the rule of law variable is relatively highly correlated with the other institutional variables thus rendering such analyses problematic. It should be noted, however, that the results of the other two moderator variables (informal institutions and governance institutions) remained significant. The interdependency among the three types of institutions is consistent with the theory as outlined by Williamson (2000), suggesting an embedded and inter-related hierarchy among institutions.

*** Table 3 about here***

In models 2 and 3, we introduce *informal institutions of control*. While the main effect (Model 2) is not significant, we find support for hypothesis 1 in Model 3 that *informal institutions of control* has a positive significant moderating effect on the proclivity of SOEs to internationalize ($\beta=0.58$, $p<0.05$). This supports our argument that in countries with high normative control over persons in high authority roles, ISOEs are more internationalized compared to POEs. The fact that the main effect in model 2 is not significant underscores our theoretical argument; it is not that *informal institutions of*

control per se influences firm internationalization; however, when combined with a particular ownership type (ISOE versus POE) it may induce ISOEs to invest abroad.

Hypothesis 2, which proposed a positive moderation of *formal institutions of control* on the focal relationship, also received strong support ($\beta=0.14$, $p<0.01$) (Model 5), suggesting that the strength of rule of law increases the degree of listed SOE internationalization. Finally, Hypothesis 3 predicted a positive moderation of corporate governance institutions in form of *governance control* on the state-ownership-internationalization relationship. This hypothesis also obtained strong support ($\beta=0.13$, $p<0.01$) (Model 7) in favor of our theory. Together, the results provide strong evidence for our theoretical framework as outlined in Figure 1; listed SOE internationalization is conditioned in important ways by the configurations of informal, formal and governance institutions of the countries from which these listed SOEs originate.

With respect to control variables, we detect positive and highly significant effects of *R&D intensity* and resource-based industries across the models. These results may be interpreted as testimony to the importance of access to valuable resources in order to create transferable ownership advantages when investing abroad (Dunning, 1993, Kirca *et al.*, 2012), irrespective of ownership. *R&D intensity* indicates that, on balance, firms that invest in building innovative capabilities may be better positioned to reap the benefits of international competition, as one would expect given the importance of firm-specific advantages in explaining FDI (Dunning, 1993). We also note that currency reserves seem to be negatively related to internationalization. Perhaps this reflects a macro-economic effect whereby high reserves increase the value of the domestic currency, making imports cheaper and exports more expensive. Such a shift in the terms of trade might lead firms to invest in ‘cheap’ acquisition opportunities overseas, and in production sites abroad.

Robustness tests

We conducted a series of robustness tests in order to reduce concerns about unobserved heterogeneity and provide additional confidence in our results. First, we used an alternative continuous measure of state ownership that accounted more precisely for different levels of state ownership and obtained empirical results consistent with our finding reported above. However, the continuous state-ownership

variable, derived from Thompson Ownership, had more missing values and revealed inconsistencies when checked against company annual reports.

Second, we substituted some measures of the moderating theoretical constructs used in our hypotheses testing. For example, we used the protection of intellectual property rights in place of rule of law to gauge the role of formal institutions, and we found the results to be virtually identical. Similarly, we substituted Hofstede's (1980; 2001) measure of power distance with other measures of informal institutions, including the Globe measures (House et al., 2004). Again, the results remain unchanged.

Next, we used additional control variables. Since our sample of SOEs includes 36 companies from China and India, respectively, we included a dummy variable for each country in order to control for country-specific effects. The results revealed no such effects as all our hypotheses were still supported, suggesting that our results are not driven by SOEs from China or India. We also did an additional test controlling for firms listed on stock exchanges outside their home country as listed SOEs may use international listing as a springboard to overcome institutional constraints in order to secure capital for international expansion. This did not lead to substantive changes in any of the focal results. Moreover, we added more home country control variables, notably population as a control for the size of the home economy, but this did not change the focal results either.

Finally, we conducted a robustness check by running the same models on the full sample of 5000 firms and, again, the results remain largely robust, albeit naturally with different levels of significance. In that full sample, the direct effect of state-ownership was highly significant ($\beta=-0.10$, $p<0.01$) even when controlling for GDP per capita. However, as evidenced by our matched sample analysis, this relationship appears to be driven to a large extent by sample size and confounded by level of development of the home country economy. Thus, our matched sample approach allows for a stronger and more accurate test of our theoretical model. Together, these robustness tests lend additional credibility to our results and emphasize the importance of home country governance institutions for SOE internationalization.

Discussion

Our central proposition is that the internationalization of listed SOEs depends on the institutional environment from which they originate. Following Williamson's (2000) hierarchy, we distinguish between informal, formal and governance institutions that affect resource allocation decisions such as internationalization. Specifically, we have examined how home country institutions exerting control over decision makers in state owned firms affect the comparative internationalization levels of listed SOEs and POEs. Our results reveal a complex association between state ownership and internationalization, depending on institutions at all three levels of the hierarchy. However, despite this complexity, we find a parsimonious core relationship arising from our theory and confirmed by the empirical tests: the more that institutions provide for effective controls of decision-makers, the more listed SOEs pursue strategies that resemble those of private firms.

This moderating effect of home country institutions on the degree of listed SOEs' internationalization helps to explain the drivers of their internationalization. Specifically, our finding that informal institutions of control in form of societal norms strengthen listed SOE's internationalization offers important insights into how deep-rooted cultural values may interact with firm ownership in determining international strategies. In line with Hypothesis 1, listed SOEs originating from countries with strong normative controls over elites are found to be more internationalized compared to their privately owned counterparts. Indeed, as illustrated in Figure 2, as *informal institutions of control* increase, we find that listed SOEs internationalize more, whereas private firms internationalize less.

*** *Insert Figure 2 here* ***

As argued above, where unequal distribution of power is legitimate, decision makers in listed SOEs face fewer normative controls over their behavior, and are therefore less likely to be challenged when pursuing self-serving objectives. Such objectives favor allocation of resources to domestic activities, and hence less internationalization. However, as informal control institutions improve, this diversion of resources is reduced, as observed in Figure 2. At the same time, Figure 2 suggests that private firms reduce their level of internationalization the stronger informal controls, which is consistent with the argument that informal constraints on authority serve as a mechanisms to prevent

strategies to be driven by managerial hubris (Crossland & Hambrick, 2011). As a result, managers of POEs may overestimate their ability to pursue international prestige projects. While we were primarily interested in the difference between state and privately owned firms (the latter internationalizing less than the former in high power distance countries), the finding that private firms internationalize *more* in low informal institutional control (or high power distance) countries indicates that further research is needed into informal institutions and internationalization strategies.

Building on the hierarchy of institutions outlined by Williamson (2000), we also find strong support for the importance of home country formal and governance institutions for SOE internationalization (Hypotheses 2 and 3). In particular, strong institutions of law enforcement and capital market governance propel listed SOEs toward internationalization, relative to the pattern of private firms. As shown in Figures 3 and 4, while a stronger rule of law and stronger governance both enhance the internationalization of SOEs, the effect on private firms in most cases is small – in both graphs the line for private firms is almost horizontal. Hence, improvements in the institutional environment, for example by strengthening the legal and governance systems, reduce the differences between these two types of firms, as we have hypothesized.

*** *Insert Figures 3 and 4 here* ***

We interpret these results as evidence that strong formal and governance institutions lead listed SOEs to act in ways similar to private firms, both by providing better monitoring of decision makers, and by enhancing firms' ability to develop firm-specific advantages that may be exploited abroad. Weak home country governance institutions tend to be positively and significantly related to waste in government, red tape and bureaucracy in the public sector, which, as argued above, permit more rent-seeking activities that are typically domestic in nature (Faccio, 2006; Krueger, 1990; Shleifer & Vishny 1994). Hence, the greater are external institutional pressures on listed SOEs, either in form of well enforced legislation or in terms of shareholders empowered by advanced governance systems, the more such firms behave like their privately owned counterparts in pursuing internationalization.

Together, these Figures reveal a consistent pattern, along the lines we have hypothesized. *High* normative control, *high* regulatory control and *high* levels of capital market control all provide, in

different ways, external checks on decision-makers in listed SOEs, and thus create incentives for them to follow patterns that resemble those of private firms. Interestingly, the explanatory power of the model increases from informal to formal and to governance control (models 3, 5, and 7), supporting the view that governance control as the most direct mechanism is more important than informal control which impacts firms more indirectly.

Implications for theory

Our study is among the first to systematically analyze the configuration of home country institutional influences that provide the impetus (or hindrance) for listed SOEs to expand outward across national borders. It contributes to the theory of the MNE by offering explanations for why and how home country institutions moderate the impact of ownership on international strategies. Traditional work on the MNE often makes the implicit assumption that the home context has a neutral effect, and that internationalization is driven by firm-specific resources (Kirca et al., 2012), though resources of the home country have recently been recognized as a source of such firm-specific resources (Nielsen & Nielsen, 2010; Wan, 2005). Some scholars of specific contexts have also pointed to government policy may help firms mobilize resources, for example in Japan in the 1960s/1970s (Yang et al., 2009) and China in the 2000s (Buckley et al., 2007, Wang et al., 2012b). However, there has been little theorizing as to how specific home country institutions interact with different types of MNEs in driving internationalization strategies.

Moreover, we focus on the internationalization of listed SOEs, a phenomenon on the rise (Bruton et al., 2015; Cuervo-Cazurra et al., 2014; UNCTAD 2014). Our analysis of the institutional conditions that propel or discourage SOEs from internationalizing challenges conventional theories that assume a profit motive underlying firms' quest for profitable business opportunities. Specifically, we show how listed SOEs may be deterred from internationalizing (relative to the pattern of POEs in the same industry) by institutions that influence managerial incentives. In consequence, internationalization strategies of SOEs differ from private firms with respect to institutional drivers. Our empirical results, based on a unique sample of listed firms from 40 different countries, allow us to advance theory by establishing that listed SOE internationalization is not idiosyncratic to a specific institutional context,

such as China or India, but driven by some common institutional features. Specifically, listed SOEs, as a particular type of firms, are subject to constraints and opportunities emanating from their home country institutions.

Our study also advances institutional theory (e.g., Kostova et al. 2008, Meyer et al., 2009, Peng et al. 2008) by focusing on the intersection of government ownership and outward FDI. Our empirical setting offers a unique opportunity to study the role of governments as owners across a wide variety of institutional settings. This approach makes at least two important contributions. First, existing studies have predominantly utilized institutional theory to explain home country institutional context in single country studies, notably China (Buckley et al., 2007; Cui & Jiang, 2012; Li et al., 2014; Wang et al., 2012c) or India (Choudhury & Khanna, 2014). Our study extends this literature to study the influence of home country institutional context on firm internationalization in a comprehensive sample of 40 countries, spanning both developing and developed economies with a wide variety of institutional and political configurations. As such, our study also contributes to the comparative corporate governance literature (Aguilera & Jackson, 2003; Filatotchev, et al., 2013; Wiseman, et al., 2012) by providing new insights into the mechanisms by which national institutions and corporate ownership interact in shaping business strategies.

Second, we contribute to the discussion on how and why institutions of a country influence firms beyond the boundaries of the country (Jackson & Deeg, 2008; Meyer & Thein, 2014). Institutions create incentives and constraints on strategic choices, which in turn influence firms' drive and ability to invest in foreign environments rather than in their home country.

Moreover, we are contributing to new institutional theory in economics (La Porta et al., 1997; Williamson, 2000; Acemoglu & Robinson, 2012). Specifically, we are probably the first study to operationalize and test Williamson's (2000) framework in a multi-country setting. From the perspective of this literature, internationalization is a special case of resource allocation that requires high levels of risk taking, and is affected by the institutional context of the firm. Specifically, our findings suggest that state ownership subjects firms (and their managers) to a complex set of choices based on both economic and political incentives. In this literature (e.g. Shleifer & Vishny, 2002), the

government is often perceived to maximize its political utility through its ownership in listed companies while expropriating the interest of minority shareholders. However, our study suggests that the more external institutions monitor listed SOEs, the less this is a concern.

Limitation and future research

The first set of limitations of our empirical study arises from the nature of the dataset. We aimed to study the most important firms and to cover companies from a wide variety of home countries with different institutional configurations; a precondition for studying home country effects. However, this focus on large firms implies that we have little specific to say about smaller SOEs. One might argue that smaller SOEs can draw on fewer state resources and are subject to local rather than national politics, which would moderate their internationalization behavior (Li et al., 2014). Comparing large and small SOEs thus would be a promising path for future research.

By the same token, our sample includes only stock-market listed entities. While this choice was made in order to ensure comparability between SOEs and POEs in terms of motives for expanding abroad, it limits the generalizability of our results. Specifically, we cannot assess how unlisted SOEs may be affected by home country institutions. Future research may investigate such firms and compare them to both listed SOEs and unlisted privately owned firms.

Second, our dataset is of a cross-sectional nature, relating the current internationalization to current ownership and institutional frameworks. This type of study always leaves open the possibility of reverse causality. However, we believe this to be a minor limitation in our study because our explanatory variables are at a higher level of aggregation than our dependent variable, and each individual SOE is less likely to influence the institutional context in which they all operate, at least in the short-to-medium term (see also Andersson, Cuervo-Cazurra & Nielsen, 2014). Even so, all listed SOEs in a country may together influence their institutional context in the long run. This issue could be addressed in future research by analyzing changes over time on the basis of panel data. We note, though, that since particularly informal, and, to a large extent, formal institutions are unlikely to change substantially within a decade or more, such a study must cover a relatively long time period in order to capture significant institutional changes. Panel data may also alleviate concerns regarding

biases due to temporary effects, such as the Global Financial Crisis, though we would expect the influence on internationalization of listed firms (SOEs and POEs alike) to be similar.

Third, the literature on the drivers of internalization has pointed to top management team characteristics, especially their international experience, as drivers of internationalization (Kirca et al., 2010; Sambharya, 1996; Tan & Meyer, 2010). Since top management teams are appointed by owners or their representatives, as we have argued, the characteristics of the top management team are endogenous to the ownership structures. This however suggests that characteristics of upper echelons may be mediating variables between ownership and investment decisions, such as internationalization. Similarly, non-executive board members representing different types of owners (including government branches) may exert their influence on strategic decisions. Future researchers with access to detailed data on top management teams and boards may investigate the moderating and mediating effects of upper echelons.

Finally, we find home country institutions to influence listed SOE internationalization, but the theoretical arguments could be extended to propose that home institutions impact on other aspects of ISOEs' international strategies, in particular strategic decisions such as the location of investment or the mode of foreign entry (Meyer et al., 2014). Such a study would require detailed ISOE subsidiary-level data but holds great promise for further advancing our understanding of host institutions and international business. Related, the outcome of internationalization for both ISOEs and POEs is important yet beyond the current study. Future research may extend our study by focusing on variation in performance related to internationalization of firms with different ownership and institutional profiles⁶.

Implications for Management Practice

Managers of MNEs around the world increasingly face new types of competitors, especially from emerging markets, that are state owned (UNCTAD, 2014). The prior literature might have led them to expect these new competitors to behave very differently than privately owned firms in their international strategies; perhaps driven by a mix of political and insider agendas of their owners and

⁶ We thank an anonymous reviewer for drawing our attention to the importance of outcomes of internationalization.

managers. However, to fully appreciate the motivations and strategies of an SOE, managers need to evaluate and understand the institutional environment of its country of origin.

A thorough understanding of the institutional configuration of the home country may indicate the extent to which listed SOEs are likely to follow POE-like strategies. If the cultural traditions of a country support strong controls over elites, or reforms strengthen formal institutions or governance arrangements, then state ownership may not imply great deviation in behavior from what would occur under private ownership. However, where institutions do not provide adequate controls over the state apparatus and management, listed SOE internationalization strategies are likely to substantively differ from those of their privately owned counterparts. Specifically, SOEs under weak control institutions are likely exploit domestic opportunities, including rent seeking opportunities, and pursue foreign investments primarily where they can leverage their political assets. This may influence how managers of Western private firms can interact strategically with state owned competitors in the global market place.

Beyond the scope of our empirical study, such a home country analysis may also include the political system and countries' integration in supra-national arrangements. For example, in China SOEs are closely aligned to political agenda through a strong legitimacy of the role of the state in the economy and career paths that move cadres back and forth between state, state enterprise and party roles (Brødsgaard, 2012). On the other hand, in the European Union, competition rules enforced by the European Commission constrain member states from providing financial support to SOEs, which induce SOEs to act more like private firms with hard budget constraints.

Conclusion

Listed SOEs have emerged as major players in the global economy. Their strategies, however, are critically determined by the nature and quality of home country institutions. Our study of 153 listed SOEs, matched with 153 listed POEs, from some 40 different countries demonstrates that informal, formal and governance institutions of the country of origin of listed SOEs significantly affect their propensity to internationalize. Specifically, institutions that impose more monitoring and constraints

on decision makers in SOEs – namely high normative control, highly developed legal systems, and high levels of capital market development – reduce the home market bias of SOEs, and induce them to pursue internationalization more similar to private firms. Our study thus enhances the understanding of MNEs, of SOEs, and of the extra-territorial effects of institutions.

Williamson's (2000) hierarchy of institutions also allows us to consider the likely impact of policy changes on the internationalization of SOEs. Changes of institutions that enhance the monitoring of SOE decision makers likely bring SOEs behavior more in line with their private counterparts. Since lower levels of hierarchies are easier to change, policy makers may accelerate the development of local capital markets as means to address SOE behavior. Institutional reforms to improve the quality and functioning of legal systems may also be effective, but results may be much slower in showing. However, cultural factors will remain important even after reforms to the legal and governance systems, and may explain why apparently well designed reforms at these lower levels of the hierarchy do not always achieve all that is expected of them in a short time frame.

REFERENCES

- Acemoglu, D. & Robinson, J.A. (2012). *Why nations fail*. New York: Crown Publishing.
- Aguilera, R. V., and Jackson, G. (2003). 'The cross-national diversity of corporate governance: Dimensions and determinants'. *Academy of Management Review*, 28, 447-465
- Aharoni, Y. (1981). 'Performance Evaluation of State-Owned Enterprises: A Process Perspective'. *Management Science*, 27(11): 1340-1347.
- Andersson, U., Cuervo-Cazurra, A., & Nielsen, B.B. (2014). From the Editors: Explaining interaction effects within and across levels of analysis. *Journal of International Business Studies*, 45(9): 1063-1071.
- Applebaum, E. & Katz, E. (1987). 'Seeking rents by setting rents: The political economy of rent-seeking'. *Economic Journal*, 97, 685-699.
- Basabe, N. & Ros, M. (2005). 'Cultural dimensions and social behavior correlates: Individualism-collectivism and power distance'. *International Review of Social Psychology*, 18(1/2), 189-224.
- Benito, G.R.G., Lunnan, R. & Thomassen, S. (2011). 'Distant encounters of the third kind: multinational companies locating divisional headquarters abroad', *Journal of Management Studies*, 48(2), 373-394.
- Boddewyn, J.J. & Brewer, T. (1994). 'International business political behavior: New theoretical directions'. *Academy of Management Review*, 19, 119-144.
- Borisova, G., Fotak, V., Holland, K. & Megginson, W. (2012). 'Government ownership and the cost of debt: Evidence from government investments in publicly traded firms'. *working paper*, SSRN #2127397.
- Buckley, P.J. & Cassen, M.C. (1976). *The future of the multinational enterprise*, London: Macmillan.
- Brødsgaard, K.E. (2012) Politics and business group formation in China: The party in control, *China Quarterly*, 211: 624-648.
- Bruno, R., Bychkova, M. & Estrin, S. (2013). 'Institutional Determinants of New Firm Entry in Russia: A Cross-regional Analysis'. *Review of Economics and Statistics*, 95(5): 1740-1749.

- Bruton, G.D., Ahlstrom, D. & Li, H.L. (2010). 'Institutional theory and entrepreneurship: where are we now and where do we need to move in the future?' *Entrepreneurship Theory and Practice*, **34**(3), 421-440.
- Bruton, G.D., Filatotchev, I., Chahine, S. & Wright, M. (2010). 'Governance, ownership structure, and performance of IPO firms: The impact of different types of private equity investors and institutional environments'. *Strategic Management Journal*, **31**(5), 491-509.
- Bruton, G.D., Peng, M.W., Ahlstrom, D., Ciprian, S. & Xu, K. (2015). 'State-owned enterprises around the world as hybrid organizations'. *Academy of Management Perspectives*, **29**(1): 92-114.
- Buckley, P.J., Clegg, J., Cross, A., Liu, X., Voss, H. & Zheng, P. (2007). 'The determinants of Chinese outward FDI'. *Journal of International Business Studies*, **38**(4), 499-518.
- Chen, Y.Y. & Young, M.N. (2010). 'Cross-border mergers and acquisitions by Chinese listed companies: A principal-principal perspective'. *Asia Pacific Journal of Management*, **27**(3), 523-539.
- Choudhury, P., & Khanna, T. (2014). Toward resource independence-Why state-owned entities become multinationals: An empirical study of India's public R&D laboratories. *Journal of International Business Studies*. doi:10.1057/jibs.2014.20.
- Crossland, C. & Hambrick, D.C. (2011). 'Differences in managerial discretion across countries: how nation-level institutions affect the degree to which CEOs matter'. *Strategic Management Journal*, **32**(8), 797-819.
- Cuervo-Cazurra, A., Inkpen, A., Musacchio, A., & Ramaswamy, K. (2014). Governments as owners: State-owned multinational companies. *Journal of International Business Studies*, **45**(8): 919-942.
- Cui, L. & Jiang, F. (2012). 'State ownership effect on firms' FDI ownership decisions under institutional pressure: A study of Chinese outward-investing firms'. *Journal of International Business Studies*, **43** (2), 264-284.
- Dean, T.J. & Meyer, G.D. (1996). 'Industry environments and new venture formations in U.S. manufacturing: A conceptual and empirical analysis of demand determinants'. *Journal of Business Venturing*, **11**(2), 107-132.

- Dehejia, R. H., & Wahba, S. (2002). Propensity score-matching methods for nonexperimental causal studies. *Review of Economics and Statistics*, 84(1), 151-161.
- Delios, A. & Henisz, W.J. (2003). 'Political hazards, experience and sequential entry strategies: The international expansion of Japanese firms, 1980–1998'. *Strategic Management Journal*, 24(11), 1153–1164.
- Dharwadkar, R., George, G. & Brandes, P. (2000). 'Privatization in emerging economies: An agency theory perspective'. *Academy of Management Review*, 25: 650-669.
- Dunning, JH. (1993). *Multinational enterprises and the global economy*. Wokingham Berkshire: Addison Wesley.
- Economist*, 2010, China buys up the world, Nov 11, page 11.
- Estrin, S., Baghdasaryan, D. & Meyer, K.E. (2009a). 'The impact of institutional and human resource distance on international entry strategies'. *Journal of Management Studies*, 46,1171–96.
- Estrin, S., Hanousek, J., Kocenda, E. & Svejnar, J. (2009b). 'The effects of privatization and ownership in transition economies'. *Journal of Economic Literature*, 47(3), 699-728.
- Estrin, S. & Perotin, V. (1991). 'Does ownership always matter?' *International Journal of Industrial Organization*, 9(1), 55-72.
- Estrin, S. & Prevezer, M. (2011). 'The role of informal institutions in corporate governance: Brazil, Russia, India, and China compared'. *Asia Pacific Journal of Management*, 28(1), 41-67
- Faccio, M. (2006). 'Politically connected firms'. *American Economic Review*, 96(1): 369-386.
- Fama, E.F. & Jensen, M.C. (1983). 'Separation of ownership and control'. *Journal of Law and Economics*, 26(2), 301-325.
- Filatotchev, I., Jackson, G., & Nakajima, C. (2013). 'Corporate governance and national institutions: A review and emerging research agenda'. *Asia Pacific Journal of Management*, 30(4), 965-986
- Filatotchev, I. & Wright, M. (2011). 'Agency perspectives on corporate governance of multinational enterprises'. *Journal of Management Studies*, 48(2), 471-486.
- Friedman, E., Johnson, S. & Mitton, T. (2003). 'Tunneling and Propping'. *Journal of Comparative Economics*, 4, 732-750.

- Garcia-Canal, E. & Guillén, M.F. (2008). 'Risk and the strategies of foreign location choice in regulated industries'. *Strategic Management Journal*, **29**, 1097-1115.
- Gedajlovic, E. & Shapiro, D. (1998). 'Management and ownership effects: evidence from five countries'. *Strategic Management Journal*, **19**, 533-553.
- Geletkanycz, M.A. (1997). 'The salience of "culture's consequences": The effects of cultural values on executive commitment to the status quo'. *Strategic Management Journal*, **18**(8), 615-634.
- George, G. & Prabhu, G.N. (2000). 'Developmental financial institutions as catalysts of entrepreneurship in emerging economies'. *Academy of Management Review*, **25**(3), 620-629.
- Globerman, S & Shapiro, D. (2003). 'Governance infrastructure and US foreign direct investment'. *Journal of International Business Studies* **34**, 19-39.
- Goh, S.K. & Wong, K.N. (2011). 'Malaysia's outward FDI: The effects of market size and government policy'. *Journal of Policy Modeling*, **32**(3), 497-510.
- Goldeng, E., Grünfeld, LA. & Benito, GRG, (2008). 'The performance differential between private and state owned enterprises: the roles of ownership, management and market structure', *Journal of Management Studies*, **45**(7), 1244-1273.
- Greene, W. (2003). *Econometric analysis (5th ed.)*. New Jersey: Prentice Hall.
- Habib, M. & Zurawicki, L. (2002). 'Corruption and foreign direct investment'. *Journal of International Business Studies* **33**, 291-307
- Hair, J.F. Jr, Anderson, R.E., Tatham, R.L. & Black, W.C. (1995). *Multivariate Data Analysis*, 3rd edn. New York: Macmillan.
- Henisz, W.J. (2001). 'The institutional environment for multinational investment'. *Journal of Law, Economics and Organization*, **16**, 334-64.
- Henisz, W.J. & Zelner, B.A. (2010). 'The hidden risks in emerging markets'. *Harvard Business Review*, **88**, 88-95.
- Hillman, A.J. & Hitt, M.A. (1999). 'Corporate political strategy formulation: a model of approach, participation and strategy decision'. *Academy of Management Review*, **24**, 825-42.

- Hitt, M.A. Tihanyi, L., Miller, T., & Connely, B. (2006). International diversification: Antecedents, outcomes, and moderators, *Journal of Management*, 32, 831-867.
- Hofstede, G. (1980). *Culture's Consequences: International Differences in Work-Related Values*. SAGE Publications, Beverly Hills.
- Hofstede, G. (1991). *Cultures and Organizations: Software of the mind*. McGraw-Hill Book Company, London.
- Hofstede, G. (2001). *Culture's Consequences*. SAGE Publications, Thousand Oaks, CA.
- Holburn, G.L.F & Zelner, B.A. (2010). 'Political capabilities, policy risk, and international investment strategy'. *Strategic Management Journal*, 31(12), 1290-1315.
- Hoskisson, R.E., Hitt, M.A., Johnson, R.A. & Moesel, D.D. (1993). 'Construct validity of an objective (entropy) categorical measure of diversification strategy'. *Strategic Management Journal*, 14, 215-235.
- House, R.J., Hanges, P.M., Javidan, M., Dorfman, P. & Gupta, V. (2004). *Culture, Leadership and Organizations: The GLOBE Study of 62 Societies*. Sage: Thousand Oaks, CA.
- Jackson, G., & Deeg, R. (2008). Comparing capitalisms: Understanding institutional diversity and its implications for international business. *Journal of International Business Studies*, 39(4), 540-561.
- Jensen, N.M. (2003). 'Democratic Governance and Multinational Corporations: Political Regimes and Inflows of Foreign Direct Investment'. *International Organization*, 57(3), 587-16.
- Jiang, Y., Colakoglu, S., Lepak, D.P., Blasi, J.R. & Kruse, D.L. (2015). Involvement work systems and operational effectiveness: Exploring the moderating effect of national power distance, *Journal of International Business Studies*, 46(3), 332-354.
- Kaufmann, D., Kraay, A. & Mastruzzi, M. (2010). 'The Worldwide Governance Indicators: Methodology and Analytical Issues'. *World Bank Policy Research Working Paper No. 5430*, World Bank, Washington, D.C.
- Khanna, T. & Palepu, K. (2000). 'The future of business groups in emerging markets: Long-run evidence from Chile'. *Academy of Management Journal*, 43(3), 268-285.

- Khanna, T., & Rivkin, J. W. (2001). Estimating the performance effects of business groups in emerging markets. *Strategic Management Journal*, 22(1), 45-74.
- Kirca, A.H., Hult, G.T.M., Perry, M.Z. & Cavusgil, S.T. (2010). A multilevel examination of the drivers of multinationality: A meta-analysis, *Journal of Management*, ///.
- Kirca, A.H., Hult, G.T.M., Roth, K., Cavusgil, S.T., Perry, M.Z., Akdeniz, M.B., Deligonud, S.Z., Mena, J.A., Pollitte, W.A., Hoppner, J.J., Miller, J.C. & White, R.C. (2012). 'Firm-specific assets, multinationality, and firm performance: A meta-analytic review and theoretical integration'. *Academy of Management Journal*, 54(1), 47-72.
- Kirkman, B. & Shapiro, D. (1997). 'The impact of cultural values on employee resistance to teams: toward a model of globalized self-managing work team effectiveness'. *Academy of Management Review*, 22(3), 730-57.
- Knutsen, C.H., Rygh, A. & Hveem, H. (2011). 'Does state ownership matter? Institutions' effect on foreign direct investment revisited'. *Business & Politics*, 13(1): article 2.
- Kostova, T., Roth, K. & Dacin, T. (2008). 'Institutional theory in the study of multinational corporations: A critique and new directions'. *Academy of Management Review*, 33, 994—1006.
- Krueger, A.O. (1990). 'Government failures in development'. *Journal of Economic Perspectives*, 4(3), 9-23.
- Kwok, C.C.Y. & Reeb, D.M. (2000). 'Internationalization and firm risk: An upstream-downstream hypothesis'. *Journal of International Business Studies*, 31(4), 611-629.
- La Porta, R., Lopez de Silanes, F., Shleifer, A. & Vishny, R.W. (1997). Law and finance, *Journal of Political Economy*, 106(6): 1113-1155.
- Levine, R. & Zervos, S. (1988). 'Stock markets, banks, and economic growth'. *American Economic Review*, 88, 537-558.
- Levy, V. (2005). The influence of top management team attention patterns on global strategic posture of firms, *Journal of Organizational Behavior*, 26: 797-819.
- Li, M. H., Cui, L., & Lu, J. (2014). Varieties in state capitalism: Outward FDI strategies of central

- and local state-owned enterprises from emerging economy countries. *Journal of International Business Studies*. doi:10.1057/jibs.2014.14
- Lubatkin, M. H., Schulze, W. S., Ling, Y. and Dino, R. N. (2005). 'The effects of parental altruism on the governance of family-managed firms'. *Journal of Organizational Behavior*, 26, 313–30
- Meyer, K.E., Ding, Y., Li, J. & Zhang, H. (2014). 'Overcoming distrust: How state-owned enterprises adapt their foreign entries to institutional pressures abroad'. *Journal of International Business Studies*, 45(8): 1005-1028.
- Meyer, K.E., Estrin, S., Bhaumik, S.K. & Peng, M.W. (2009). 'Institutions, resources, and entry strategies in emerging economies'. *Strategic Management Journal*, 30(1), 61-80.
- Meyer, K.E. & Peng, M. W. (2016). 'Theoretical foundations of emerging economy research', *Journal of International Business Studies*, 47(1): in press, doi:10.1057/jibs.2015.34.
- Meyer, K.E. & Thein, H.H. (2014). 'Business under adverse home country institutions: The case of international sanctions against Myanmar'. *Journal of World Business*, 49(1), 156-171.
- Morck, R., Yeung, B. & Zhao M. (2008). 'Perspectives on China's outward foreign direct investment'. *Journal of International Business Studies* 39(3), 337-350.
- Murtha, T. & Lenway, S.A. (1994). 'Country capabilities and the strategic state: How national political institutions affect multinational corporations' strategies'. *Strategic Management Journal*, 15, 113-129.
- Newman, K.L. & Nollen, S.D. (1996). 'Culture and congruence: The fit between managerial practices and national culture'. *Journal of International Business Studies*, 27(4), 753-779.
- Nielsen, B.B. & Nielsen, S. (2010). 'A multilevel approach to understanding the multinationality–performance relationship'. *Advances in International Management*, 23, 527-557.
- Nielsen, B.B. & Nielsen, S. (2011). 'The role of top management team international orientation in international strategic decision-making: The choice of foreign entry mode'. *Journal of World Business*, 46, 185-193.
- Nielsen, B.B. & Nielsen, S. (2013). 'Top management team nationality diversity and firm performance: A multilevel study'. *Strategic Management Journal*, 34(3), 373-382.

- North, D. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- Okhmatovskiy, I. (2010). 'Performance implications of ties to the government and SOEs: A political embeddedness perspective', *Journal of Management Studies*, **47**(6), 1020-1047.
- Olson, M. (1996). 'Big bills left on the sidewalk: Why some nations are rich, and others are poor'. *Journal of Economic Perspectives*, **10**(2), 3-24.
- Palepu, K. (1985). 'Diversification strategy, profit performance, and the entropy measure of diversification'. *Strategic Management Journal*, **6**, 239-255.
- Peng, M.W., Wang, D. & Jiang, Y. (2008). 'An institution-based view of international business strategy: a focus on emerging economies'. *Journal of International Business Studies*, **39**, 920-936.
- Rajan, R.G. & Zingales, L. (1998). 'Financial dependence and growth'. *American Economic Review*, **88**, 559-86.
- Redding, G. & Witt, M. (2009). 'China's business system and its future trajectory'. *Asia Pacific Journal of Management*, **26**(3), 381-399.
- Rodríguez, G.C., Espejo, C.A.D. & Cabrera, R.V. (2007). 'Incentives management during privatization: An agency perspective', *Journal of Management Studies*, **44**(4), 536-560.
- Rugman, A.M. (1980). Internalization as a general theory of foreign direct investment: A re-appraisal of the literature, *Review of World Economics*, **116**(2): 365-379.
- Sambharya, R.B. (1996). Foreign experience of top management teams and international diversification strategies of U.S. multinational corporations, *Strategic Management Journal*, **17**: 739-746.
- Schneider, S. & DeMeyer, A. (1991). 'Interpreting and responding to strategic issues: The impact of national culture'. *Strategic Management Journal*, **12**, 307-20.
- Shleifer, A., & Vishny, R. W. (1994). Politicians and firms. *The Quarterly Journal of Economics*, 995-1025.
- Shleifer, A. & Vishny, R.W. (2002). *The Grabbing Hand*. Cambridge, Mass.: Harvard University Press.

- Singh, J. (2008). 'Distributed R&D, cross-regional knowledge integration and quality of innovative output'. *Research Policy*, **37**(1), 77-96.
- Stoian, C. (2013). 'Extending Dunning's investment development path: The role of home country institutional determinants in explaining outward foreign direct investment'. *International Business Review*, **22**, 615-637.
- Tan, D., & Meyer, K. E. (2010). Business groups' outward FDI: A managerial resources perspective. *Journal of International Management*, **16**(2), 154-164.
- Tihanyi, L., Griffith, D.A. & Russell, C.J. (2005). 'The effect of cultural distance on entry mode choice, international diversification, and MNE performance: A meta-analysis'. *Journal of International Business Studies*, **36**, 270–283.
- Tihanyi, L. Johnson, R.A., Hoskisson, R.E. & Hitt, M.A. (2003). Institutional ownership differences and international diversification. The effects of boards of directors and technological opportunity, *Academy of Management Journal*, **46**: 195-205.
- Tipton, F.B. (2009). 'Southeast Asian capitalism: History, institutions, states, and firms'. *Asia Pacific Journal of Management*, **26**(3), 401-434.
- Tobin, J. (1958). 'Estimation of relationships for limited dependent variables'. *Econometrica*, **26**(1), 24–36.
- UNCTAD. (2013). *World Investment Report*. United Nations: Geneva.
- UNCTAD. (2014). *World Investment Report*. United Nations: Geneva.
- Vickers, J. & Yarrow, G. (1992). 'Economic perspectives on privatization'. *Journal of Economic Perspectives*, **5**(2), 111-132.
- Wan, W.P. (2005). 'Country resource environments, firm capabilities, and corporate diversification strategies'. *Journal of Management Studies*, **42**(1), 161-182.
- Wang, J., Guthrie, D. & Xiao, Z. (2012a). 'The rise of SASAC: Asset management, ownership concentration, and firm performance in China's capital markets'. *Management Organization Review*, **8**(2), 253-282.

- Wang, C., Hong, J., Kafouros, M. & Boateng, A. (2012b). 'What drives outward FDI of Chinese firms? Testing the explanatory power of three theoretical frameworks'. *International Business Review*, **21**(3), 425–438.
- Wang, C.Q., Hong, J.J., Kafouros, M. & Wright, M. (2012c). 'Exploring the role of government involvement in outward FDI from emerging economies'. *Journal of International Business Studies*, **43**, 655-676.
- Wiersema, M.F. & Bowen, H.P. (2011). 'The relationship between international diversification and firm performance: Why it remains a puzzle'. *Global Strategy Journal*, **1**(1/2), 152-170.
- Williamson, O.E. (2000). 'The new institutional economics: Taking stock, looking ahead'. *Journal of Economic Literature*, **38**, 595-613.
- Wiseman, R. M., Cuevas-Rodríguez, G., and Gomez-Mejia, L. R. (2012). 'Towards a social theory of agency'. *Journal of Management Studies*, **49**, 202-222
- World Bank (2010). *World Development Report*, Washington, DC: Oxford University Press.
- Xu, D. & Meyer, K.E. (2013): 'Linking theory and context: Strategy research in emerging economies since Wright et al.', *Journal of Management Studies*, **50**(7), 1322-1346.
- Yang, X.H., Jiang, Y., Kang, R.P. & Ke, Y.B. (2009). 'A comparative analysis of the internationalization of Chinese and Japanese firms'. *Asia Pacific Journal of Management* **26**(1), 141-162.
- Yiu, D.W., Lau, C.M. & Bruton, G.D. (2007). 'International venturing by emerging economy firms: The effects of firm capabilities, home country networks, and corporate entrepreneurship'. *Journal of International Business Studies*, **38**(4), 519-540.
- Young, M.N., Peng, M.W., Ahlstrom, D., Bruton, G.D. & Jiang, Y. (2008). 'Corporate governance in emerging economies: A review of the principal-principal perspective'. *Journal of Management Studies*, **45**(1), 196-220.
- Zaheer, S. (1995). 'Overcoming the liability of foreignness'. *Academy of Management Journal* **38**(2), 341-63.

Figure 1: Framework of our Analysis

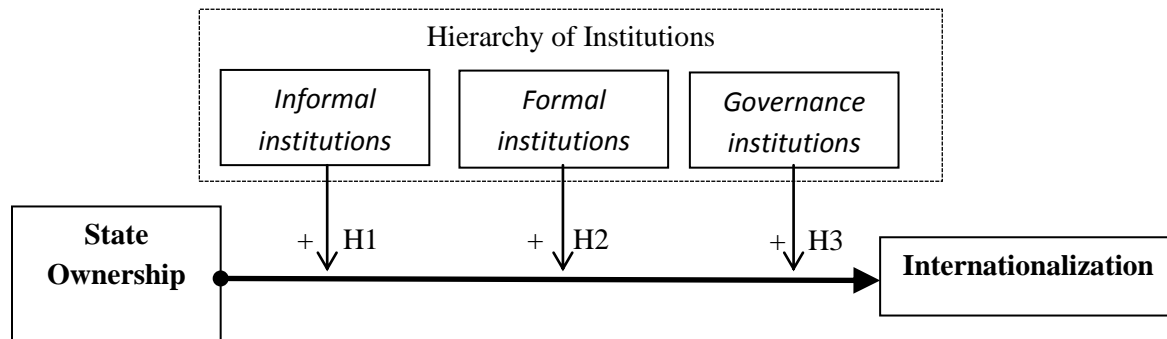


Table 1: Matched Sample

Country	POE	SOE	Total	Country	POE	SOE	Total
Argentina	0	1	1	Japan	25	1	26
Australia	2	1	3	Kuwait	0	1	1
Austria	0	1	1	Malaysia	0	3	3
Belgium	1	2	3	Holland	1	0	1
Bahrain	1	0	1	Norway	0	3	3
Brazil	1	8	9	Pakistan	0	2	2
Canada	3	0	3	Philippines	3	0	3
Switzerland	3	2	5	Poland	0	3	3
China	3	36	39	Portugal	1	0	1
Germany	10	2	12	Qatar	0	2	2
Finland	2	1	3	Russia	5	15	20
France	4	4	8	Saudi Arabia	1	3	4
United Kingdom	7	0	7	Singapore	1	3	4
Greece	0	2	2	Sweden	4	1	5
Hong Kong	2	8	10	Thailand	1	2	3
Indonesia	2	5	7	Turkey	1	0	1
India	4	36	40	Taiwan	3	0	3
Ireland	0	1	1	USA	51	0	51
Israel	2	0	2	South Africa	2	0	2
Italy	7	2	9	UAE	0	2	2
				Total	153	153	306

TABLE 2
Descriptive statistics and correlations

Variable	Mean	St.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Internationalization	0.13	0.21	1														
State ownership	0.5	0.5	-.18	1													
R&D intensity	0.59	1.72	.21	-.22	1												
R&D presence	0.44	0.5	.15	-.14	.39	1											
Firm size	9.13	1.51	.10	.19	-.01	-.11	1										
Product diversification	0.73	0.52	.11	.10	.05	.04	.17	1									
Firm age	45.38	40.91	.11	-.12	.13	-.05	.14	.06	1								
Industry growth	0.03	0.06	-.09	.05	.04	-.08	.04	.09	-.06	1							
Industry concentration	0.63	0.22	.09	-.12	.05	.20	-.09	-.04	-.09	-.14	1						
Resource-based industry	0.1	0.3	.05	.13	-.08	.09	.03	-.03	-.12	-.27	.23	1					
Currency reserves	685.97	898.06	-.20	.23	.06	.18	.03	.10	-.26	.11	-.03	.08	1				
Normative control	57.8	20.04	.21	-.59	.17	.14	-.09	-.03	.25	-.01	.20	-.12	-.32	1			
Regulatory control	0.69	0.93	.33	-.55	.22	.15	-.05	-.04	.27	.00	.20	-.19	-.38	.83	1		
Capital market control	103.84	80.4	.19	-.01	-.06	-.10	-.11	-.07	-.01	.01	.03	.02	-.12	-.09	.31	1	
GDP per capita	9.58	1.33	.33	-.56	.21	.12	-.09	-.02	.13	.00	.22	-.13	-.27	-.72	.83	.17	1

^a Currency reserves is in \$ billions.

All correlations = .11 or above are significant at $p < .05$

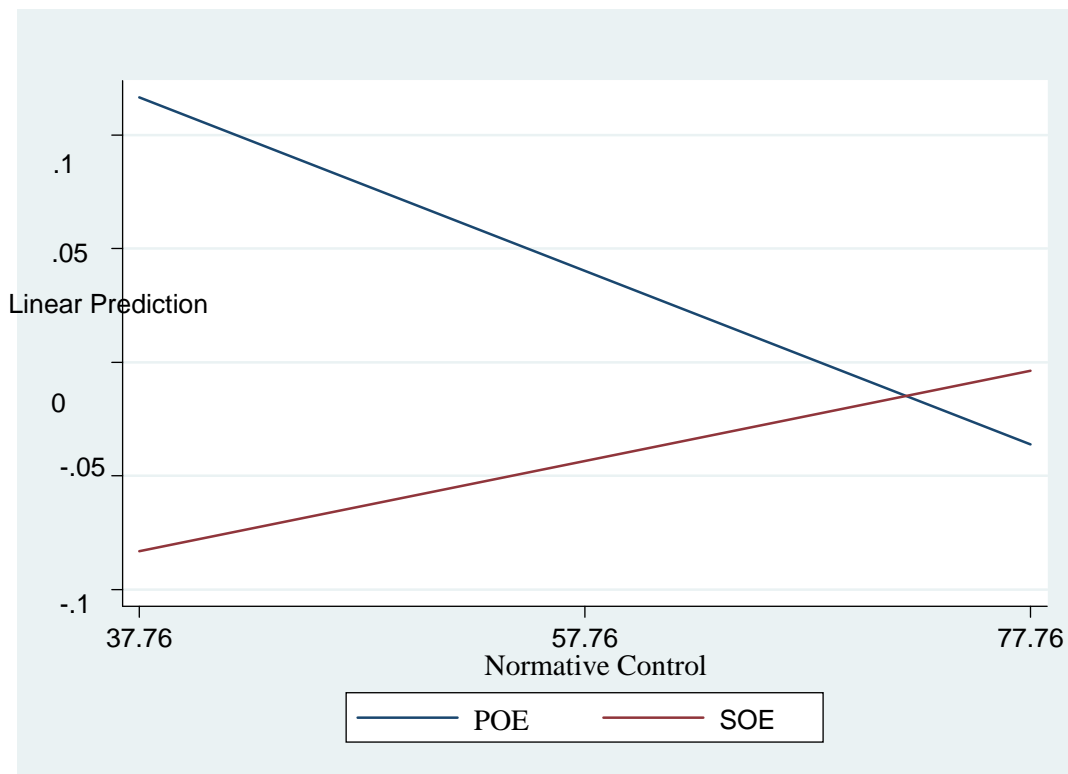
TABLE 3
Estimation of Tobit regressions for internationalization

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Intercept	-1.14 (0.24) ***	-1.19 (0.28) ***	-1.15 (0.27) ***	-0.66 (0.32) *	-0.56 (0.32) +	-1.06 (0.23) ***	-1.04 (0.23) ***
R&D intensity	0.03 (0.01) **	0.03 (0.01) **	0.03 (0.01) **	0.03 (0.01) **	0.03 (0.01) **	0.03 (0.01) **	0.03 (0.01) **
R&D presence	0.03 (0.05)	0.02 (0.05)	0.03 (0.05)	0.01 (0.05)	0.02 (0.05)	0.04 (0.05)	0.05 (0.04)
Firm size	0.03 (0.01) *	0.04 (0.01) *	0.04 (0.01) **	0.03 (0.01) *	0.04 (0.01) **	0.04 (0.01) **	0.04 (0.01) **
Product diversification	0.11 (0.04) **	0.12 (0.04) **	0.11 (0.04) **	0.11 (0.04) **	0.10 (0.04) **	0.12 (0.04) **	0.11 (0.04) **
Firm age	0.04 (0.05)	0.05 (0.05)	0.04 (0.05)	0.02 (0.05)	0.01 (0.05)	0.04 (0.05)	0.04 (0.05)
Industry growth	0.06 (0.37)	0.06 (0.38)	0.09 (0.37)	0.01 (0.36)	0.04 (0.36)	0.02 (0.36)	0.05 (0.35)
Industry concentration	-0.13 (0.10)	-0.13 (0.10)	-0.10 (0.10)	-0.14 (0.10)	-0.14 (0.10)	-0.12 (0.10)	-0.11 (0.09)
Resource-based industry	0.19 (0.07) **	0.20 (0.07) **	0.19 (0.07) **	0.21 (0.07) **	0.20 (0.07) **	0.17 (0.07) *	0.18 (0.07) *
Currency reserves	-8.02 (2.73) ***	-7.93 (2.80) **	-7.09 (2.76) *	-6.51 (2.79) *	-4.85 (2.81) +	-7.43 (2.67) **	-7.32 (2.62) **
GDP per capita	0.09 (0.02) ***	0.09 (0.02) ***	0.08 (0.02) ***	0.04 (0.03)	0.03 (0.05)	0.07 (0.02) ***	0.07 (0.02) **
State ownership	-0.05 (0.05)	-0.08 (0.05)	-0.08 (0.05)	-0.04 (0.05)	-0.06 (0.05)	-0.07 (0.05)	-0.07 (0.05)
Informal (normative control)		-0.01 (0.02)	-0.04 (0.02) *				
Informal (normative control) * SOE			0.58 (0.24) *				
Formal (Regulatory control)				0.09 (0.04) *	0.03 (0.05)		
Formal (Regulatory control) * SOE					0.14 (0.05) **		
Governance (Capital market control)						0.71 (0.23) **	-0.16 (0.38)
Governance (Capital market control) * SOE							0.13 (0.05) **
N	301	286	286	301	301	301	300
χ^2	87.2 ***	80.29 ***	86.08 ***	91.72 ***	98.84 ***	96.68 ***	104.43 ***
Log-likelihood	-112.96	-107.04	-104.15	-110.7	-107.14	-108.22	-103.69
McFadden's pseudo R ^{2 a}	0.28	0.27	0.29	0.29	0.32	0.31	0.33

^a McFadden's pseudo R² as Tobit regression does not have an equivalent to the R-squared that is found in OLS regression.

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Figure 2: Interaction of State Ownership and Normative Control



Note to Figures 2 to 4:

The Figures show a linear approximation of the marginal effect. The horizontal axis shows the range of the explanatory variables from one standard deviation below the mean to one standard deviation above the mean.

Figure 3: Interaction of State Ownership and Regulatory Control

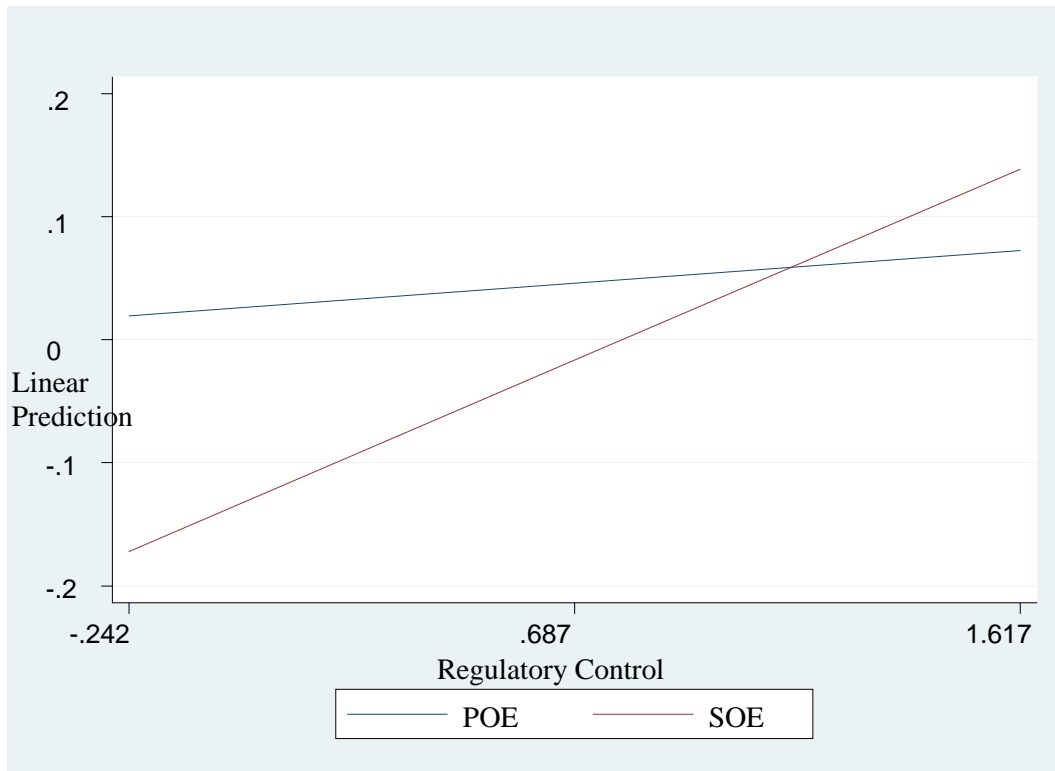


Figure 4: Interaction of State Ownership and Capital Market Control

