The Dynamics of Political Embeddedness in China[*]

**Heather A. Haveman,[1] Nan Jia,[2] Jing Shi,[3]
and Yongxiang Wang[2]**

Abstract

Economic transitions in countries that move from state planning and redistribution to market exchange create business opportunities but also uncertainty, because many interdependent factors—modes of exchange, types of products, and forms of organizations—are in flux. Uncertainty is even greater when the country's political institutions remain authoritarian because the rule of law is weak and state bureaucrats retain power over the economy. This study of listed firms in China, which has recently seen economic transition but persistent authoritarianism, shows that in such contexts, firms can reduce uncertainty by developing relationships with state bureaucrats, which help firms learn how state bureaucracies operate and engender trust between firms and bureaucrats. Together, knowledge and trust stabilize operations and help persuade bureaucrats to lighten regulatory burdens, grant firms access to state-controlled resources, and improve government oversight. Our results show that as economic transitions proceed and uncertainty increases, business–state ties increasingly improve firm performance. We also investigate two likely contingencies, industry and firm size, and two important causal mechanisms, access to bank loans and protection from related-party loans, and show that the value of business–state relations varies over time, depending on the trajectory of both economic and political institutions.

Keywords: firm performance, corporate governance, top management, social networks, economic transition, China, political embeddedness, market development

Economic transitions from state planning and redistribution to market exchange can take many paths (Stark and Bruszt, 1998; Whitley, 1999; Przeworski et al.,

---

[*] The authors are listed in alphabetical order.
[1] Haas School of Business, University of California, Berkeley
[2] Marshall School of Business, University of Southern California
[3] School of Economics, Finance and Marketing, RMIT University, and International Institute for Financial Studies, Jiangxi University of Finance and Economics

2000), but all such transitions generate uncertainty for economic actors as new venues for economic exchange, new kinds of goods and services, and new forms of organizations arise and old ones disappear or evolve. Uncertainty during economic transition is also affected by political institutions, notably whether or not governments become democratic. Democracy supports the creation of the rule of law (Acemoglu and Robinson, 2012; Assiotis and Sylwester, 2015), which in turn supports market functioning by reducing uncertainty for economic actors. In contrast, persistent authoritarianism undermines the rule of law and heightens uncertainty, thus hindering market functioning. Because economic transitions are inherently dynamic phenomena, they require dynamic analysis, with attention to changes over time (or the lack thereof) in both economic and political institutions.

Although the uncertainty generated by economic transition is greater under persistently authoritarian regimes, it can be reduced by creating relationships with state bureaucrats (Pfeffer and Salancik, 1978; Burt, 1982), because persistently authoritarian regimes not only generate weak rule of law but also give state bureaucrats considerable power over the economy. As markets develop in authoritarian regimes, relationships between firms and state authorities help firms learn how state bureaus work, reducing uncertainty for firms and engendering trust between firms and state authorities. This helps businesses grasp new opportunities by stabilizing operations and making it easier to persuade bureaucrats to allow access to resources and customers, reduce regulatory burdens, lower fees and taxes, and provide better regulatory oversight. Therefore, as markets develop in authoritarian regimes, business–state ties increasingly improve firm performance.

In this paper, we study business–state ties in China, which saw great economic change coupled with political stability. Starting in 1978, China moved from state planning and redistribution to market exchange: transactions at market prices (rather than through state mandate) rose from 6 percent in 1978 to 97 percent in 2003 for farm commodities, from 0 to 87 percent for producer goods, and from 3 to 96 percent for retail purchases (Dougherty, Herd, and He, 2007). Yet China's political institutions remained stable. The Communist Party retained absolute control over politics, the state bureaucracy, and the legal system, so laws concerning property, contracts, and competition were slow to develop and not enforced impartially (Clarke, Murrell, and Whiting, 2008; McGregor, 2012). Political inertia gave state authorities persistent power over the economy through their power to issue permits and licenses and to levy fees, fines, and taxes (e.g., Y. Lin, 2001; Yang, 2005) and their control of state-owned enterprises, land, and capital (e.g., Shih, 2008; Choo, 2014). The combination of economic change and political inertia created uncertainty for businesses and altered the nature of their relationships with the state.

Previous research on business–state relations in China, however, has provided little direct evidence of the causal mechanisms underpinning their effects and has seldom considered contingencies that limit those effects (for exceptions, see Y. Lin, 2001; Nee and Opper, 2010, 2012). Moreover, most previous research has been cross-sectional and so could not capture the dynamics of business–state ties, and the few longitudinal studies have generally relied on repeated cross-sections, again rendering dynamic analysis impossible (for exceptions, see Keister, 2004; Wang, Guthrie, and Xiao, 2012; Li and Liang,

2015). In contrast to previous work, we consider both economic and political institutions and conduct a dynamic analysis.

We study listed firms, which are among the largest and most important in China, and focus on a common form of business–state tie: having state bureaucrats serve as listed firms' executives or directors, which embeds political institutions in economic institutions (Chen and Dickson, 2010). Business–state ties affect two important causal mechanisms that have an impact on listed firms' performance. The first is access to bank loans, which fuels growth and improves performance. The second is protection from pressures by controlling shareholders to siphon funds from listed firms to support other members of controlling shareholders' business groups, which impairs listed firms' performance. We begin by explaining transitions from state redistribution to market exchange, in general and then for China in particular, and then analyze how, in the face of economic transition without political change, relationships between businesses and the state increasingly improve firm performance in an uncertain economic environment.

ECONOMIC TRANSITIONS GENERATE UNCERTAINTY

During economic transitions, elements of old systems disappear and are replaced by elements of new systems. New kinds of economic exchange, such as market-based ways to buy and sell, and novel venues for doing so, develop and old ones, such as state planning and redistribution, dissolve or evolve into new forms. New forms of economic actors, such as privately owned businesses, trade and industry associations, financial service institutions, regulatory agencies, and labor unions, arise and old ones, such as state-owned production and service facilities, and ministerial planning and redistribution departments, disappear or are transformed. New types of goods and services appear, including more varied consumer goods, financial services, and private housing, and replace older, standard-issue consumer goods and enterprise-based housing and social services. These changes are highly interdependent: change in one element, such as the launch of a new market venue, impels changes in other elements, for example, the creation of a new kind of business, regulatory agency, or industry association, and the development of a new type of good or service. Thus economic transitions are instances of complex system change: because elements of economic systems are interdependent, change in any single element has implications for many others; moreover, these implications cannot be predicted in advance because of bounded rationality (Simon, 1957) but must be learned through trial and error (Simon, 1962). The upshot is that economic transitions generate much uncertainty for businesses: firms' decision makers cannot predict what actions are or are not possible, acceptable, and effective, or what kinds of actors are or are not acceptable and capable.

Uncertainty, in turn, reduces the ability of firms' decision makers to take advantage of the new opportunities created by economic transitions, makes it harder for firms to decide how to invest resources, and increases their likelihood of making mistakes. The greater the uncertainty, the more difficult it is for firms to be sure which investments will be good, much less best, so the more mistakes firms will make and the worse and more costly those mistakes will be.

Economic transitions, and the uncertainty they unleash, are deeply influenced by political institutions. The ''rules of the game'' put in place by governments are fundamental to market functioning. Strong rule of law—notably transparent and impartially enforced laws concerning property rights, contracts, and competition—determines how, and how well, market exchange functions (North, 1990; Acemoglu and Robinson, 2012; Walder, Isaacson, and Lu, 2015). The stronger the rule of law, the more political institutions support market exchange and the more the uncertainty caused by economic transition is reduced. Strong rule of law is created and maintained by democratic governments, which are accountable and responsive to citizens (Acemoglu and Robinson, 2012; Assiotis and Sylwester, 2015). Not all economic transitions have been accompanied by political transitions to democracy and thus to a strong rule of law. In countries like Poland and Romania, democratic institutions have developed, while in countries like China and Russia, political institutions have remained authoritarian (Whitley, 1999; Przeworski et al., 2000). The level of uncertainty generated by economic transitions depends on the nature of political regimes: it is greater when they remain authoritarian and less when they become democratic. And the power of state authorities over the economy—specifically, their ability to develop a predatory or developmental state (Johnson, 1982; Evans, 1995)—depends on the nature of political regimes: state predation and state-led development are both more likely when political regimes remain authoritarian and less likely when they become democratic; the balance between them depends on the content of state policies and the incentives they create for state bureaucrats. In turn, greater power over the economy gives state bureaucrats more capacity to influence the uncertainty generated by economic transition.

Economic Transition in China

In 1978, China began a gradual and as-yet incomplete economic transition, with new modes of exchange, goods and services, and economic actors appearing, and old ones disappearing or evolving. More than a thousand state-owned enterprises were reorganized as joint-stock corporations and listed on the stock exchanges, while millions of privately owned enterprises were launched. The portion of capital invested in non-state-owned enterprises rose from 2 percent in 1992 to 41 percent in 2007, while the portion of the labor force working in non-state-owned enterprises rose from 16 to 68 percent (*China Statistical Yearbook*, various years). Led first by manufacturing and later by services, GDP per capita exploded from $316 (in current U.S. dollars) in 1990 to $7,590 in 2014, an average annual increase of 9.0 percent (World Bank, 2015).

In contrast, China's political institutions remained stable. The Communist Party retained absolute control over politics, except village elections; even there, party members dominated elected councils (Oi and Rozelle, 2000; Lu, 2012). Therefore the political regime was persistently authoritarian: since 1976, China's Polity IV score has been –7 on a scale running from –10 (fully institutionalized autocracy) to +10 (fully institutionalized democracy) (http://www.system icpeace.org/polity/polity4.htm).[1] The party retained control over the state

---

[1] This score takes into consideration the competitiveness of political participation, the openness and competitiveness of executive recruitment, and constraints on the chief executive.

bureaucracy and the legal system (Clarke, Murrell, and Whiting, 2008; McGregor, 2012), so the rule of law was weak: laws governing property rights, contracts, and competition were slow to develop and not enforced impartially (the judiciary was not independent of the party), and state governance of the economy was often ambiguous and opaque (Clarke, Murrell, and Whiting, 2008). Because electoral politics were not available to discipline state bureaucrats, the Chinese state became a predatory one: bureaucrats could prey on businesses to fulfill private goals as well as official goals (Witt and Redding, 2013). The gradual and piece-meal nature of China's economic transition created varied and sometimes incompatible regulations, increasing uncertainty and enhancing opportunities for state predation (Manion, 2004; Naughton, 2007; Bian and Zhang, 2014). State bureaus controlled key resources and many business activities. There were low levels of trust in the state bureaucracy, due not only to the possibility of state predation but also to the great uncertainty caused by the state bureaucracy's ambiguity, opacity, and internal heterogeneity (Bian and Zhang, 2014). The combination of economic transition and political inertia generated great uncertainty for business in China. And because the economic transition was gradual, change continued, exacerbating uncertainty.

The Chinese state's relationship to the economy was very complex—not just predatory but also at different times and in different places developmental, entrepreneurial, and embedded (Witt and Redding, 2013)—due to temporal and spatial variation in its economic and political institutions. New policies were frequently introduced to promote economic development by setting economic growth targets and making state bureaucrats' career prospects dependent on meeting those targets (Naughton, 2007; Witt and Redding, 2013). This even pushed local state bureaus to become entrepreneurial, with local officials launching and actively managing for-profit businesses (Duckett, 1998). Developmental efforts accelerated in 1992, when the ''Modern Enterprise System'' turned state-owned enterprises into corporations, some of which became the listed firms we studied. Under this system, state officials shucked off old roles as allocators and redistributors of resources and forged new roles as regulators and brokers of market transactions; economic growth became an increasingly important determinant of bureaucrats' career advancement (Y. Lin, 2001; Zhou, 2010). The developmental state bifurcated in 1997, with the doctrine of ''grasping the large and letting go of the small'' [*zhuada fangxiao*]: central authorities were to promote and manage enterprises in a few strategic sectors, and local authorities were to oversee enterprises in all other sectors. Much power to regulate land use, issue business and building permits, levy taxes, and impose fees and fines was delegated from central state bureaus to local ones (Boisot and Child, 1996; Y. Lin, 2001; Pei, 2006; Naughton, 2007; Landry, 2008). Finally, the Chinese state became an embedded one (Johnson, 1982; Evans, 1995) through two changes that forged close social ties between political and economic elites. The party informally opened its ranks to entrepreneurs in the early 1990s, despite a 1989 ban; it formally legitimated this practice in 2002 (Dickson, 2003, 2008) and created formal linkages to entrepreneurs through trade, professional, and industry associations (Kennedy, 2005). In sum, the complexity of the Chinese state's relationship to the economy heightened the uncertainty created by its gradual economic transition.

Political Connections and Economic Activity

Social scientists have long recognized that economic action is ''embedded and enmeshed in institutions, both economic and non-economic'' (Polanyi, 1957: 250). Therefore any analysis of economic action must consider the impact of social factors, such as social networks, that shape the allocation and valuation of resources (Polanyi, 1944, 1957; Granovetter, 1985). All economic exchanges ''are rife with social connections'' (Granovetter, 1985: 493) and so are embedded in social relations, although some are more deeply embedded than others. By generating trust among alters, embeddedness in social relations improves cooperation, reduces uncertainty, and makes economic exchange more predictable. In turn, predictability lowers the perceived costs of exchange and increases the perceived benefits, making many forms of economic exchange possible, including access to bank loans (Uzzi, 1999), stock offerings (Stuart, Hoang, and Hybels, 1999), and trade between manufacturers and sub-contractors (Uzzi, 1996). Social relations are especially important in contexts in which market-supporting institutions such as free information flows and strong rule of law are absent or weak: in such contexts, social relations offer alternative mechanisms for building trust, which in turn facilitates cooperation and reduces uncertainty, improving the predictability of exchange (Guseva and Róna-Tas, 2001). In authoritarian regimes, in which the rule of law is weak, social relations are especially valuable.

Relations between economic and political actors are particularly important (Polanyi, 1957: 250; Lie, 1991). State bureaucrats create institutions that fundamentally shape economic activity (North, 1990; Dobbin, 1994; Fligstein, 2001; Acemoglu and Robinson, 2012). They create property-rights laws that limit what can and cannot be sold and under what circumstances, who can and cannot sell it, and who can and cannot profit from selling it. They also create laws concerning contracts and competition, and they use those laws to adjudicate disputes between firms. Resource-dependence theory holds that uncertainty, such as that created by economic transition, can be reduced by developing ties to the state (e.g., Pfeffer and Salancik, 1978; Burt, 1982) because state officials regulate business and, in authoritarian regimes, control access to resources. Especially in authoritarian regimes, developing relations with political actors like state bureaucrats can alter the opportunities and constraints economic actors face.

Concretely, in transition economies with authoritarian regimes, ties with state bureaucrats can reduce uncertainty by clarifying which are the most profitable investment opportunities, revealing how to gain access to state-controlled resources, and making it easier to secure favors from bureaucrats. As a result, firms with ties to state bureaucrats can more quickly invest in new projects and maximize returns from those investments. Increasing uncertainty also makes regulations ambiguous and facilitates predatory behavior by state authorities. Ties with state bureaucrats can clarify regulations, thereby easing firms' decision making, and improve government oversight, thereby forestalling predation. Because uncertainty increases as markets develop, the benefits of business–state relations also increase as markets develop in authoritarian regimes.

Notwithstanding these benefits of business–state ties, there are two possible costs. First, such ties may increase pressure for firms to achieve political

goals, such as full employment and political stability, and hinder their pursuit of economic goals. Second, if state bureaucrats are less well educated than people with experience in business, and thus less well prepared for making business decisions, business–state ties will make firms more dependent on bureaucrats with lower-quality human capital. As markets develop, uncertainty increases and the stakes grow larger, so firms have to attend more to economic goals, and decision-making quality becomes crucial. Therefore, as markets develop, business–state ties might have increasingly negative effects on firm performance. The balance between the benefits and costs of business–state ties depends on context, specifically on the extent to which economic growth is a political goal and on the strength of human capital in state bureaucracies relative to that in business.

Political Embeddedness and Firm Performance in China

Because social relations—*guanxi*—have long been central to Chinese society (Fei, 1992; N. Lin, 2001), focusing on them is especially appropriate for studying economic activity there. China's reform-era economic system has been described as ''networked capitalism'' (Boisot and Child, 1996) because social relations are commonly used to accomplish economic goals. One common business–state social relation is having state bureaucrats serve as company executives or directors. Doing so literally embeds political actors in economic institutions (Chen and Dickson, 2010) and creates social relations that are variously bureaucratic, instrumental, and affective (Michelson, 2007: 356).[2]

Within the Chinese state bureaucracy, social relations have long been essential, not only for carrying out one's assigned tasks but also for advancing one's career (Zhou, 2010; Zhou, Ai, and Lian, 2012). Both lateral and vertical relations help officials manage uncertainty, gather information, mobilize resources to get things done, and solve unexpected problems. In these ways, officials use social ties to ''soften'' the iron cage of bureaucracy. Such social relations became even more important during the economic transition as a system of impersonal rules and incentives was put in place, greatly increasing the uncertainty officials faced (Yang, 2005; Landry, 2008; Zhou, Ai, and Lian, 2012). Because the social ties forged by working in the state bureaucracy are so valuable, they are likely to be maintained even when officials take positions in business concerns.

In the face of market development, becoming politically embedded by having people from the state bureaucracy serve as company executives and directors reduces uncertainty for firms by giving them access to knowledge about how things get done in state agencies—knowledge that the executives and directors developed from working as bureaucrats. This knowledge helps firms navigate state agencies, clarifies the regulatory process, and improves firms' understanding of state bureaucrats' actions. Becoming politically embedded also makes business–state relationships less formal and rooted more in shared goals and interests than in governmental authority (Wank, 1999, 2002; Y. Lin, 2001; Yang, 2005; Tsai, 2007) and so increases trust between business and state. In combination, the knowledge and trust generated by becoming politically embedded facilitate exchanging favors with bureaucrats and persuading

---

[2] Having state authorities own listed firms, even if ownership is partial, embeds economic actors in political institutions, which also creates complex social ties (Yang, 2005; Fligstein and Zhang, 2009).

bureaucrats to lighten the regulatory load, offer relief from taxation and fees, and make it easier to acquire resources that are controlled by the state, notably bank loans and land-use rights; they also help improve legal oversight to stave off predatory behavior (Y. Lin, 2001; Chen and Dickson, 2010; Nee and Opper, 2010, 2012). The decentralized state system that emerged in China provided many opportunities for negotiation between businesspeople and bureaucrats; to profit from these negotiations, businesspeople needed good relationships with bureaucrats (Parish and Michelson, 1996; Wank, 1999, 2002; Peng and Luo, 2000; Y. Lin, 2001; Bian and Zhang, 2014).

Although becoming politically embedded can be costly for firms in transition economies, this was not as much of a problem in China as in other countries. Starting in the 1990s, official political goals became closely linked to economic development (Naughton, 2007; Witt and Redding, 2013) and became important for bureaucrats' career advancement (Y. Lin, 2001; Zhou, 2010). This aligned state bureaucrats' goals with those of firms and reduced the likelihood that they pressured firms to achieve political goals that contradicted economic ones. Moreover, most bureaucrats were Communist Party members, and the education level of party members increased dramatically in the reform era (Zhou, 2001). Over time, this shift reduced any human-capital difference between state bureaucrats and other candidates for executive and director positions. We conclude therefore that in China, the benefits of becoming politically embedded increasingly outweighed the costs. Accordingly, we predict:

> Hypothesis 1 (H1): As market development proceeded, becoming politically embedded had increasingly positive effects on firm performance.

Contingencies

Industry. Economic transitions can create wide variation across industries in the number and relative size of firms: some industries become highly concentrated with a few large incumbents, while others become much less concentrated with many similarly sized incumbents. In highly concentrated industries, the small number of dominant firms increases the likelihood of collusion, which in turn reduces competition and uncertainty (Tirole, 1988). If industry competition and uncertainty are positively correlated, then during economic transitions in authoritarian regimes, business–state ties will benefit firms more as competition increases. Moreover, as competition increases, firms have more to gain from such ties—and more to lose without them (Bian and Zhang, 2014).

In China, as in many other countries, the economic transition had divergent effects on industries. Differences in the pace and nature of economic change created very different distributions of firms in terms of size and ownership (state or non-state) and thus very different levels of competition. For instance, the steel industry remained dominated by large, state-owned enterprises, so competition was limited; in contrast, the textiles industry was dominated by small, privately owned firms, and competition was intense (Kennedy, 2005; McGregor, 2012). Given this variation in industry structure and competition, and the positive correlation between competition and uncertainty, we predict

that as market development proceeded, the benefits of becoming politically embedded were more pronounced in more-competitive industries:

> **Hypothesis 2 (H2):** The positive joint effect of market development and becoming politically embedded on firm performance was stronger in more-competitive industries.

Firm size. There are several important differences between firms of different sizes (Scott, 2003). Compared with smaller firms, larger firms have more resources. Larger firms also have more power to negotiate better terms from suppliers, distributors, and customers, and they benefit more from economies of scale; together, market power and economies of scale make it easier for larger firms to hold down costs and compete on price. Finally, larger firms have greater visibility, legitimacy, and status.

Because larger firms have larger resource bases and can use economies of scale and market power to drive down their costs, they can more easily recover from the costs of mistakes. Therefore they are better equipped than smaller ones to handle the uncertain terrain of a transition economy and may have less need to develop ties to state authorities and reduce uncertainty (and thus mistakes): larger firms can deal with uncertainty by relying on their larger resource bases and their lower cost structures, while smaller ones cannot. But at the same time, larger firms' superior visibility, legitimacy, and status make it easier to attract the attention of state authorities and to forge ties with them—even though they have less need of such ties to deal with uncertainty.

This logic applies well to firms in China: larger Chinese firms have more resources, benefit more from economies of scale, have more bargaining power with exchange partners, and have greater visibility, legitimacy, and status. But there are other reasons, specific to China, why larger firms may find it easier to cultivate ties to state agents (Peng and Luo, 2000), even if they have less need to do so. Larger firms tend to be in more central positions in China's power structure: they have more ties to bureaucrats and ties to more-powerful bureaucrats (Guthrie, 1999; Y. Lin, 2001). Larger firms dominate the industry associations that serve as conduits to state authorities, and their scale helps them attract bureaucrats' attention (Kennedy, 2005). And research on interorganizational ties in China shows that they are ''weapons of the weak'' (Yang, 1994: 126). Smaller enterprises must leverage their social ties to secure the benefits that accrue easily to larger ones: less exposure to regulations, taxes, fees, and fines (e.g., Gold, 1990; Tsai, 2002); easier access to state-controlled resources and lower risks of government expropriation of assets (Cull and Xu, 2005; Li and Zhang, 2007; Li et al., 2008); and better opportunities to acquire resources from sources outside the state, including foreign investors (Walder, 1994; Keister, 2004). Both general and China-specific differences between larger and smaller firms lead us to predict that as market development proceeds, the benefits of becoming politically embedded are less pronounced for larger firms than for smaller ones—even though it may be easier for larger firms to become politically embedded in the first place:

> **Hypothesis 3 (H3):** The positive joint effect of market development and becoming politically embedded on firm performance is weaker for larger firms.

Causal Mechanisms

To probe causal mechanisms, we consider two common flows of funds into and out of firms in transition economies: bank loans and related-party transactions.

   Access to bank loans. Access to bank loans facilitates expansion, allowing firms to achieve economies of scale and market power vis-à-vis suppliers and customers, thereby enhancing their competitiveness and improving their performance. Demand for such loans increases as markets develop and new business opportunities arise. To the extent that banks are agents of the state, ties with state authorities will be important in securing such loans.

   During our study period, Chinese banks were firmly under state control (Shih, 2008; Nee and Opper, 2010; Allen et al., 2013). In 2007, the end of our study period, the assets of the ''big five'' state-owned banks accounted for 63 percent of all bank assets. Other, smaller state-owned or state-controlled banks accounted for another 24 percent, and non-state-controlled banks just 13 percent. Many Chinese firms had limited access to bank loans from state-owned and state-controlled banks, relying instead on their own retained earnings, which were often constrained; for example, the average return on assets for listed firms during our study period was just 3.1 percent. The only other alternatives were private lenders, which charged higher interest rates than banks (Allen, Qian, and Qian, 2005). Politically embedded firms could borrow money from banks at dramatically lower interest rates and with far less collateral (Allen, Qian, and Qian, 2005). Thus we predict:

   Hypothesis 4a (H4a): As market development proceeded, becoming politically embedded had increasingly positive effects on firms' access to bank loans.

   Hypothesis 4b (H4b): Access to bank loans mediated the joint effect of market development and becoming politically embedded on firm performance.

   Related-party transactions. In transition economies, many firms are members of business groups, collections of firms controlled by the same shareholder that are connected through a mix of equity, debt, personnel, and trade (Granovetter, 1993; Khanna and Yafeh, 2007). In business groups, ownership of any firms listed on the stock markets is split between their controlling shareholders and other (minority) shareholders, while ownership of other, non-listed firms is solely in the hands of controlling shareholders. In response to pressure from controlling shareholders, business group members often exchange information, funds, goods, or services with other members in what are called related-party transactions. Such transactions allow controlling shareholders to pull resources out of the listed firms in which they have partial ownership and transfer them to the non-listed firms in which they have full ownership, which impairs listed firms' performance but increases aggregate returns to controlling shareholders. Despite the harm such transactions do to listed firms, controlling shareholders can push for related-party transactions because they exercise considerable influence over listed firms' strategies and operations. Moreover, when the rule of law is weak, controlling shareholders face few external corporate governance mechanisms, such as lawsuits by minority shareholders, that would deter such transactions (Shleifer and Vishny, 1997; La Porta et al., 1998). Pressures to engage in related-party

transactions increase as markets develop because the performance of business-group members often deteriorates due to increased competition and uncertainty.

Listed firms can defend themselves from pressures to engage in related-party transactions by forging relationships with state bureaucrats. The weak rule of law in authoritarian regimes means the judiciary is not independent of the state bureaucracy, and state bureaucrats have discretion in applying regulations. Relationships with those bureaucrats can provide an alternative to the rule of law (Guseva and Róna-Tas, 2001): such relationships build trust between firms and state authorities and so make it easier to secure enforcement of any formal checks and balances regulators have imposed, including those concerning controlling shareholders' behavior. Business–state ties can protect firms against pressure by controlling shareholders to engage in related-party transactions; as markets develop and these pressures mount, such ties increasingly improve firm performance.

In China, most listed firms are members of business groups (Keister, 2000; Zheng, 2013) within which controlling shareholders exert an influence that exceeds their ownership share because the rule of law is weak (Clarke, 2003). Controlling shareholders can push for related-party transactions even when they have less than majority ownership stakes (Fisman and Wang, 2010) because they face few external governance mechanisms that would deter such transactions (Zheng and Kim, 2011). Our analysis focuses on related-party loans (and loan guarantees) made by listed firms to other business-group members. Because Chinese listed firms are usually the financially strongest in their business group (Zheng, 2013), controlling shareholders often pressure them to support other business-group members financially. Listed firms' financial strength and their transparent financial statements, which follow tightly regulated disclosure requirements, make it preferable for them to guarantee third-party loans to other business-group members (Fisman and Wang, 2010), but doing so puts listed firms at risk of repaying these loans if borrowers default. Because interest on many loans is not paid and many loans are never repaid, these transactions funnel financial resources out of listed firms and impair their performance (Fisman and Wang, 2010; Jiang, Lee, and Yue, 2010; Jia, Shi, and Wang, 2013).

Becoming politically embedded can help Chinese listed firms defend themselves against pressure from controlling shareholders to make related-party loans. Chinese regulators have begun to view these loans with great suspicion and have imposed increasingly stringent control over them. For example, on August 28, 2003, the China Securities Regulatory Commission issued a regulation demanding plans from listed firms for decreasing related-party loans by 30 percent per year. Listed firms that become politically embedded develop closer ties to and greater visibility with state officials, so they can more easily persuade bureaucrats to enforce regulations that protect firms' interests (Li, Meng, and Zhang, 2006).[3] Pressures to make related-party loans increased as

---

[3] Previous research on business–state ties in China demonstrated that political embeddedness offers protection across an array of settings: lawyers received favors from court officials (Michelson, 2007); firms were more likely to use the court system because their political ties gave them advantages over their opponents (Ang and Jia, 2014); and when firms experienced infringement of their property rights by state officials, they could appeal to higher-level officials for corrective action (Li, Meng, and Zhang, 2006). Thus, although business–state ties have generally been linked to corruption, we predict that they may sometimes fend off tunneling (see also Michelson, 2007).

market development proceeded, so becoming politically embedded was increasingly important to resist those pressures. In turn, protection from related-party loans improved firm performance. Therefore we predict:

Hypothesis 5a (H5a): As market development proceeded, becoming politically embedded had increasingly negative effects on firms' related-party loans.

Hypothesis 5b (H5b): Related-party loans mediated the joint effect of market development and becoming politically embedded on firm performance.

METHOD

Sample

We study Chinese firms listed on the domestic stock exchanges, which are among the largest firms in China and which dominate most industrial sectors. Much more, and more-reliable, information is available on listed firms than on non-listed firms, which makes them a strategic site for research on China's economic transition. Our analysis begins in 1992, the year after the Chinese stock markets opened, and ends in 2007 when China finally adopted laws to fully proclaim the rights to private property in business. Using this endpoint avoids having the analysis confounded by the global financial crisis that erupted in 2008 and the subsequent decline in the Chinese stock market. The number of listed firms increased over time, from 26 in 1992 to 801 in 1999 and 1,371 in 2007. The full dataset contains 11,145 firm-year records.

All listed firms were politically embedded to some extent because they had to receive state approval to list on the domestic stock exchanges in the first place (Zheng, 2013). Up to 1999, the state set strict quotas for listing, and firms competed vigorously for those quotas; starting in 1999, the state dropped quotas and allowed investment banks to nominate firms to become listed, but the state still needed to approve listings. That the firms we study had to be politically embedded to get listed should reduce our ability to find any impact of the specific form of political embeddedness we study, rendering our analyses conservative tests of our arguments.

To consider whether our arguments generalize to other firms in China, we conducted a supplementary analysis of non-listed firms, using data from a series of surveys done by the Privately Owned Enterprises Research Project Team, a group of scholars in a wide array of governmental and non-governmental organizations, including the Chinese Academy of Social Science and the All-China Federation of Industry and Commerce. In each survey year (1995, 1997, 2000, 2002, 2004, and 2006), the research team used stratified random sampling to generate nationally representative samples of privately owned firms across all Chinese provinces and all industries. The average sample size each year was 1,385 firms.[4] These data have three limitations. First, they consist of repeated cross-sections, rather than panels, so our ability to pinpoint causation is limited. Second, they measure industry coarsely, so we could not assess that contingency. Third, they contain no data on bank borrowing or

---

[4] We excluded from analysis the rare listed firms in this dataset, which constituted 0.2 percent of the total.

related-party loans, so we could not test these causal mechanisms. Still, this analysis allowed us to test our central argument and the contingent effect of firm size.

Data Sources and Measures

Political embeddedness. We hand-collected the résumés of each listed firm's chief executive officer (CEO), all other top executives (all those with ''Chief'' in their titles), and all directors from the website of Sina (finance.sina .com.cn), which publishes comprehensive information on Chinese listed firms. Because listed firms' executives and directors changed over time, we collected these data for every year each firm was listed on a domestic stock exchange. We scrutinized each person's résumé to determine whether he or she had served as a bureaucrat and, if so, at what rank (chief officer, deputy, etc.) and at what level in the official hierarchy. This hierarchy has six main levels: ministry (*bu*), department (*ju*), division (*chu*), section (*ke*), staff member (*keyuan*), and clerk (*banshiyuan*). We coded a firm's *political embeddedness* as a binary indicator variable set to one in years when an executive or director of the focal firm had served as the chief officer or deputy chief officer at the division (*chu*) level or above, and zero otherwise. This threshold is commonly used in studies of Chinese bureaucrats (e.g., Zhou, 2000; Walder, 2004). Lower-level officials are not funded through the central fiscal system, so the division level indicates membership in the political elite, which in 1998 included roughly half a million individuals (Walder, 2004: 195) out of a total population of 1.25 billion that year—just four out of 10,000 Chinese people. Because the vast majority of high-level bureaucrats are Chinese Communist Party members, our measure captures a second aspect of political embeddedness. For robustness checks, we constructed two other measures: the number and the proportion of executives and directors who had served as the chief officer or deputy chief officer at the division (*chu*) level or above.

To code political embeddedness, we hired five research assistants each at two universities, one in Jiangxi Province and one in Beijing. Each school's group of students independently coded data according to detailed coding instructions. We compared codes generated by the two groups, and for 96.3 percent of manager-year observations, their codes were in agreement. For the remaining 3.7 percent of observations, we had both groups check the reasons underlying their coding decisions and worked with them to resolve all disagreements.

Any relationship we find between becoming politically embedded and performance may be epiphenomenal: if state officials serving as executives and directors later return to the state bureaucracy, it may be that those officials are placed in listed firms to polish their résumés, and the higher-level officials who orchestrate these moves will protect politically embedded firms. This is unlikely to explain our findings in their entirety because only a small fraction of officials serving as executives and directors later returned to the state bureaucracy. Among listed firms, 2.5 percent of CEOs made such moves between 2005 and 2011 (Cao et al., 2014). Among listed firms controlled by the central state, such

moves constituted 11 percent of all moves of top managers and directors between 2004 and 2007 (Lin and Milhaupt, 2013). Such moves are rare in part because bureaucrats usually move into firms near retirement age (60 years for male civil servants and 55 years for female ones). Still, there are some returns, and return rates are likely to be higher for larger firms and for firms owned by the central state.[5]

To handle this possibility, we did four things. First, we matched treated (politically embedded) and control (unembedded) firms along key observable dimensions, including state ownership. Second, we included firm fixed effects, which means we analyzed changes in political ties within firms over time. Ownership is constant, and if owners' strategies for appointing executives and directors remained constant, differences between state-controlled and non-state-controlled firms in terms of whether politically tied leaders were appointed by the state are captured by the firm fixed effects. Third, we conducted ancillary analyses that dropped firms owned by the central state from the dataset; these results were highly consistent with the results shown here. Fourth, we analyzed state-controlled and non-state-controlled firms separately and found no statistically significant difference in interactions between market development and political embeddedness.

Market development. We measured the proportions of labor and capital allocated through markets rather than by the state, based on how labor and capital were divided between state-owned and non-state-owned firms. We followed the National Bureau of Statistics' definition of state-owned firm as (a) those in which the state owns more than 50 percent of shares and (b) those in which the state owns less than 50 percent of shares but the state is the largest shareholder or the controlling shareholder (Holz and Lin, 2001). The first measure, *market development* (*employment*), is the logged percentage of the labor force working in non-state-owned firms each year. The second measure, *market development* (*investment*), is the logged percentage of fixed-asset investments in non-state-owned firms each year. Both variables are measured for the nation as a whole, as many listed firms operate in multiple locations. Both were based on data in the *China Statistical Yearbook* (various years).[6] We logged them because they were right-skewed.

In results not shown here to save space, we used an indicator of market development that was based on state policy and the creation of market-supporting institutions, such as free information flows or laws governing property rights, contracts, and competition, rather than market size. The year 2003 was a milestone in the development of such institutions, spurred by China's

---

[5] Xueguang Zhou, personal communication, April 29, 2015.

[6] Starting in 1998, the definition of the share of labor and investment in state-owned firms was changed to include part of the labor and investment in non-state-controlled firms, proportionate to state ownership stakes in those firms (Holz and Lin, 2001). Because the share of labor and investment in state-owned firms that could be apportioned to non-state shareholders, based on their ownership stakes, was not deducted, measures of market development starting in 1998 were artificially reduced relative to measures for prior years. This change should make it more difficult for us to find support for our hypotheses.

accession into the World Trade Organization in December 2001 (e.g., Yang, 2005).[7]

Firm and industry variables. We obtained most data on firms from the Guo Tai An Information Technology Company (GTA, also called China Securities Market and Accounting Research), a Hong Kong firm that has developed databases on the Chinese banking industry, stock market, and economy for academic and industry researchers. We used GTA's China Stock Market Trading Database. We also obtained some data from Wind Information Co., a leading financial data firm in China.

To measure *firm performance*, we used net return on net assets (ROA), a measure that is comparable across industries and across firms operating on different scales. For robustness checks, we also calculated net return on equity (ROE), which reveals how much profit the company generates with the money shareholders invested. Given the rise of the shareholder value model in the United States (Lazonick and O'Sullivan, 2000; Fligstein and Shin, 2007) and the number of American economic advisors working in China, this measure may be highly salient to Chinese executives and directors. But in China, accounting for assets is less ambiguous than accounting for equity (Peng and Luo, 2000), so we focus primarily on ROA.

To measure *competition*, we aggregated data on firms to the industry level. We defined industry using two-digit Chinese Standard Industrial Classification codes. We used the Herfindahl–Hirschman index of concentration, calculated using the market share, based on sales, of all listed firms in each industry each year. The index of concentration is an inverse measure of competition: higher values indicate lower levels of competition.

Mediating variables. We first assessed each firm's access to bank loans by calculating its *borrowing ratio*, the ratio of bank borrowing to total assets. Scaling by assets makes this variable comparable across firms of different sizes. We then examined related-party loans by calculating for each year the total value of loans and loan guarantees provided by the listed firm to the controlling shareholder or to other firms controlled by that shareholder, minus the value of loans repaid to those entities and loans or loan guarantees provided to the listed firm by those entities. We scaled this variable by the listed firm's total assets to make it comparable across firms of different sizes and created the *related-party loan ratio*. Data on related-party loans became available only in 1998, when a new reporting requirement was put in place, so our analysis of this causal mechanism is limited to 1998 onward.

Four conditions must be present for a variable to be a mediator: (1) the initial explanatory variable must be correlated with the outcome variable, (2) the initial explanatory variable must be correlated with the mediator, (3) the mediator must affect the outcome variable, and (4) the effect of the explanatory variable on the outcome variable in a model that includes the mediator should be

---

[7] See also media accounts, for example, ''The year of 2003: A first step to improve China's economic reforms,'' Xinhua News Agency, November 28, 2011 (http://news.xinhuanet.com/newscen ter/2003-11/28/content_1202985.htm) and ''Milestones of reform: 30 years of 3rd Plenums,'' China.org.cn, October 8, 2008 (http://www.china.org.cn/china/reform-opening-up/2008-10/08/ content_16645095_2.htm).

significantly smaller than in a model that does not include the mediator (Baron and Kenny, 1986). As we show below, we tested all four conditions. To assess the statistical significance of the change in the effect of the explanatory variable, we used the method derived by Sobel (1982).

   Control variables. We controlled for other variables that may affect firm performance, access to bank loans, and related-party loans. First, we constructed an indicator of *state ownership*, coded one if the firm was controlled by a state agency and zero otherwise. In China, listed firms' controlling shareholders exercise considerable control over operations through their power to make appointments to boards of directors, even if those shareholders have significantly less than majority stakes (Clarke, 2003; Fisman and Wang, 2010). Different types of controlling shareholders influence not only firm performance but also what firms can gain from their political embeddedness (Walder, 1996). State-owned firms can use their formal political connections to maneuver for more advantageous market positions (e.g., Calomiris, Fisman, and Wang, 2010). Non-state-owned firms can use informal ties to bureaucrats, such as having bureaucrats serve as directors or executives, to get protection from competition and access to financing and industry information (e.g., Luo, 2003; Li and Zhang, 2007), so informal ties may be especially rewarding for non-state-owned firms. Second, we controlled for *firm size* using assets, logged to normalize the distribution, because larger firms are more likely to have political ties, although smaller ones may be more likely to actively use them (Guthrie, 1999; Y. Lin, 2001). In robustness checks, we used an alternative measure of size, based on sales, again logged to normalize the distribution.

Model Specification and Estimation

Firms that become politically embedded may differ considerably from those that do not. For example, firms in less competitive industries may be more likely to become politically embedded and more likely to perform well as markets develop independent of their becoming politically embedded. If so, regression analyses will be biased by selection into the ''treatment condition'' (becoming politically embedded) rather than the ''control condition'' (not becoming politically embedded). To put it simply, industry competitiveness may explain any observed association between the treatment and the dependent variable.

   Propensity-score matching helps alleviate such concerns by matching firms in the treatment and control conditions on observable confounds, thus eliminating spurious results due to those confounds (Rosenbaum and Rubin, 1983). To implement this technique, researchers predict selection of cases into the treatment condition using a set of variables that are not affected by the dependent variable, calculate each case's predicted probability of being selected into the treatment condition—its ''propensity score'' for experiencing the treatment— and match cases in the treatment and control conditions on the basis of their propensity scores. For our study, we first estimated a logistic regression predicting firms becoming politically embedded using firm size, borrowing ratio, state ownership, industry, and year. We then calculated the propensity score for each firm each year—its predicted probability of being politically embedded.

Next we constructed a subset of firms that did not become politically embedded but that had sufficiently high propensity scores (the ''matching sample'') that they resembled the set of firms that did become politically embedded in all observable respects, except for receiving the treatment. To determine which propensity scores were high enough for inclusion in the matching sample, we used nearest-neighbor matching without replacement. We began by sorting the firms in the treatment condition randomly and then matched each with the closest firm in the control condition. To match, we used a caliper of 0.25 standard deviations. All matches not within this caliper were dropped (317 firms: 201 that became politically embedded and 116 that did not), so the sample analyzed included 1,054 firms.

To test the quality of the matching process, we assessed whether the two groups of firms were statistically similar in terms of observables. Although firms that became politically embedded had slightly higher propensity scores than those that did not, the distributions overlapped greatly. For state ownership, firm size, and borrowing ratio, the percentage bias between the two groups was smaller than the commonly accepted threshold of 5 percent (Rosenbaum and Rubin, 1983); moreover, t tests of differences between the two groups were nonsignificant ($p > .05$) for the borrowing ratio, state ownership, and firm size. For all industry and year indicator variables, the percentage bias between the two groups was smaller than 5 percent. Differences between the two groups were not significantly different for the overwhelming majority of indicator variables: t tests yielded $p > .05$ for 92 percent of industry indicators and 97 percent of year indicators. These results suggest that the overall match is good: after pooling the two groups, becoming politically embedded can be regarded as exogenous to the extent that we have ruled out selection on observables.

Our dependent variables are continuous, so we estimated ordinary least-squares regressions on the matched samples. We lagged all explanatory variables by one year. Because we have multiple observations on each firm, data points are not independent. To deal with this, we included firm fixed effects in all models and clustered standard errors by firm. Including firm fixed effects means that we compared within-firm, over-time changes in the impact of political embeddedness; doing so eliminates concerns about time-invariant unobservable differences between firms that may yield spurious results (Halaby, 2004). These models offer conservative tests of our hypotheses because they do not model variation between firms.

The next step was to add year fixed effects, which eliminated concerns about all unobserved over-time differences (e.g., unemployment or inflation), not just market development. Because market development is measured at the national level, these models do not include the main effect of market development—that coefficient is swept away by the year fixed effects. Models with both firm and year fixed effects are more conservative than models with just firm fixed effects: the former capture not just over-time variation in market development but also over-time variation in other national-level factors, some of which may be caused by market development.

To test hypothesis 1, we interacted market development with the political embeddedness dummy. To test hypotheses 2 and 3, we conducted subsample analyses. We tested hypothesis 2 by comparing regressions across subsamples of firms split by the level of competition they faced in their primary

industry. We coded an industry as more competitive if concentration was below the median across all industries in the focal year and less competitive if concentration was above the median. We tested hypothesis 3 by comparing regressions across subsamples split based on firm size. We defined a firm as large if its total assets were above the median for size in the focal year and small if its total assets were below the median. We used subsample analysis because it is flexible, as it allows other covariates to differ between firms in more and less competitive industries and between large and small firms. By contrast, estimating a single model constrains the coefficients of these covariates to be the same for all firms, which may not be justifiable. Subsample analysis is also more straightforward to interpret than three-way interactions.

RESULTS

Trends over Time and across Space

Figure 1 plots the number of listed firms each year and the number each year that have executives or directors who worked as bureaucrats at the division (*chu*) level or above in the cadre hierarchy. It shows a striking pattern: over time, listed firms were increasingly likely to have former bureaucrats as executives and directors. In 1992, only 27 percent of listed firms (7 of 26) were politically embedded in this way. The number rose to 54 percent in 1998 (378 of 704), then to 69 percent in 2002 (721 of 1,051), before declining slightly to 66 percent in 2007 (908 of 1,368).

Both measures of market development increased steadily during our study period. In 1992, non-state-owned firms accounted for 16 percent of employment and 1.9 percent of assets invested. By 2007, non-state-owned firms accounted for 68 percent of employment and 41 percent of assets invested. At every point in time, market concentration varied tremendously across

Figure 1. Number of listed firms and number of politically embedded listed firms.
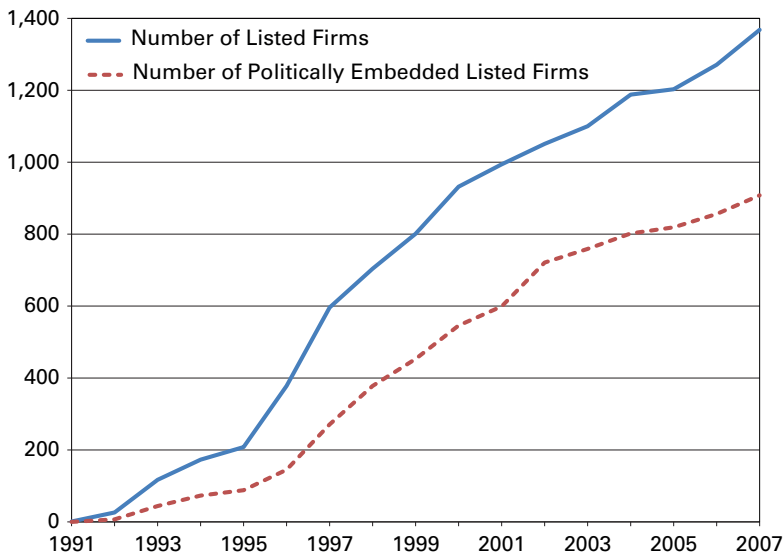
industries. Among the most competitive (least concentrated) industries were machinery and industrial equipment, metal and non-metal products, and textiles and clothing, with Herfindahl–Hirschman indexes of .026, .054, and .056, respectively, on average across our study period. Social services and finance were the least competitive (most concentrated) industries, with indexes of .842 and .933, respectively.

Testing Hypotheses

Table 1 presents univariate statistics and correlations. None of the correlations is high enough to raise concerns about multicollinearity, except between (a) the two measures of market development and (b) the two interactions between political embeddedness and these measures of market development, but neither pair of variables is included in the same regression model.

Firm performance. Table 2 presents results on return on assets (ROA) using market development (employment). Model 1 reports the results of the baseline model with all explanatory variables except the interaction between

Table 1. Univariate Statistics and Bivariate Correlations*

Variable	Mean	S.D.	Min.	Max.	Number of observations	1	2	3
1. Return on assets	.031	.060	−.360	.179	10,861			
2. Borrowing ratio	.499	.195	.000	.920	10,704	.367		
3. Related-party loan ratio	.057	.106	.000	.514	9,152	−.154	−.306	
4. Political embeddedness	.609	.488	.000	1.000	10,861	.001	−.077	.002
5. State-controlled firm (yes = 1)	.785	.411	.000	1.000	10,861	.036	.105	−.092
6. Industry competition (concentration)[†]	.462	.499	.000	1.000	10,861	.174	−.037	−.026
7. Firm size (log assets, RMB)	20.903	.981	14.937	27.111	10,861	.032	−.186	.133
8. Market development (employment)	−1.055	.190	−1.338	−.772	10,860	−.166	−.285	.286
9. Market development (investment)	−.565	.168	−1.113	−.331	10,860	−.169	−.283	.285
10. Market development × Political embeddedness (employment)	−.627	.523	−1.338	.000	10,860	−.027	.022	.051
11. Market development × Political embeddedness (investment)	−.331	.294	−1.113	.000	10,860	−.044	−.012	.081

Variable	4	5	6	7	8	9	10
5. State-controlled firm (yes = 1)	.105						
6. Industry competition (concentration)[†]	.126	.173					
7. Firm size (log assets, RMB)	.147	.141	.406				
8. Market development (employment)	.120	−.174	−.120	.314			
9. Market development (investment)	.119	−.174	−.123	.313	.987		
10. Market development × Political embeddedness (employment)	−.963	−.132	−.152	−.076	.094	.093	
11. Market development × Political embeddedness (investment)	−.905	−.143	−.164	−.030	.217	.222	.985

* This table presents statistics on the combined treatment and control samples that were created by propensity-score matching.
[†] Low values indicate strong competition.

**Table 2. The Impact of Political Embeddedness on Firm Performance (ROA), Contingent on Market Development (Employment)*

Variable	(1) All firms	(2) All firms	(3) All firms	(4) All firms	(5) More-competitive industries	(6) Less-competitive industries	(7) Small firms	(8) Large firms
Political embeddedness	−.001	.039•••	.002	.032••	.038••	.009	.047•	.013
	(.002)	(.011)	(.002)	(.010)	(.014)	(.015)	(.019)	(.014)
Market development	−.037•••	−.060•••						
	(.006)	(.009)						
Market development × Political embeddedness		.036•••		.027••	.031•	.013	.038•	.014
		(.010)		(.009)	(.014)	(.014)	(.016)	(.013)
Firm size (log assets, RMB)	−.021•••	−.021•••	−.019•••	−.019•••	−.038•••	−.015•••	−.038•••	−.019•••
	(.002)	(.002)	(.002)	(.002)	(.003)	(.003)	(.004)	(.003)
State-controlled firm (yes = 1)	−.010••	−.011••	−.010••	−.011••	−.015•••	−.007	−.013•	−.009
	(.003)	(.003)	(.003)	(.003)	(.004)	(.006)	(.005)	(.006)
Chow test					(Prob > F) = .07		(Prob > F) = .05	
Number of observations	10,860	10,860	10,860	10,860	5,847	5,013	5,364	5,496
Adjusted R-squared	.248	.251	.290	.291	.293	.381	.276	.363

• $p < .05$; •• $p < .01$; ••• $p < .001$.

* Robust standard errors (clustered on firms) are shown in parentheses. Market development is the (logged) percentage of the labor force employed in non-state-owned firms each year. More-competitive industries are those with below-median concentration indexes in the focal year. Small firms are those with below-median assets in the focal year. All models include firm fixed effects, and models 3–8 include year fixed effects.

market development and political embeddedness. It shows a significant negative effect of market development and a near-zero effect of political embeddedness. It also shows that larger firms and state-controlled firms perform worse than smaller and non-state-controlled ones. Model 2 adds the interaction between political embeddedness and market development and shows a significant positive effect, which indicates that being politically embedded increasingly enhanced firm performance, supporting hypothesis 1.

Model 3 adds year fixed effects and drops the main effect of market development. Model 4 adds the interaction between market development and political embeddedness and shows a positive and statistically significant effect, which indicates that becoming politically embedded increasingly enhanced firm performance, supporting hypothesis 1. This effect is quite large. When market development was at its mean, becoming politically embedded increased predicted ROA by .004. When market development was one standard deviation above the mean, the increase was .009. Thus as market development increased from the mean to one standard deviation above the mean, becoming politically embedded increased ROA by an additional .005—a 16-percent increase from the sample-average ROA.

To test hypothesis 2, models 5 and 6 compare more and less competitive industries, based on a median split of the sample. The interaction between political embeddedness and market development is positive and statistically significant in model 5 (more-competitive industries) and positive but nonsignificant in model 6 (less competitive industries), and the magnitude of the interaction effect is greater in model 5 than in model 6. But a Chow test shows that

Table 3. The Impact of Political Embeddedness on Firm Performance (ROA), Contingent on Market Development (Investment)*

Variable	(1) All firms	(2) All firms	(3) All firms	(4) All firms	(5) More-competitive industries	(6) Less-competitive industries	(7) Small firms	(8) Large firms
Political embeddedness	−.001	.017•	.002	.020••	.027••	.004	.031••	.006
	(.002)	(.007)	(.002)	(.007)	(.009)	(.010)	(.012)	(.009)
Market development	−.036•••	−.055•••						
	(.007)	(.010)						
Market development × Political embeddedness		.031••		.030••	.038•	.014	.043•	.014
		(.011)		(.010)	(.016)	(.015)	(.018)	(.015)
Firm size (log assets, RMB)	−.022•••	−.022•••	−.019•••	−.019•••	−.038•••	−.015•••	−.038•••	−.019•••
	(.002)	(.002)	(.002)	(.002)	(.003)	(.003)	(.004)	(.003)
State-controlled firm (yes = 1)	−.009••	−.010••	−.010••	−.011••	−.015•••	−.007	−.013•	−.009
	(.003)	(.003)	(.003)	(.003)	(.004)	(.006)	(.005)	(.006)
Chow test					(Prob > F) = .16		(Prob > F) = .06	
Number of observations	10,860	10,860	10,860	10,860	5,847	5,013	5,364	5,496
Adjusted R-squared	.246	0.247	0.290	0.291	0.293	0.381	0.276	0.363

• $p < .05$; •• $p < .01$; ••• $p < .001$.

* Robust standard errors (clustered on firms) are shown in parentheses. Market development is the (logged) percentage of all fixed-asset investments made by non-state-owned firms each year. More-competitive industries are those with below-median concentration indexes in the focal year. Small firms are those with below-median assets in the focal year. All models include firm fixed effects, and models 3–8 include year fixed effects.

the difference between the interaction effects is not statistically significant ($p = .07$), which fails to support hypothesis 2.

To test hypothesis 3, models 7 and 8 compare small and large firms, again based on a median split of the sample. The interaction between political embeddedness and market development is positive and statistically significant in model 7 (small firms) and positive but nonsignificant in model 8 (large firms), and the magnitude of the interaction effect is greater in model 7 than in model 8. A Chow test shows that the difference between the interaction effects is statistically significant ($p = .05$). This supports hypothesis 3 and indicates that as market development proceeded, becoming politically embedded became more beneficial only for smaller firms.

Table 3 replicates table 2, substituting market development (investment), and the results are largely consistent with those in table 2. In model 1, the effect of this measure of market development is negative and significant. In model 2, the interaction between political embeddedness and market development is again positive and significant, indicating that being politically embedded became increasingly beneficial, which further supports hypothesis 1. As in table 2, model 3 adds year fixed effects and drops the main effect of market development. Model 4 adds the interaction between political embeddedness and market development, which is again positive and significant, further supporting hypothesis 1. Again, the effect is quite large. When market development was at its mean, becoming politically embedded increased ROA by .003. When market development was one standard deviation above the mean, the increase was .008. Thus, as market development increased from the mean to

one standard deviation above the mean, becoming politically embedded increased ROA by an additional .005—a 16-percent increase from the sample-average ROA.

Models 5 and 6 compare more and less competitive industries, based on a median split of the sample, to test hypothesis 2 again. As before, the interaction between political embeddedness and market development is positive and statistically significant in model 5 (more-competitive industries) and positive but nonsignificant in model 6 (less competitive industries). The interaction is also larger in model 5 than in model 6. But a Chow test shows that the interaction effects are not significantly different (p = .16), which fails to support hypothesis 2. Models 7 and 8 compare smaller and larger firms, based on a median split of our sample, to test hypothesis 3 again. The interaction between political embeddedness and market development is positive and statistically significant in model 7 (small firms) and positive but nonsignificant in model 8 (large firms), and the interaction is larger in model 7 than in model 8. But a Chow test shows the difference between the interaction effects is not statistically significant (p = .06), which fails to support hypothesis 3.

Robustness checks. To assess the sensitivity of our results to model specification, we conducted several robustness checks, which are not shown to save space. First, we estimated models with random (latent) effects for firm instead of fixed effects. Such models are less conservative than fixed-effects models because they make a strong assumption that firm-level heterogeneity does not persist for more than a single year (Wooldridge, 2001). Second, we included the prior-year value of the dependent variables as an additional control variable. Third, we estimated models using two-stage least-squares. We used a combination of variables to predict the likelihood of firms becoming politically embedded, including market development and firm size, plus dummies for the state in which the focal firm was headquartered and the focal firm's industry. We then used the predicted value of political embeddedness in the second-stage analysis. For all alternative model specifications, the results show the same patterns as those discussed above.

We tried measuring the dependent variable as return on equity. We also experimented with explanatory variables. We replaced the binary measure for political embeddedness with two alternatives: first the logarithm of the number of executives and directors who had served as the chief officer or deputy chief officer at the division (*chu*) level in the cadre hierarchy or above, and second the proportion. We replaced the continuous measure of market development with an indicator for the years after 2003, to reflect legal changes in the wake of China's accession to the World Trade Organization in December 2001. Finally, we used a different measure of firm size, based on sales. Analyses using each of these alternatives yielded results that were almost identical to the results discussed above.

Probing mechanisms: Access to bank loans. The first four columns in table 4 show the results of the analysis of bank borrowing, which tests hypothesis 4a. Models 1 and 2 use market development (employment), while models 3 and 4 use market development (investment). Models 1 and 3 are main-effects models; models 2 and 4 add the interaction between political

Table 4. The Impact of Political Embeddedness on Causal Mechanisms, Contingent on Market Development[*]

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Borrowing ratio				Related-party loan ratio			
	Employment		Investment		Employment		Investment	
Political embeddedness	−.003	.055	−.003	.033	−.001	−.064[••]	−.001	−.040[••]
	(.006)	(.030)	(.006)	(.019)	(.004)	(.021)	(.004)	(.014)
Market development × Political embeddedness		.053[•]		.061		−.060[••]		−.070[••]
		(.027)		(.032)		(.020)		(.022)
Firm size (logged assets, RMB)	−.040[•••]	−.040[•••]	−.040[•••]	−.040[•••]	.005	.005	.005	.005
	(.005)	(.005)	(.005)	(.005)	(.003)	(.003)	(.003)	(.003)
State-controlled firm (yes = 1)	.021[••]	.020[•]	.021[••]	.020[•]	−.000	.001	−.000	.001
	(.008)	(.008)	(.008)	(.008)	(.006)	(.006)	(.006)	(.006)
Number of observations	9,983	9,983	9,983	9,983	9,136	9,136	9,136	9,136
Adjusted R-squared	0.629	0.630	0.629	0.630	0.383	0.385	0.383	0.385

[•] $p < .05$; [••] $p < .01$; [•••] $p < .001$.
[*] Robust standard errors (clustered on firms) are shown in parentheses. All models include firm fixed effects and year fixed effects.

embeddedness and market development. The interaction is both positive and statistically significant in model 2 and nonsignificant ($p < .06$) in model 4. Taken together, these results provide partial support for hypothesis 4a, which predicted that as market development proceeded, becoming politically embedded increased bank borrowing. Limited access to credit is an obstacle that confronts many Chinese firms. These results suggest that one mechanism through which political embeddedness can help firms is to facilitate their access to this scarce resource, which is largely state-controlled. But this effect is modest.

When market development (employment) was at its mean, becoming politically embedded increased the predicted borrowing ratio by .001. When it was one standard deviation above the mean, the increase was .009. That is, as market development increased from the mean value to one standard deviation above the mean, becoming politically embedded increased the borrowing ratio by an additional .008—a 2-percent increase from the sample-average borrowing ratio.

Probing mechanisms: Related-party loans. The last four columns in table 4 show the analysis of related-party loans to test hypothesis 5a. Models 5 and 6 use market development (employment), while models 7 and 8 use market development (investment). Models 5 and 7 are main-effects models; models 6 and 8 add the interaction between market development and political embeddedness. The interaction is negative and statistically significant, indicating that as market development proceeded, becoming politically embedded increasingly helped listed firms defend themselves from pressures exerted by their controlling shareholders to engage in value-destroying loans and loan guarantees for members of their business group. Thus becoming politically embedded

buffered listed firms from exploitative shareholders, which supports hypothesis 5a, and these effects are substantial.

When market development (employment) was at its mean, becoming politically embedded decreased the related-party loan ratio by .001. When it was one standard deviation above the mean, the decrease was .012. In other words, as market development increased from the mean value to one standard deviation above the mean, becoming politically embedded decreased the related-party loan ratio by an additional .011—a 19-percent decrease from the sample-average related-party loan ratio. Similarly, when the market development (investment) was at its mean, becoming politically embedded decreased the related-party loan ratio by .0004, and when it was one standard deviation above the mean, the change was .012. That is, as market development increased from the mean to one standard deviation above the mean, becoming politically embedded decreased the related-party loan ratio by an additional .0116—a 21-percent decrease from the sample-average related-party loan ratio.

Mediation test.   To test hypotheses 4b and 5b and determine whether easier access to bank loans and greater ability to fend off related-party loans are channels through which becoming politically embedded benefitted firms as markets developed, we conducted formal mediation tests. Table 4 shows that the interaction between political embeddedness and market development was associated with both mediators (bank loans and related-party loans), while tables 2 and 3 show that, without controlling for either mediator, this interaction was associated with ROA. The final step is to assess whether, after controlling for the mediators, the association between this interaction and ROA is eliminated or at least weakened. Table 5 shows this step, reporting models of ROA that include the borrowing ratio and related-party loan ratio. Models 1 to 3 in this table use market development (employment); models 4 to 6 use market development (investment). In both sets of models, we first included only the borrowing ratio, then only the related-party loan ratio, and finally both variables.

Results show that the borrowing ratio mediates the effect on ROA of becoming politically embedded, but only partly. In model 1 of table 5, the interaction between political embeddedness and market development (.023) is less than in model 1 of table 2 (.027). The change in the interaction is statistically significant. A similar but less pronounced pattern is seen in model 4 of table 5: the interaction there is .026, compared with .030 in model 1 of table 3. Again, the change is statistically significant. Yet in both cases, the interaction remains statistically significant. Table 5 also shows that the related-party loan ratio mediates the effect on ROA of becoming politically embedded but again only partly. In table 5, the interactions between political embeddedness and market development (.025 in model 2; .027 in model 4) are less than those in tables 2 and 3 (.027 in table 2, model 1; .030 in table 3, model 1). Again, while both changes are statistically significant, the interactions remain statistically significant. The more fully specified models (3 and 6), which contain both causal mechanisms, show stronger mediation effects: the interactions between political embeddedness and market development decrease further (.021 in model 3; .023 in model 6). These changes are statistically significant, but the interactions still remain significant.

Table 5. Mediation Test: The Impact of Political Embeddedness on Firm Performance (ROA), Net of Causal Mechanisms, Contingent on Market Development*

Variable	(1)	(2)	(3)	(4)	(5)	(6)
	Employment			Investment		
Political embeddedness	.026••	.030••	.025•	.017••	.019••	.016•
	(.010)	(.011)	(.010)	(.006)	(.007)	(.007)
Market development ×	.023•	.025•	.021•	.026•	.027•	.023•
Political embeddedness	(.009)	(.010)	(.010)	(.010)	(.012)	(.011)
State-controlled firms (yes = 1)	−.014•••	−.012••	−.014•••	−.014•••	−.012••	−.014•••
	(.003)	(.004)	(.004)	(.003)	(.004)	(.004)
Firm size (logged assets, RMB)	−.014•••	−.023•••	−.016•••	−.014•••	−.023•••	−.016•••
	(.002)	(.002)	(.002)	(.002)	(.002)	(.002)
Borrowing ratio	.117•••		.113•••	.117•••		.113•••
	(.007)		(.008)	(.007)		(.008)
Related-party loan ratio		−.043•••	−.015		−.043•••	−.015
		(.010)	(.010)		(.010)	(.010)
Change in market development ×	.004•••	.002•••	.006•••	.004•••	.003•••	.007•••
Political embeddedness[†]	(.0001)	(.0001)	(.0001)	(.0001)	(.0002)	(.0002)
Number of observations	10,703	9,152	9,131	10,703	9,152	9,131
Adjusted R^2	.344	.307	.350	.344	.307	.350

• $p < .10$; •• $p < .05$; ••• $p < .01$.

* Robust standard errors (clustered on firms) are shown in parentheses. All models include firm fixed effects and year fixed effects.

[†] For market development (employment), the change in the interaction term is calculated relative to model 4 in table 2. For market development (investment), the change in the interaction term is calculated relative to model 4 in table 3.

Figures 2 and 3 show the mediation test graphically: figure 2 for market development (employment) and figure 3 for market development (investment). Taken together, these results indicate that bank loans and related-party loans significantly (albeit partially) mediated the joint effect on firm performance of becoming politically embedded and market development. These results support hypotheses 4b and 5b. These flows of funds are two of the mechanisms through which becoming politically embedded helped firms as market development proceeded. Other mechanisms by which becoming politically embedded increasingly improved firm performance (which we cannot test with these data), such as improved access to building and business permits, government contracts, and import or export permits, may explain why the interaction between political embeddedness and market development remained statistically significant.

Alternative explanations. One alternative explanation for these results is that causality is reversed: high-ranking state officials might have appointed lower-ranking officials to better-performing firms as a reward for their service (Cao et al., 2014) and might have been more inclined to do so as market development proceeded. If this were true, we would expect to observe stronger interactions between becoming politically embedded and market development among state-owned than among non-state-owned firms, because officials have more power over the appointment in the state-owned firms. To assess this
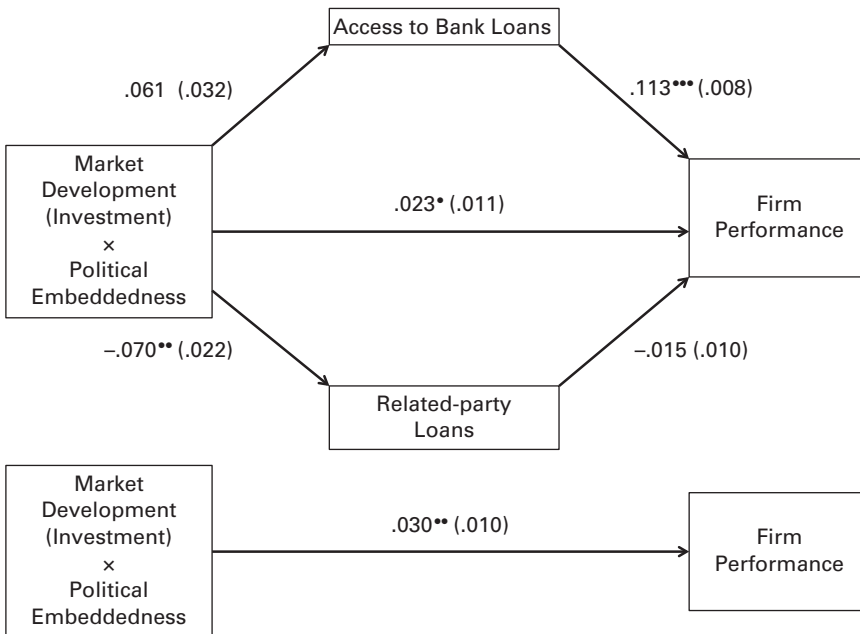
Figure 2. Mediation analysis: Employment-based measure of market development.*
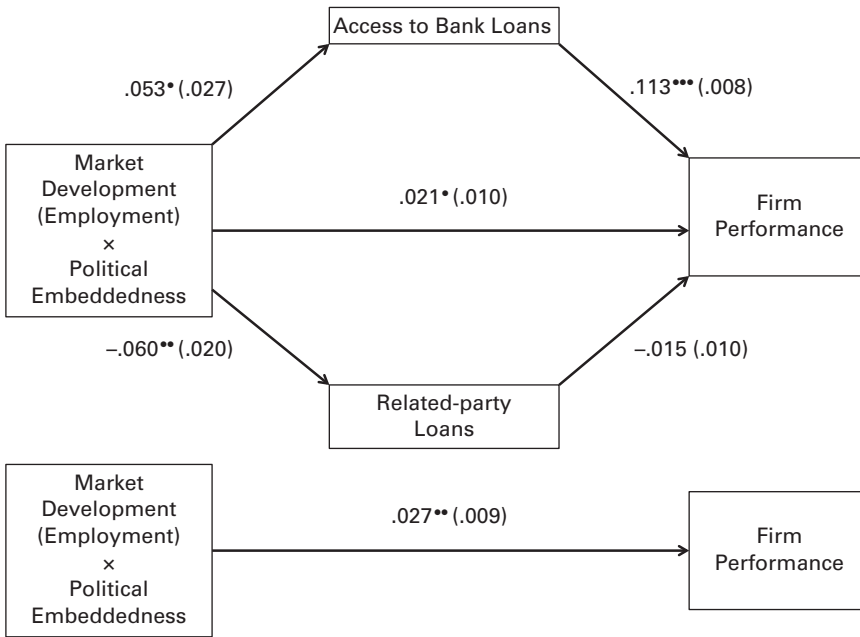
* This figure is based on the estimates in model 4 of table 2, models 2 and 6 of table 4, and model 3 of table 5. Estimated standard errors are shown in parentheses.

Figure 3. Mediation analysis: Investment-based measure of market development.*

* This figure is based on the estimates in model 4 of table 3, models 4 and 8 of table 4, and model 6 of table 5. Estimated standard errors are shown in parentheses.

possibility, we conducted separate analyses of state-owned and non-state-owned firms. Among state-owned firms, the interaction is positive and statistically significant; among non-state-owned firms, it is positive but smaller and nonsignificant. But neither interaction was significantly different. Moreover, the robustness check using the milestone year of 2003 as an alternative measure of market development showed stronger, not weaker, effects for non-state-owned firms than for state-owned firms. Taken together, these results indicate that reverse causality is unlikely.

A second alternative explanation is that these results are driven by some factor that is not included in our analysis and that causes both the observed pattern of political embeddedness and the observed pattern of firm performance, such as a common environmental shock. But we estimated models that included year fixed effects, which absorb the effects of such unobserved factors. Moreover, as long as such omitted factors are uncorrelated with how the sample is split, the suspected spurious relationship should persist in all subsamples. Yet our split-sample analyses indicate that the interaction between political embeddedness and market development was stronger in smaller firms. Thus our analyses obviate concerns about spuriousness due to omitted variables.

Although we argued that related-party loans harm firms, previous research has shown the existence of a coinsurance relationship between controlling shareholders and listed firms at particular points in time (Jia, Shi, and Wang, 2013). When controlling shareholders experienced credit crunches, related-party loans occurred, funneling financial assets out of listed firms. Then, when listed firms' performance dropped, non-loan-based related-party transactions occurred, funneling non-financial assets into listed firms. Although related-party loans were not always reciprocated—only when listed firms' performance dipped—and related-party loans were always detrimental to listed firms, we did two things to alleviate concerns that coinsurance confounded our results. First, because timing is key to the coinsurance argument, we controlled for times when controlling shareholders experienced credit crunches. When we did this, our results still held. Second, we modeled non-loan-based related-party transactions. When we did this, the interaction between political embeddedness and market development was nonsignificant, indicating that as markets developed, political embeddedness did not help firms gain access to these nonfinancial resources. Together, these results indicate that related-party loans always harmed listed firms' performance, and listed firms had incentives to fight them off.

Scope conditions: Non-listed firms. To check the generalizability of our analysis of listed firms in China, we analyzed a nationally representative survey of non-listed firms. For these firms, political embeddedness occurred when the owner was a deputy of the National People's Congress or the People's Political Consultative Conference, the country's main political assemblies. This is a more appropriate measure for smaller firms: less than 2 percent of non-listed firms had connections to the state bureaucracy through owners who had worked as bureaucrats at the division (chu) level or above, compared with 61 percent of listed firms. The paucity of former bureaucrats in non-listed firms is likely due to the fact that there are millions of non-listed firms but only a limited number of high-level bureaucrats. In contrast, just over 40 percent of non-listed

firms had owners who were members of the Congress or Conference. We used propensity-score matching to balance politically embedded and unembedded firms on observables, then analyzed the balanced samples, regressing return on equity (data on assets were not available) on political embeddedness, market development, their interaction, and firm size, plus province and industry fixed effects. Because these data are repeated cross-sections, not a panel, it is difficult to assess the direction of causal effects; therefore we interpret results on this sample as evidence of statistical association, not causation.

Table 6 shows these results. Models 1 and 2 show models with only main effects, while models 3 and 4 add interactions between political embeddedness and the two measures of market development. Both interactions had positive and statistically significant effects, indicating that our findings on listed firms generalize to unlisted firms. Because we had data on firm size, we could test hypothesis 3, which predicted a smaller association with large firms than small ones, with these data. We split the data on this sample by size, defining a firm as small if its total assets were below the median for size in the focal year and large if its total assets were above the median. These results are shown in models 5 to 8. Interactions between political embeddedness and both measures of market development were positive and statistically significant for both size groups, but the interaction effects were larger for small firms than for large ones, and both differences were statistically significant (Chow test $p < .01$). These results persisted when we added year fixed effects. This analysis bolsters the conclusion that our findings on listed firms generalize well to other firms in China.

Table 6. Analysis of Privately Owned Non-listed Firms: The Impact of Political Embeddedness on Firm Performance (ROE), Contingent on Market Development*

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All firms		All firms		Small firms	Large firms	Small firms	Large firms
	Employment		Investment		Employment		Investment	
Political embeddedness	.011	−.051••	.010	−.096••	−.046	−.031•	−.101	−.058•
	−.009	(.016)	−.009	(.031)	(.028)	(.014)	(.055)	(.029)
Market development	−.272•••	−.425•••	−.172•••	−.301•••	−.672•••	.033	−.495•••	.049
	−.055	(.065)	−.048	(.059)	(.116)	(.062)	(.099)	(.060)
Market development × Political embeddedness		.297•••		.251•••	.403••	.155•	.323•	.139
		(.075)		(.074)	(.131)	(.074)	(.129)	(.074)
Firm size (logged equity, RMB)	−.027•••	−.027•••	−.025•••	−.025•••	−.042•••	−.004••	−.039•••	−.004••
	−.002	(.002)	−.001	(.001)	(.003)	(.001)	(.002)	(.001)
Chow test					(Prob > F)	< .01	(Prob > F)	< .01
Number of observations	6,972	6,972	6,972	6,972	3,458	3,514	3,458	3,514
Adjusted R-squared	.074	.075	.072	.074	.093	.037	.090	.038

• $p < .05$; •• $p < .01$; ••• $p < .001$.
* Political embeddedness is coded one if the focal firm's owner was a deputy of the People's Congress or the People's Conference and zero otherwise. Small firms are those with below-median assets in the focal year. Robust standard errors (clustered on firms) are shown in parentheses. All models include province and industry fixed effects.

DISCUSSION

Our analyses generally support our arguments. As markets developed in China, having state bureaucrats serve as executives and directors in listed firms had increasingly positive effects on firm performance. And, as predicted, these effects were stronger for smaller firms. Analysis of a random sample of non-listed firms showed parallel results for all firms and stronger results for smaller firms, suggesting that our arguments apply widely in China. Yet contrary to predictions, among listed firms, interactions between political embeddedness and market development did not differ significantly between more and less competitive industries. Finally, as predicted, becoming politically embedded increased listed firms' access to bank loans and their ability to ward off related-party loans; both flows of funds affected overall performance (positively for bank loans, negatively for related-party loans) and partly mediated the interaction between political embeddedness and market development.

These empirical relationships were driven by uncertainty, which increased as markets developed and was worsened by the persistently authoritarian political regime. China experienced a series of economic changes. The privately owned sector of the economy grew and displaced the state-owned sector; market transactions displaced state redistribution; new forms of organizations were founded to replace state-run production facilities and ministries; new kinds of goods and services were developed to replace state-issued standard ones; and economic growth targets were imposed on state bureaucrats, whose careers increasingly depended on meeting those targets. These changes expanded the array of opportunities for businesses but also greatly increased the uncertainty facing businesses, increasing their likelihood of making costly mistakes. These changes were implemented gradually and at different times in different regions; such persistent and uneven change further increased uncertainty. The Communist Party retained control over the state bureaucracy and the rule of law remained weak, so the state retained control of key business resources, and electoral processes were not available to discipline bureaucrats. Thus stasis in political institutions further increased uncertainty and weakened trust in state authorities. Ties to state bureaucrats were needed to reduce this uncertainty and strengthen trust in state authorities, and this need grew as market development proceeded and uncertainty increased.

Our analysis showed that China's economic and political systems were interdependent—the effects of its economic transition were contingent on its political regime—and both had to be considered to explain firm performance. Moreover, because this economic transition was by its very nature dynamic, analysis of its effects on firm performance had to be dynamic—thus we focused on the effects of market development over time in the face of political stasis. Our theoretical approach and empirical design were advances on previous, mostly static research on China's economic transition and should provide a template for future research.

Our analysis ends in 2007, the year before the global financial crisis erupted. Did what we find here persist after that event? There are two divergent possibilities. First, the fallout from the financial crisis slowed China's economic growth considerably, from 14 percent constant-dollar GDP growth in 2007 to 11 percent in 2010 and 7 percent in 2014 (World Bank, 2015), which intensified pressure on state bureaucrats to spur economic growth and raise extra-

budgetary revenues. Bureaucrats could accomplish both objectives by developing even closer relationships with business. Second, the deeply entwined development of state and market created one severe problem: rampant corruption through predatory state action (Manion, 2004; Sun, 2004; Pei, 2006). A nonpoliticized, legally transparent anti-corruption crackdown might force bureaucrats and businesspeople to erect more arm's-length relationships and become less interdependent. Until such a crackdown begins, we expect that the benefits derived from business–state ties like the ones we studied here increased after 2007, but that trend may eventually be reversed.

The insights generated in this paper apply to many other transition economies—those in which economic change has been accompanied by little, if any, political change and elites have retained political power, such as in Hungary and Russia (Róna-Tas, 1994; Walder, 1996, 2004). In such contexts, the rule of law is weak and cannot reduce the uncertainty generated by economic transition—instead, because the legal process is murky, the uncertainty created by economic transition is exacerbated. In such contexts, social networks offer alternative mechanisms for building trust and predictability, facilitating economic exchange, and improving firm performance (Guseva and Róna-Tas, 2001). Because political actors in such contexts retain much power over the economy, ties between businesses and the state are especially important. In contrast, the insights generated here apply less well to transition economies, such as Vietnam and Poland, in which the political advantages of state bureaucrats dissipate during market development (Walder, 2004; Walder and Nguyen, 2008) and thus the benefits of ties to state authorities are also likely to diminish, rather than increase, as markets develop.

In addition to the nature and trajectory of the political regime, the trajectory of the economic transition also matters. In China, the transition was gradual and varied across regions, occurring sooner and more completely in some regions (the coast) than others (the interior). In other countries in which elites have retained political power, the economic transition has occurred more quickly and uniformly (e.g., Russia). Uncertainty will be especially great in the aftermath of a ''big bang'' economic transition but may decline later, although the time path of uncertainty in such contexts is an empirical question. If uncertainty does decline as time passes in countries like Russia, the positive association between political embeddedness and firm performance will be largest in the earliest stages of transition and weaker in later stages, although if elites continue to dominate politics, the association will still be positive. In contrast, in countries like China, the positive association will increase as economic transition proceeds.

Our analysis suggests it is not political institutions per se, such as democratic vs. authoritarian governments, that determine the value of ties to state authorities during economic transition. Instead, what matters is whether political institutions create and sustain a strong rule of law—clear and impartially adjudicated laws concerning property rights, contracts, and competition—and therefore whether political institutions limit state bureaucrats' power in the economic sphere and render their actions transparent and remediable. Our analysis hinges on a single aspect of political institutions that shaped the rule of law: governments that remain authoritarian during transitions from state redistribution to market exchange, so the rule of law is weak and political elites retain power over economic actors. Future research could focus on other political

processes that shape the rule of law and determine the power of state authorities. Perhaps most fruitful would be to investigate the different ways public assets—here ''China Inc.'' but in other contexts regional components of ''USSR Inc.''—have been converted to private ownership (Walder, 2004; Walder, Isaacson, and Lu, 2015). The more the conversion processes adopted by state bureaucrats allow them to appropriate state assets, the more power those bureaucrats retain over the economy, and the more relations with them will affect businesses' performance. In China, asset appropriation varied across regions (easier in urban than rural areas), across sectors (easier in real estate than steel), and over time (generally easier later in the transition). Asset appropriation has also varied greatly across countries (easier in Russia and Uzbekistan; more difficult in Poland and Vietnam), which suggests that this is a fruitful avenue for future research.

Acknowledgments

REFERENCES

Acemoglu, D., and J. A. Robinson
    2012 Why Nations Fail: Origins of Power, Poverty, and Prosperity. New York: Random House.
Allen, F., J. Qian, and M. Qian
    2005 ''Law, finance, and economic growth in China.'' Journal of Financial Economics, 77: 57–116.
Allen, F., J. ''QJ'' Qian, C. Zhang, and M. Zhao
    2013 ''China's financial system: Opportunities and challenges.'' In J. P. H. Fan and R. Morck (eds.), Capitalizing China: 63–145. Chicago: University of Chicago Press.
Ang, Y., and N. Jia
    2014 ''Perverse complementarity: Political connections and the use of courts among private firms in China.'' Journal of Politics, 76: 318–332.
Assiotis, A., and K. Sylwester
    2015 ''Does democracy promote the rule of law?'' Journal of Economic Development, 40: 63–92.
Baron, R. M., and D. A. Kenny
    1986 ''The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations.'' Journal of Personality and Social Psychology, 51: 1173–1182.
Bian, Y., and L. Zhang
    2014 ''Corporate social capital in Chinese guanxi culture.'' In D. J. Brass, G. Labianca, A. Mehra, D. Halgin, and S. P. Borgatti (eds.), Research in the Sociology of Organizations, 40: 421–443. Bingley, UK: Emerald Books.
Boisot, M., and J. Child
    1996 ''From fiefs to clans and network capitalism: Explaining China's emerging economic order.'' Administrative Science Quarterly, 41: 600–628.

Burt, R. S.
   1982 Toward a Structural Theory of Action: Network Models of Social Structure,
   Perception, and Action. New York: Academic Press.
Calomiris, C. W., R. Fisman, and Y. Wang
   2010 ''Profiting from government stakes in a command economy: Evidence from
   Chinese asset sales.'' Journal of Financial Economics, 96: 399–412.
Cao, J., M. Lemmon, X. Pan, M. Qian, and G. Tian
   2014 ''Political promotion, CEO incentives, and the relationship between pay and per-
   formance.'' Working paper, Singapore Management University. Available at http://
   papers.ssrn.com/sol3/papers.cfm?abstract_id=2504930; retrieved April 2015.
Chen, J., and B. J. Dickson
   2010 Allies of the State: China's Private Entrepreneurs and Democratic Change.
   Cambridge, MA: Harvard University Press.
Choo, J. M.
   2014 ''The change-up: The emergence of the real estate sector in urban China,
   1978–2004.'' Unpublished Ph.D. dissertation, University of California, Berkeley,
   Department of Sociology.
Clarke, D. C.
   2003 ''Corporate governance in China: An overview.'' China Economic Review, 14:
   494–507.
Clarke, D. C., P. Murrell, and S. Whiting
   2008 ''The role of law in China's economic development.'' In T. Rawski and L. Brandt
   (eds.), China's Great Economic Transition: 375–428. Cambridge: Cambridge Univer-
   sity Press.
Cull, R., and L. C. Xu
   2005 ''Institutions, ownership, and finance: The determinants of profit reinvestment
   among Chinese firms.'' Journal of Financial Economics, 77: 117–146.
Dickson, B. J.
   2003 Red Capitalists in China: The Party, Private Entrepreneurs, and Prospects for
   Political Change. Cambridge: Cambridge University Press.
Dickson, B. J.
   2008 Wealth into Power: The Communist Party's Embrace of the Private Sector.
   New York: Cambridge University Press.
Dobbin, F.
   1994 Forging Industrial Policy: The United States, Britain, and France in the Railway
   Age. Cambridge: Cambridge University Press.
Dougherty, S., R. Herd, and P. He
   2007 ''Has a private sector emerged in China's industry? Evidence from a quarter
   million firms.'' China Economic Review, 18: 309–334.
Duckett, J.
   1998 The Entrepreneurial State in China: Real Estate and Commerce Departments in
   Reform Era Tianjin. New York: Routledge.
Evans, P. B.
   1995 Embedded Autonomy: States and Industrial Transformation. Princeton, NJ:
   Princeton University Press.
Fei, X.
   1992 From the Soil: The Foundations of Chinese Society. G. Hamilton and W. Zhang,
   trans. (Originally published in 1948 as *Xiangtu Zhongguo*.) Berkeley, CA: University of
   California Press.
Fisman, R., and Y. Wang
   2010 ''Trading favors within Chinese business groups.'' American Economic Review:
   Papers and Proceedings, 100 (May): 429–433.

Fligstein, N.
    2001 The Architecture of Markets: An Economic Sociology of Twenty-First-Century
    Capitalist Societies. Princeton, NJ: Princeton University Press.
Fligstein, N., and T. Shin
    2007 ''Shareholder value and the transformation of the US economy, 1984–2000.''
    Sociological Forum, 22: 399–424.
Fligstein, N., and J. Zhang
    2009 ''A new agenda for research on the trajectory of Chinese capitalism.'' Manage-
    ment and Organization Review, 7: 39–62.
Gold, T.
    1990 ''Urban private business and social change.'' In D. Davis and E. Vogel (eds.),
    Chinese Society on the Eve of Tiananmen: 157–180. Cambridge, MA: Harvard Univer-
    sity Press.
Granovetter, M. S.
    1985 ''Economic action and social structure: The problem of embeddedness.'' Ameri-
    can Journal of Sociology, 91: 481–510.
Granovetter, M. S.
    1993 ''Coase revisited: Business groups in the modern economy.'' In N. Smelser and
    R. Swedberg (eds.), Handbook of Economic Sociology: 453–475. Princeton, NJ, and
    New York: Princeton University Press and Russell Sage Foundation.
Guseva, A., and Á. Róna-Tas
    2001 ''Uncertainty, risk, and trust: Russian and American credit card markets com-
    pared.'' American Sociological Review, 66: 623–646.
Guthrie, D.
    1999 Dragon in a Three-piece Suit: The Emergence of Capitalism in China. Princeton,
    NJ: Princeton University Press.
Halaby, C. N.
    2004 ''Panel models in sociological research: Theory into practices.'' In K. S. Cook
    and J. Hagan (eds.), Annual Review of Sociology, 30: 507–544. Palo Alto, CA: Annual
    Reviews.
Holz, C. A., and Y.-M. Lin
    2001 ''The 1997–1998 break in industrial statistics: Facts and appraisal.'' China Eco-
    nomic Review, 12: 303–316.
Jia, N., J. Shi, and Y. Wang
    2013 ''Coinsurance within business groups: Evidence from related party transactions
    in an emerging market.'' Management Science, 59: 2295–2313.
Jiang, G., C. M. C. Lee, and H. Yue
    2010 ''Tunneling through intercorporate loans: The China experience.'' Journal of
    Financial Economics, 98: 1–20.
Johnson, C.
    1982 MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925–1975.
    Stanford, CA: Stanford University Press.
Keister, L. A.
    2000 Chinese Business Groups: The Structure and Impact of Interfirm Relations
    during Economic Development. New York: Cambridge University Press.
Keister, L. A.
    2004 ''Capital structure in transition: The transformation of financial strategies in
    China's emerging economy.'' Organization Science, 15: 145–158.
Kennedy, S.
    2005 The Business of Lobbying in China. Cambridge, MA: Harvard University Press.
Khanna, T., and Y. Yafeh
    2007 ''Business groups in emerging markets: Paragons or parasites?'' Journal of Eco-
    nomic Literature, 45: 331–372.

Landry, P. F.
    2008 Decentralized Authoritarianism in China: The Communist Party's Control of
    Local Elites in the Post-Mao Era. New York: Cambridge University Press.
La Porta, R., F. Lopes-de-Silanes, A. Shleifer, and R. Vishny
    1998 ''Law and finance.'' Journal of Political Economy, 106: 1113–1155.
Lazonick, W., and M. O'Sullivan
    2000 ''Maximizing shareholder value: A new ideology for corporate governance.''
    Economy and Society, 29: 13–35.
Li, H., L. Meng, Q. Wang, and L.-A. Zhou
    2008 ''Political connections, financing and firm performance: Evidence from Chinese
    private firms.'' Journal of Development Economics, 87: 283–299.
Li, H., L. Meng, and J. Zhang
    2006 ''Why do entrepreneurs enter politics? Evidence from China.'' Economic
    Inquiry, 44: 559–578.
Li, H., and Y. Zhang
    2007 ''The role of managers' political networking and functional experience in new
    venture performance: Evidence from China's transition economy.'' Strategic Manage-
    ment Journal, 28: 791–804.
Li, X.-H., and X. Liang
    2015 ''A Confucian social model of political appointments among Chinese private-firm
    entrepreneurs.'' Academy of Management Journal, 58: 592–617.
Lie, J.
    1991 ''Embedding Polanyi's market society.'' Sociological Perspectives, 34: 219–235.
Lin, L.-W., and C. J. Milhaupt
    2013 ''We are the (national) champions: Understanding the mechanisms of state
    capitalism in China.'' Stanford Law Review, 65: 697–760.
Lin, N.
    2001 ''Guanxi: A conceptual analysis.'' In A. So, N. Lin, and D. Poston (eds.), The Chi-
    nese Triangle of Mainland China, Taiwan, and Hong Kong: 153–166. Greenwich, CT:
    Greenwood.
Lin, Y.
    2001 Between Politics and Markets: Firms, Competition, and Institutional Change in
    Post-Mao China. Cambridge: Cambridge University Press.
Lu, J.
    2012 ''Varieties of electoral institutions in China's grassroots democracy: Cross-
    sectional and longitudinal evidence from rural China.'' China Quarterly, 210: 482–493.
Luo, Y.
    2003 ''Industrial dynamics and managerial networking in an emerging market: The
    case of China.'' Strategic Management Journal, 24: 1315–1327.
Manion, M.
    2004 Corruption by Design. Cambridge, MA: Harvard University Press.
McGregor, R.
    2012 The Party: The Secret World of China's Communist Rulers. New York: Harper
    Perennials.
Michelson, E.
    2007 ''Lawyers, political embeddedness, and institutional continuity in China's transi-
    tion from socialism.'' American Journal of Sociology, 113: 352–414.
Naughton, B.
    2007 The Chinese Economy: Transitions and Growth. Cambridge, MA: MIT Press.
Nee, V., and S. Opper
    2010 ''Political capital in a market economy.'' Social Forces, 88: 2105–2132.
Nee, V., and S. Opper
    2012 Capitalism from Below: Markets and Institutional Change in China. Cambridge,
    MA: Harvard University Press.

North, D. C.
    1990 Institutions, Institutional Change, and Economic Performance. Cambridge:
    Cambridge University Press.
Oi, J. C., and S. Rozelle
    2000 ''Elections and power: The locus of decision-making in Chinese villages.'' China
    Quarterly, 162: 513–539.
Parish, W. L., and E. Michelson
    1996 ''Politics and markets: Dual transitions.'' American Journal of Sociology, 101:
    1042–1059.
Pei, M.
    2006 China's Trapped Transition: The Limits of Developmental Autocracy. Cam-
    bridge, MA: Harvard University Press.
Peng, M. W., and Y. Luo
    2000 ''Managerial ties and firm performance in a transition economy: The nature of a
    micro–macro link.'' Academy of Management Journal, 43: 486–501.
Pfeffer, J., and G. R. Salancik
    1978 The External Control of Organizations: A Resource Dependence Perspective.
    New York: Harper and Row.
Polanyi, K.
    1944 The Great Transformation: The Political and Economic Origins of Our Time.
    Boston: Beacon Press.
Polanyi, K.
    1957 ''The economy as instituted process.'' In K. Polanyi, C. M. Arensberg, and
    H. W. Pearson (eds.), Trade and Market in the Early Empires: Economies in History
    and Theory: 243–270. Glencoe, IL: Free Press.
Przeworski, A., M. E. Alvarez, J. A. Cheibub, and F. Limongi
    2000 Democracy and Development: Political Institutions and Well-being in the World,
    1950–1990. New York: Cambridge University Press.
Róna-Tas, Á.
    1994 ''The first shall be last? Entrepreneurship and communist cadres in the transi-
    tion from socialism.'' American Journal of Sociology, 100: 40–69.
Rosenbaum, P. R., and D. B. Rubin
    1983 ''The central role of the propensity score in observational studies for causal
    effects.'' Biometrika, 70: 41–55.
Scott, W. R.
    2003 Organizations: Rational, Natural, and Open Systems, 6th ed. Upper Saddle
    River, NJ: Prentice-Hall.
Shih, V. C.
    2008 Factions and Finance in China: Elite Conflict and Inflation. New York: Cambridge
    University Press.
Shleifer, A., and R. Vishny
    1997 ''A survey of corporate governance.'' Journal of Finance, 52: 737–783.
Simon, H. A.
    1957 Models of Man. New York: John Wiley & Sons.
Simon, H. A.
    1962 ''The architecture of complexity.'' Proceedings of the American Philosophical
    Society, 106: 467–482.
Sobel, M. E.
    1982 ''Asymptotic confidence intervals for indirect effects in structural equation mod-
    els.'' Sociological Methodology, 13: 290–312.
Stark, D., and L. Bruszt
    1998 Postsocialist Pathways: Transforming Politics and Property in East Central
    Europe. New York: Cambridge University Press.

Stuart, T. E., H. Hoang, and R. C. Hybels
    1999 ''Interorganizational endorsements and the performance of entrepreneurial ven-
    tures.'' Administrative Science Quarterly, 44: 315–349.
Sun, Y.
    2004 Corruption and Market in Contemporary China. Ithaca, NY: Cornell University
    Press.
Tirole, J.
    1988 The Theory of Industrial Organization. Cambridge, MA: MIT Press.
Tsai, K. S.
    2002 Back-alley Banking: Private Entrepreneurs in China. Ithaca, NY: Cornell Univer-
    sity Press.
Tsai, K. S.
    2007 Capitalism without Democracy: The Private Sector in Contemporary China.
    Ithaca, NY: Cornell University Press.
Uzzi, B.
    1996 ''The sources and consequences of embeddedness for the economic perfor-
    mance of organizations: The network effect.'' American Sociological Review, 61:
    674–698.
Uzzi, B.
    1999 ''Embeddedness in the making of financial capital: How social relations and net-
    works benefit firms seeking capital.'' American Sociological Review, 64: 481–505.
Walder, A.
    1994 ''The decline of communist power: Elements of a theory of institutional
    change.'' Theory and Society, 23: 297–323.
Walder, A. G.
    1996 ''Markets and inequality in transitional economies: Toward testable theories.''
    American Journal of Sociology, 101: 1060–1073.
Walder, A. G.
    2004 ''The party elite and China's trajectory of change.'' China: An International Jour-
    nal, 2: 189–209.
Walder, A. G., A. Isaacson, and Q. Lu
    2015 ''After state socialism: The political origins of transitional recessions.'' American
    Sociological Review, 80: 444–468.
Walder, A. G., and G. H. Nguyen
    2008 ''Ownership, organization, and income inequality: Market transition in rural Viet-
    nam.'' American Sociological Review, 73: 251–269.
Wang, J., D. Guthrie, and Z. Xiao
    2012 ''The rise of SASAC: Asset management, ownership concentration, and firm
    performance in China's capital markets.'' Management and Organization Review, 8:
    253–281.
Wank, D. L.
    1999 Commodifying Communism: Business, Trust, and Politics in a Chinese City.
    Cambridge: Cambridge University Press.
Wank, D. L.
    2002 ''Business–state clientelism in China: Decline or evolution?'' In T. Gold,
    D. Guthrie, and D. Wank (eds.), Social Connections in China: Institutions, Culture,
    and the Changing Nature of Guanxi: 97–115. Cambridge: Cambridge University
    Press.
Whitley, R.
    1999 Divergent Capitalisms: The Social Structuring and Change of Business Sys-
    tems. Oxford: Oxford University Press.
Witt, M. A., and G. Redding
    2013 ''Asian business systems: Institutional comparison, clusters, and implications

for varieties of capitalism and business systems theory.'' Socio-Economic Review, 11: 265–300.

Wooldridge, J. M.
2001 Econometric Analysis of Cross Section and Panel Data. Cambridge, MA: MIT Press.

World Bank
2015 World Development Indicators. Washington, DC: World Bank. Accessed at http://databank.worldbank.org/data/reports.aspx?source=2&country=&series=NY.GDP.MKTP.KD.ZG&period. Retrieved December 2, 2015. https://www.google.fr/publicdata/explore?ds=d5bncppjof8f9_&met_y=ny_gdp_pcap_cd&idim=country:CHN:IND&hl=en&dl=en.

Yang, D.
2005 Remaking the Chinese Leviathan: Market Transition and the Politics of Governance in China. Stanford, CA: Stanford University Press.

Yang, M. M.-H.
1994 Gifts, Favors, and Banquets: The Art of Social Relationships in China. Ithaca, NY: Cornell University Press.

Zheng, L.
2013 ''Political embeddedness as a double-edged sword: Firms in China's stock market.'' Working paper, Department of Sociology, Tsinghua University.

Zheng, L., and B.-S. Kim
2011 ''Spin-offs and corporate governance.'' In J. C. Oi (ed.), Going Private in China: The Politics of Corporate Restructuring and System Reform in the PRC: 241–269. Palo Alto, CA: Asian-Pacific Research Center and the Brookings Institution.

Zhou, X.
2000 ''Economic transformation and income inequality in urban China: Evidence from panel data.'' American Journal of Sociology, 105: 1135–1174.

Zhou, X.
2001 ''Political dynamics and bureaucratic career patterns in the People's Republic of China, 1949–1994.'' Comparative Political Studies, 34: 1036–1062.

Zhou, X.
2010 ''The instructional logic of collusion among local governments in China.'' Modern China, 31: 47–78.

Zhou, X., Y. Ai, and H. Lian
2012 ''The limit of bureaucratic power in organizations: The case of the Chinese bureaucracy.'' In D. Courpasson, D. Golsorkhi, and J. J. Sallaz (eds.), Research in the Sociology of Organizations, 34: 81–111. Bingley, UK: Emerald Books.

Authors' Biographies

Heather A. Haveman is a professor of sociology and business at the University of California, Berkeley, Department of Sociology, 410 Barrows Hall, Berkeley, CA 94720-1980 (e-mail: haveman@berkeley.edu). She studies how organizations, industries, and employees' careers evolve; in addition to Chinese firms, she is currently analyzing American magazines and state-legal marijuana markets. She received a Ph.D. in organizational behavior and industrial relations from UC Berkeley.

Nan Jia is an assistant professor of strategic management at the Marshall School of Business, University of Southern California, BRI306, 3670 Trousdale Parkway, Los Angeles, CA 90089-0808 (e-mail: nan.jia@marshall.usc.edu). Her research interests include corporate political strategy, business-governance relationships, and corporate governance in international business. She received her Ph.D. in strategic management from the Rotman School of Management, University of Toronto.

Jing Shi is a professor of finance at School of Economics, Finance and Marketing, RMIT University, 445 Swanston Street, Melbourne, VIC 3000, Australia, and International Institute for Financial Studies, Jiangxi University of Finance and Economics (e-mail: Jing.Shi@rmit.edu.au). His research focuses on empirical corporate finance, political economy, and emerging markets. He received his Ph.D. in finance from the Research School of Finance, Actuarial Studies and Statistics at the Australian National University.

Yongxiang Wang is an assistant professor of finance at the Marshall School of Business, University of Southern California, BRI308, 3670 Trousdale Parkway, Los Angeles, CA 90089-0804 (e-mail: yongxiaw@marshall.usc.edu). His research focuses on empirical corporate finance, political economy, development economics, and the interaction of these fields. He obtained his Ph.D. in finance from the Columbia Business School.