China's Economic Transition and the Value of Firms' Political Connections:

A Longitudinal Study of Publicly Listed Firms

Heather A. Haveman
Department of Sociology and Haas School of Business
University of California, Berkeley
410 Barrows Hall, Berkeley, CA 94720-1980
haveman@berkeley.edu 510-642-3495

Nan Jia
Department of Management and Organization
Marshall School of Business
University of Southern California
HOH 518, 701 Exposition Blvd., Los Angeles, CA, USA 90089
nan.jia@marshall.usc.edu 213-740-1045

Jing Shi
School of Finance, Actuarial Studies and Applied Statistics
Faculty of Economics and Commerce
Australian National University
College of Business and Economics Building 26C, Canberra ACT 0200, Australia
jing.shi@anu.edu.au (+61) 2 612 54864

Yongxiang Wang
Department of Finance and Business Economics
Marshall School of Business
University of Southern California
HOH 520, 701 Exposition Blvd., Los Angeles, CA, USA 90089
yongxiaw@marshall.usc.edu 213-740-7650

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Abstract

Over the past 35 years, China shifted away from state socialism toward market capitalism and became the world's second-largest national economy. In the wake of this transition, there has been much debate about how ties between political and economic actors, in particular between state bureaucrats and business firms, changed. Some propose that the benefits of such ties for business diminished, while others contend that these benefits remained resilient. We argue that given the lack of political reform, the value of politician connections for business strengthened. Economic reform created many new business opportunities; in the absence of political reform, political connections became more important for acquiring state-controlled resources and for gaining state authorization of business activities that allowed firms to take advantage of these opportunities. Our analysis of Chinese listed firms from 1992 to 2007 supports this argument: as market development progressed, firms' political connections had increasingly positive effects on overall performance and access to bank loans. These effects were more pronounced in more-competitive markets because there was more at stake there. These effects were less pronounced for larger firms because they benefited from economies of scale and so were better-positioned to handle increased competition; they also had easier access to state-controlled resources and lower risks of state expropriation of their assets. Overall, our result reveals that economic reform without political reform has made *political* actors in China increasingly powerful *economic* actors.

Over the past 35 years, China has slowly shifted away from state socialism toward market capitalism. Due in large part to the reforms underpinning this economic transition, the Chinese economy has grown to be the world's second-largest, after that of the United States (International Monetary Fund 2013). The consequences of China's economic transition, both economic success (the lifting of hundreds of millions out of poverty, dramatic rises in the quantity and quality of manufacturing, the development of increasingly sophisticated technologies, and the modernization of transportation and communication infrastructures), coupled with persistent social problems (rampant corruption, dangerously high levels of pollution, and escalating socio-economic inequality), have drawn the interest of many social scientists.

China's transition from state socialism toward market capitalism is centered on three phenomena (Oi and Walder 1999; Naughton 2007). First, ownership of industrial enterprises has shifted away from central state ownership and control ("China Inc.") toward a combination of local state ownership and control (province, county, municipal, and township and village) and private, non-state ownership and control (domestic and foreign). Second, economic transactions have increasingly been conducted through markets rather than central state planning and redistribution. Third, institutions to safeguard property rights have gradually developed to foster private enterprise. As a result of these ambitious state-guided reforms, the development of market institutions in China progressed so rapidly that by the early 1990s, central government allocation of economic production was abandoned (Naughton 1995, 2007). Transactions for producer goods at market prices (rather than through state mandate or guidance) rose from 0% of the total in 1978 to 46% in 1991 and then to 87% in 2003; in the same years, transactions for farm commodities at market prices rose from 6% of the total to 58% and then to 97%, and retail transactions at market prices rose from 3% of the total to 69% and then to 96% (Dougherty, Herd, and He 2007).

In sharp contrast, China's political institutions have changed little, if at all – unlike the situation that has prevailed in many other transition economies (Walder 2003). The Communist

Party retains absolute control over electoral politics.[1] As a result, China's political regime has been persistently and firmly authoritarian: its Polity IV rating has remained at -7 since 1976, indicating strong autocracy.[2] China's political institutions have powerful impacts in realms beyond electoral politics. Most basically, state bureaucrats direct the large share of the economy that is produced by state-owned enterprises. State bureaucrats also control access to many resources that enterprises need, notably land (which is mostly owned by local state authorities), capital (most banks in China are state-controlled), and government contracts; they also retain the power to authorize many business activities through entry permits and business licenses (Walder 1995; Peng and Luo 2000; Gregory, Tenev, and Wagle 2000; Bai, Lu, and Tao 2006; Hsing 2006). Therefore, the private sector is far from "autonomous" (*cf.* Cao and Nee [2000: 1176]); instead, a form of "embedded autonomy" has developed (Evans 1995). Moreover, although state authorities have passed laws to create and regulate property rights, the normative power of those laws has developed very slowly (Putterman 1995; Oi and Walder 1999), so state bureaucrats have retained many opportunities to influence private enterprise.

Given the vast differences between the pace of economic and political reforms and given the state's large, albeit decentralized, ownership stake in industrial firms, any analysis of China's economic transition must take into consideration the interplay between economic and political institutions (Parish and Michelson 1996; Walder 1996, 2003). There are two opposing views on this interplay. Some scholars argue that the transition toward a market-based economy has gradually diminished the importance of political connections because the development of market-supporting institutions has obviated the need to pull the strings of the state bureaucracy to get business done (Nee 1989, 1991, 1996; Guthrie 1998, 1999, 2002; Fan, Wong, and Zhang 2007; Nee and Opper

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[1] The sole exception is village elections, where there have been direct local elections since the late 1980s – albeit with much reported corruption and lack of transparency (O'Brien and Li 2000; Pastor and Tan 2000; Lu 2012) and with Party members dominating many villages' elected councils (Oi and Rozelle 2000; Lu 2012).

[2] Polity IV scores (http://www.systemicpeace.org/polity/polity4.htm) range from -10 (fully institutionalized autocracy) to +10 (fully institutionalized democracy). These scores are derived from codings of a nation's central political system, including the competitiveness of political participation, the openness and competitiveness of executive recruitment, and constraints on the chief executive.

2010, 2012). Indeed, many observers suggest that in the wake of China's accession to the World Trade Organization in 2001, China passed a tipping point, after which the importance of political connections diminished rapidly. Other scholars argue that social ties [*guanxi*] remain bedrock institutions of Chinese society (Yang 1994) and that in cultivating social ties [*guanxi xue*], the Chinese adapt to new the economic institutions created by the transition to market-based exchange; such adaptations produce new forms of social ties and new instrumental and expressive uses for them (Bian 1994; Yang 2002; Wank 2002; Kennedy 2005). One particular kind of social tie – political connections – will evolve as state bureaucrats shuck off their former roles as allocators and redistributors of economic resources, and develop new roles as regulators and brokers of market transactions (Bian 1994; Yang 2002; Wank 2002). Therefore as markets develop, Chinese firms will continue to benefit from political connections. Although there is some support for the first argument (e.g., Fan, Wong, and Zhang 2007; Nee and Opper 2010, 2012), the preponderance of evidence supports the second argument (e.g., Hsing 1998; Wank 1999, 2002; Peng and Luo 2000; Tsai 2002; Li, Meng, Qian, and Zhou 2008; Chen 2011).

But most previous research, no matter which argument it supports, has severe methodological limitations. Almost all previous research is cross-sectional, so it cannot reveal how the value of political connections has changed as the economic transition has proceeded. Previous research also seldom explicitly measures how far the economic transition has proceeded; instead, it generally relies on proxies such as region or industry, or ignores this issue entirely by assuming that at the time data were gathered, some level of market development had occurred. To better pinpoint the progress of China's economic transition, we explicitly measure the extent to which market transactions have replaced state redistribution and trace this over time. To capture the multi-dimensional nature of this transition, which involves the allocation of both capital and labor, plus state regulation of those allocations, we use three different measures of market development; two of these capture variation across regions as well as over time. We assess the impact of political connections on one indicator of overall firm performance, return on assets, and one resource, access

to bank loans, which is critical for taking advantage of the opportunities created by market development and which remains largely under the control of the state.

To investigate how the value of political connections has changed over time, we analyze panel data on all firms in China that were listed on the domestic stock markets from 1992 (the year after the stock markets were founded) to 2007 (the year before the global financial crisis erupted). These firms are the largest in China, they dominate most industries, and there is an abundance of data available on them, all of which make them a strategic site for research on China's political-economic transition (Walder 2011). Firms with external sources of funding, such as the domestic stock market and foreign investors, are less dependent on the Chinese state than other firms (Walder 1994; Keister 2004). Because listed firms have such external funding opportunities, analyzing them provides a conservative test of hypotheses about business-state relations. And, as we show below, there is considerable cross-sectional and temporal variation among these firms in the likelihood of having political connections and in the nature of those connections, which merits investigation.

Our empirical strategy clarifies causality in two ways. First, we follow a propensity-score matching procedure to alleviate concerns about the endogeneity of political connections, by balancing differences between politically connected and politically unconnected firms in terms of key observable characteristics. Second, we leverage the panel structure of our data by estimating fixed-effects models that compare within-firm changes in the value of political connections over time.

We extend the argument that political connections have persistent benefits for business firms by arguing that China's economic reforms intensified competition over resources and customer demand, and in doing so, increased the uncertainty facing firms. Given the lack of political reform, political connections increasingly improved firms' access to resources and customers, smoothed their operations, and reduced uncertainty for their decision makers (Pfeffer and Salancik 1978); as a result, performance improved. We further argue that economic reforms opened up new business opportunities for many firms and that state control of the licenses and permits businesses needed to take advantage of these opportunities also increased the value of

political connections. Finally, we investigate three axes of cross-sectional variation: by region, industry, and firm. First, we argue that political connections were most valuable in the regions where market development was most extensive, because the stakes were higher. Second, we argue that political connections were more valuable in more competitive industries, again because the stakes were higher. Third, we argue that smaller firms had fewer slack resources than large firms and benefited less from economies of scale, so they were relatively poorly positioned to handle the increased competition that accompanied the transition toward market-mediated transactions. As a result, political connections were more valuable to smaller firms. The results of our empirical analysis support our arguments: the value of political connections for Chinese firms increased over time, these effects were stronger in regions where market development was more extensive, in more competitive industries, and for smaller firms.

The Evolving Value of Political Connections

Previous Research

In the late twentieth century, many countries shifted away from planned economies in which the state allocated inputs, organized production and investment, directed sales, and determined rewards to systems in which markets directed economic activities. Because there is great variation in the nature and pace of economic reform and because economic reform is not always accompanied by political reform, analysts must consider both the political and economic dimensions of reform (Parish and Michelson 1996; Walder 1996, 2003). There are three issues (Walder 2003). First, some nations (e.g., the Czech Republic, Hungary, Russia) dismantled their single-party hierarchy, while others (e.g., China, Vietnam, Kazakhstan) retained them. Second, some nations (e.g., the Czech Republic, Hungary, China) had strong constraints on bureaucrats' ability to appropriate public assets, while others (e.g., Russia, Kazakhstan) had weak or no constraints. Third, constraints on asset appropriation by state authorities varied with the extent, pace, and form of economic reforms, so analysts must also consider the interplay between economic and political reforms. Specifically, analysts must be clear about the specific historical path countries took in their economic transitions

– which aspects of their political economies were reformed first, and which were reformed later, if at all (Stark 1996; Stark and Bruszt 1998; Whyte 2009). Given evidence of great cross-national heterogeneity in political-economic transitions, we limit our analysis to the case of China, although we consider in the conclusion how our findings might apply to other national cases.

Sociologists have developed two general arguments about the impact of China's economic reforms on the power of political institutions and actors to influence economic institutions. The first argument holds that as market competition replaces state control over the allocation of economic resources ("redistributive power"), the power of state bureaucrats will decline and the power of entrepreneurs will increase (e.g., Nee 1989, 1991, 1996; Cao and Nee 2000). Moreover, because the power of state actors to directly manipulate the economy declines during economic transitions (Tanner 1999), it will be increasingly ineffective for businesses to rely on connections to politicians (Kennedy 2005). Additionally, as the rational-legal frameworks that support markets are put in place, business people will increasingly perceive reliance on connections to state bureaucrats to be inappropriate (Guthrie 1998, 1999, 2002). The upshot is that the importance of political connections for business in China will decline as market institutions, and the legal supports for them, develop.

This argument is bolstered by evidence that the changes in social structure resulting from economic reforms are reflected in shifts in Chinese people's values. There has been a shift in orientation from "traditional" group-centered values, which emphasize connections to others, and toward "modern" individualistic values, which celebrate personal agency. These changes have been observed in both young people and adults, in both the public at large and corporate managers (Ralston, Gustafson, Terpstra, and Holt 1995; Inglehart and Baker 2000; Liu and Wang 2009).

Some of this work (Nee 1989, 1991; Cao and Nee 2000) assumes that the state plays no role in market economies. For example, some scholars invoke a "relatively autonomous market sector"(Nee 1989; Cao and Nee 2000: 1176) and contrast "political actors" and "economic actors" (Cao and Nee 2000: 1182). But the assumption of market autonomy from the state ignores many studies showing that the state plays a fundamental role in setting the rules by which markets and

firms operate, even in advanced capitalist economies (Evans, Rueschemeyer, and Skocpol 1985; Campbell, Hollingsworth, and Lindberg 1991; Wade 1990; Fligstein and Mara-Drita 1996). This work also ignores the lack of political reform in China, which has preserved much of politicians' and bureaucrats' power to influence the functioning of the economy.

Other work predicting the declining importance of political connections for business tells a more nuanced story. This work recognizes that state institutions and actors do retain some power over businesses, so political connections will remain valuable, but mostly for businesses that are administered by lower-level state bureaus (Guthrie 1998, 1999) or for those activities that are most tightly controlled by state bureaus (Nee and Opper 2010, 2012). Still other work (Kennedy 2005) argues that ties to politicians (in China, this means members of the Communist Party) will decline in value, while ties to state regulatory authorities (bureaucrats in central state ministries, local and regional state agencies, and state licensing bureaus) will remain valuable.

The second argument about the impact of economic reforms on the power of political institutions and actors in China assumes that the state plays an active role in all market economies, including those that are making or have made the transition from state socialism. It also assumes that the power of state bureaucrats is unrelated to market development because the process of establishing market competition is independent from the preservation of state power: countries making the transition to market economies vary widely in their patterns of state power and privilege (Kornai 1990; Róna-Tas 1994; Parish and Michelson 1996; Walder 1996, 2003; Walder and Nguyen 2008). Therefore, the shift from state to market allocation of economic exchange *per se* has no consequences for the allocation of political power and income (Parish and Michelson 1996; Walder 1996, 2003). Instead, the effect of market transition on the power of state authorities depends on the extent of regime change (whether a single party still rules the country) as well as on barriers to asset expropriation (Walder 2003). In other words, the value of political connections is contingent on both the nature of the economic system *and* the nature of the political regime (Siegel 2007).

This argument assumes that although economic reform promotes competition as a way of allocating resources and deciding winners and losers in business, market impacts on firms are shaped

by the political processes by which markets are established and function (Róna-Tas 1994; Walder 1996, 2003). In the Chinese case, the state's role as allocator and redistributor may diminish as markets develop, but bureaucrats can cultivate new sources of power as regulators and brokers of market transactions (Bian 1994; Yang 2002; Wank 2002). Chinese bureaucrats can also become managers in or consultants to privately owned firms, which benefit from the knowledge and connections they developed during their time in state bureaus (Oi 1989; Lin 1995; Walder 1996). One scholar described this as a merger of state and society: "a bonding and incipient interdependence between the bureaucrat and the entrepreneur" (Solinger 1992). The upshot is that political connections will remain valuable for businesses in China because they make it easier for firms to gain access to the resources controlled by the state and protect their assets in what remains an insecure property-rights regime; they also reduce the uncertainty that stems from continual regulatory change (Hsing 1998; Wank 1999, 2002; Peng and Luo 2000; Tsai 2002; Chen 2011).

Our Argument

To explain the consequences of political connections for Chinese firms, we extend and revise the second argument detailed above. Because state bureaucrats have preserved their political power during China's market transition, they have remained influential brokers who can help firms gain access to state-controlled resources and who authorize many productive activities. Important resources under state control include loans from state-owned banks, authorization for equity offerings on state-owned stock markets, the use of land (which is mostly owned by local state authorities) to house business activities, and access to government contracts. Key business activities that require state approval include permission to import or export goods, licenses to enter new lines of business, permission to contact overseas Chinese investors, access to tax incentives, favorable verdicts on court cases, and exemptions from troublesome laws and regulations. Most of these issues are regulated at the local level; therefore, ties to local state bureaucrats should have bigger impacts on firm performance than ties to central state authorities (Parish and Michelson 1996; Guthrie 1998, 1999; Kennedy 2005).

State power over resource access and authority to transact in markets is distinct from the substantial continued state ownership and management of enterprises (Walder 1995, 2003; Walder and Nguyen 2008). The development of markets and the growth of the private sector open up new opportunities for bureaucrats to influence the operations of *all* firms, including non-state-owned firms. For example, bureaucrats can extend preferential treatment in policy enforcement and regulatory discretion to firms with strong political connections, affording them competitive advantages in the form of favorable tax policies, preferential loan access, and expedited licenses for entry into new factor or product markets (Wu 2008). As economic reforms create new business opportunities and foster more intense competition between producers, the value of the opportunities that bureaucrats can provide to firms increases. Basically, the stakes get bigger: as economic reforms proceed and more transactions are mediated by markets, firms have more to gain – but they also have more to lose. In particular, as markets develop, competition between firms intensifies and the uncertainty facing firms increases; they can reduce this uncertainty by developing ties to bureaucrats (Pfeffer and Salancik 1978; Tsui and Farh 1997). The upshot is that political connections remain important "*not only despite, but because of marketization*" (Parish and Michelson 1996: 1045; emphasis in the original).

Both the central Chinese state and many local governments provide guidance to drive economic growth, most notably by promoting particular industries (Walder 1995; Whyte 2009), such as automobile manufacturing (Thun 2006) and information technology (Segal 2002). State promotion of select industries creates lucrative business opportunities, especially for firms with political connections. The story of Himin, a privately owned producer of solar water heaters in the city of Dezhou in Shandong province, offers one compelling example (*The Economist* 2011b). The municipal government branded Dezhou China's "solar city" and vigorously promoted the development of the solar energy industry through such measures as requiring and subsidizing the installation of solar water heaters in apartment buildings and bathhouses. As the "poster child" for this strategy, Himin benefited significantly from state endorsement, which allowed it to capture a large share of the rising demand created by state policy. This example shows that as economic

reform creates new market opportunities for Chinese firms, the economic value of political connections will persist – indeed, they may become more pronounced, because the stakes are higher.

To provide greater institutional specificity, which some analysts (Walder 1994; Guthrie 2000) have called for, consider one key resource that businesses need to thrive: access to funding, which allows firms to expand production, sell more output, achieve economies of scale, and generate higher profits. Chinese financial markets remain under the control of state authorities; therefore many firms, especially those that are not state-owned, have limited access to bank loans and must instead turn to the unofficial financial system, where lenders charge high interest rates and demand substantial collateral (Tsai 2002; Allen, Qian, and Qian 2005; Nee and Opper 2010). For example, a study by China's Central Bank of Wenzhou, a city widely known for its entrepreneurial vitality, revealed that 89% of Wenzhou's population and 57% of its privately owned enterprises borrowed outside the formal banking system, and that loans in the unofficial sector typically had interest rates of 10% for 30 days or 214% for one year, compared with rates of 1.5% to 2% per month in the official sector (*The Economist* 2011a). In contrast, firms with political connections can borrow money from both state-controlled and privately controlled banks at dramatically lower interest rates and with far less collateral (Allen, Qian, and Qian 2005; Bai Lu and Tao 2006; Li, Meng, and Zhang 2006). Therefore, as markets develop, political connections can help firms acquire financial resources. Because those financial resources become much more valuable as markets develop and new business opportunities arise, the lack of political connections harms firms much more when markets are well developed than when the state allocates and redistributes resources.

Chinese entrepreneurs clearly recognize the benefits to be gained from political connections. For example, in 1999, 43.8% of entrepreneurs surveyed in four provinces (Hebei, Hunan, Shandong, and Zhejiang) believed Communist Party members had advantages in business over non-members (Dickson 2007). Such beliefs only strengthened over time: in 2007, 49.6% believed Communist Party members had advantages over non-members. Underlying these beliefs is the recognition that political connections are useful for doing business in all market economies, but they are especially useful in China, where the market economy is subject to political intervention. These beliefs about

the value of political connections are reflected in firm performance: this survey showed that firms owned by Party members had higher sales revenues, more employees, and higher levels of fixed assets than the average firm, and that these differences persisted over time. To give a different example, connections with state bureaucrats were shown to reduce of the risk of expropriation of assets by the state, which in turn promoted the reinvestment that leads to business growth and increased profits (Cull and Xu 2005; Calomiris, Fisman, and Wang 2010).

Based on this line of reasoning and this empirical evidence, we predict:

Hypothesis 1: *The value of political connections for business will increase as markets develop.*

Although some previous research (Fan, Wong, and Zhang 2007; Nee and Opper 2010, 2012) has concluded that political connections become *less* important as markets develop, this work is not sufficient to counter the argument made above. Fan et al. (2007) study outcomes very different from the ones we study here: they analyzed listed firms' stock-price returns and changes in their performance (earnings, sales, and return on sales) *relative to performance before IPO*, while we analyze *post-IPO performance* only. Nee and Opper's (2010, 2012) analysis of data on a wide array of public and private firms shows mostly positive (but not always statistically significant) effects of political connections on customs clearance delays and access to bank loans, and land; significant negative effects on government contracts; and mixed (positive and negative) but consistently nonsignificant effects of political connections on profits (return on assets). But because their analyses include multiple measures of political connections that may be highly correlated (was the CEO a party member before firm founding, was the CEO a former bureaucrat, and did the CEO have a relative who was a current bureaucrat), multicollinearity may account for their nonsignificant results.

Regional heterogeneity. The transition to a market economy in China has proceeded at different paces in different regions (Walder 1996; Parish and Michelson 1996; Lu and Tang 1997; Naughton 2007; Brandt and Rawski 2008). Chinese economic reforms have always involved "decentralized experimentation," in which the central government conducts trial reforms in a limited number of localities and provinces develop their own variations of new market institutions (Li 2003; Brandt and

Rawski 2008). Moreover, because fiscal decentralization in the 1980s and early 1990s funneled fiscal revenues from local industries into the coffers of local governments, local governments vary in their ability to influence the economy and the institutional environment (Jin, Qian, and Weingast 2005). In addition, local governments charge varying tax levies to fulfill idiosyncratic revenue targets (Nee 1992; Li, Meng, and Zhang 2006).

In general, the coastal regions have experienced more rapid economic reform than the inland regions (Heston and Sicular 2008). Starting in 1980, Special Economic Zones were established in the coastal Guangdong, Fujian, and Hainan provinces; not until the 1990s were cities in inland provinces opened up for economic reform. Because it is so heterogeneous, studying China's political economy requires careful attention to regional context, not just to some "average" national context – to many different local political *economies*, not just a single nation-wide political economy.

Because the pace of economic reform has varied across regions, the level of competition firms face will also vary across regions. The better developed markets are in a region, the more uncertainty firms operating in that region face. Firms can reduce this uncertainty by developing ties to bureaucrats (Pfeffer and Salancik 1978; Tsui and Farh 1997). Moreover, in regions where firms face more intense competition, they have more to gain with political support – and more to lose without it. Therefore, at any point in time, political connections will be more valuable in more competitive regions than in less competitive ones:

> ***H2:*** *Political connections will have greater value for business in regions where market development is more extensive.*

Heterogeneity across industries. Economic reform has also affected industries differently (Walder 1996; Lu and Tang 1997; Kennedy 2005; Naughton 2007; Brandt and Rawski 2008). As a result, different industrial segments of the Chinese economy vary greatly in how well (or poorly) they fit ideal-typical political-economic models; for example, a recent study showed that some industries appear to fit a corporatist model, others a pluralist model, still others a clientelist model (Kennedy 2005). More concretely, between-industry differences in the pace and nature of economic reform have led to very different distributions of firms, in terms of ownership (state versus non-state) and

size, and therefore to have led to very different levels of competition. For instance, in the early 2000s, the steel industry remained dominated by large state-owned enterprises and was more "socialized" than "marketized," so competition was limited; in contrast, the software industry was dominated by small privately owned firms and competition was intense (Kennedy 2005).

The more competitive an industry, the more uncertainty firms in that industry face. Firms can reduce this uncertainty by developing ties to bureaucrats (Pfeffer and Salancik 1978; Tsui and Farh 1997). Moreover, in industries where firms face more intense competition, they have more to gain with political support – and more to lose without it. Consider again the solar energy industry, where barriers to entry are low and competition is fierce.[3] Favorable relationships with local governments are especially valuable to solar energy firms, as shown in the case of Himin, which we described earlier. The intensity of competition in this industry accentuates the importance of political connections: where competition is intense, if firms with stronger political connections can more easily get financing from the official financial sector, they can substantially reduce their financing costs and so be better positioned to take advantage of new business opportunities and expand to meet growing customer demand. In turn, this greatly improves their financial performance. Therefore, we predict that the impact of political connections will be more pronounced in more competitive industries:

> ***H3:*** *The positive interaction between political connections and market development will be stronger in more competitive industries.*

Heterogeneity across firms: size matters. In China, larger firms tend to have more political influence than smaller firms because they dominate the industry associations that serve as one conduit to state authorities and because their scale helps them attract the attention of politicians and bureaucrats (Kennedy 2005; Macher and Mayo 2011). Larger firms also have easier access to state-controlled resources and lower risks of government expropriation of their assets than smaller ones (Cull and Xu 2005; Li and Zhang 2007; Li et al. 2008). Larger firms may also have more

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[3] This characterization of the solar energy industry is based on the second author's interviews with leaders of the China Rural Energy Industry Association in Beijing on October 17, 2011.

opportunities than smaller ones to acquire resources from sources outside the state; for example, larger firms are likely to have more retained earnings that they can use to meet their financing needs. Larger firms are also more likely than smaller ones to be in more central positions in China's power structure: larger firms are likely to have more ties to bureaucrats, and to more powerful bureaucrats (Guthrie 1998, 1999, 2002).[4] But larger firms may need to cultivate those ties less than smaller firms because larger firms benefit from scale economies: larger firms can acquire lower-priced inputs than smaller ones; therefore, larger firms can produce outputs at lower cost and are better able to compete on price. Hence, we predict that the benefits of political connections will be less pronounced for larger firms than for smaller ones:

> ***H4:*** *The positive interaction between political connections and market development will be weaker for larger firms.*

Research Design

Sampling Plan

Our analysis focuses on Chinese firms listed on the domestic stock exchanges. These are the largest firms in China, which dominate most industrial sectors, so understanding the interplay between these economic actors and political actors like state bureaucrats matters substantively. In addition, much more information is available on listed firms than on non-listed firms, which makes them a strategic site for research on China's economic transition (Walder 2011). Although analysis of these large firms will not generalize well to very small-scale enterprises, our analysis of size-based differences in these firms' political connections provides some insight into the behavior of medium-sized firms.

We study all firms that are listed on the Shanghai and Shenzhen Stock Exchanges except firms designated "Special Treatment," meaning those that those earned negative net profits for two consecutive years and that risk being delisted, because data on them are not available for consecutive years. During our study period, such firms accounted for less than 3% of all listed firms. Our

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[4] Chinese firms are similar to firms in Hungary after the transition to market capitalism: larger ones are more likely than smaller ones to have former cadres in management (Róna-Tas 1994).

analysis begins in 1992, the year after the Chinese stock markets opened. It ends in 2007, the year 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. The number of firms in the sample increased over time, from 26 in 1992 to 801 in 1999 and 1,368 in 2007. After lagging explanatory variables by one year and excluding "Special Treatment" firms, the dataset we analyzed contains 11,145 firm-year records.

Data Sources and Measures

Political connections. We hand-collected the resumes of each firm's Chief Executive Officer (CEO), all other top executives (all those with "Chief" in their titles, including the Chief Operating Officer, Chief Financial Officer, and Chief Information Officer), the Chairman of the Board of Directors, and all other board members from the website of Sina (finance.sina.com.cn). This Internet content provider publishes comprehensive information on Chinese listed firms. Because listed firms' executives and directors changed over time, we collected these data every year each firm was listed on a domestic stock exchange.

We scrutinized each person's resume to determine whether he (rarely she) had served as a bureaucrat – that is, as an official in a central or local government bureau – and if so, at what rank (chief officer, deputy, etc.) and at what level in the official hierarchy (nation [*bu ji*], province [*ting ji* or *ju ji*], county [*chu ji*], or city [*ke ji*]). We coded a firm's *political connections* as a binary indicator variable set equal to one in years when the focal firm's CEO, at least one other top manager, or at least one member of the board of directors had served as the chief officer or deputy chief officer at the county level [*chu ji*] or above, and zero otherwise. Using past positions is a reasonable indicator of social ties [*guanxi*] because many bases of social ties in China involve past relationships (Tsui and Farh 1997). For a robustness check, we constructed two continuous measures of political connections, the natural logarithm of the number and proportion of executives and board members who had served as chief officers or deputy chief officers at the county level or above.

We chose the county level [*chu ji*] as our threshold for political connections because it is a distinct cutoff point in the Chinese administrative hierarchy. Lower-level officials (e.g., those at the city level [*ke ji*]) are not funded through the central fiscal system, so the county level indicates membership in the inner circle of political elites, which in 1998 included roughly 500,000 individuals (Walder 2004: 195), out of a total population of 1.25 billion that year. Because most high-level officials are Communist Party members, this measure also captures a second aspect of political connections. We considered using the province level [*ting ji* or *ju ji*], which is just above the county level, as our threshold. But there are far fewer officials at the province level than the county level and, as we explain below, very few listed firms had connections at the province level. With a province-level threshold, the lack of variation in political connections makes it difficult to obtain stable, even credible, effect estimates.

Market development. Following Walder's (1996) suggestion, we measured the proportions of labor and capital that were allocated through markets rather than by state bureaus. We based these measures on how labor and capital were divided between state-owned and non-state-owned firms. We followed the National Bureau of Statistic's definition of state-owned firm as those in which the state owns more than 50% of shares plus those in which the state owns less than 50% of shares but the state is the largest shareholder *or* the state is the controlling shareholder (Holz and Lin 2001). The first measure, *market development* (*employment*), is the logarithm of the percentage of the labor force working in non-state-owned firms each year. The second measure, *market development* (*investment*), is the logarithm of the percentage of all fixed-asset investments in non-state-owned firms each year. Both variables were based data in the *China Statistical Yearbook*.[5] Because both percentage measures were skewed, we took their natural logarithms to normalize them. To test hypotheses 1, 3, and 4, we

[5] 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-owned 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 deflated relative to measures for the years 1992 to 1997. This artificial reduction in measures of market development starting in 1998 would make it more difficult for us to find support for our hypotheses.

calculated both market development variables for the country as a whole; to test hypothesis 2, we calculated both variables for the region (province) where the focal firm's headquarters was located, because the province is the most important marker of regional economic differences in China.

We also created a third measure of market development, a time-period indicator. Although China's economic reforms unfolded over time, some years witnessed more dramatic policy changes than others (Brandt and Rawski 2008). Many local observers viewed 2003 as a milestone for economic reform because that year saw a new stage of economic reform unleashed .[6] As a condition of China's official accession into the World Trade Organization at the end of 2001, over 7,000 tariffs, quotas, and trade barriers were relaxed in 2003. The resulting changes to China's economic institutions affected many sectors of its economy, including banking, investment systems, state-owned enterprises, regulated industries, and many factor markets. (We provide more details of the reforms of 2003 in the Appendix.) To capture this discontinuity in the development of market-supporting institutions, we created a dummy variable set equal to zero up to and including 2003, and one after 2003, which we labelled the *milestone year*.

Firm and industry variables. We obtained basic data on firms, including financial data, from the Guo Tai An Information Technology Company (GTA, also called also called China Securities Market and Accounting Research, CSMAR), a for-profit firm in Hong Kong that has developed databases on the Chinese banking industry, stock market, and economy for international academic and industry researchers. We used GTA's China Stock Market Trading Database. We supplemented these data with data compiled by Wind Information Co., a leading financial data firm in China. To measure overall *firm performance*, we used net return on net assets (ROA), a measure

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[6] See, 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/newscenter/2003-11/28/content_1202985.htm); "Experts' explanations of the *'Decision of the Central Committee of the Communist Party of China on some issues concerning the improvement of the socialist market economy*'," Sina News, October 21, 2003 (http://news.sina.com.cn/c/2003-10-21/2122962787s.shtml); "Administrative reforms of government structure in the reform and opening era," Xinhua News Agency, January 15, 2008, (http://news.xinhuanet.com/legal/2008-01/15/content_7425177.htm); "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).

that is comparable across industries and across firms operating on different scales. To probe causal mechanisms more deeply, we analyzed one critical resource for firms, bank loans. We calculated each firm's *borrowing ratio*, defined as the ratio of its bank borrowing to its assets. We measured *firm size* in terms of sales, because sales revenue contributes directly to firm profitability (ROA). We defined a firm as large if its total sales were above the median for size in the focal year and small if its total sales were below the median.

To measure the *level of competition in each industry* , we aggregated data on firms to the industry level. We used the Herfindahl index of concentration, which we calculated using the market share, based on sales, of all listed firms in each industry each year. We defined industry using two-digit Chinese Standard Industrial Classification codes. Each industry was coded as being more competitive if concentration was above the median across all industries in the focal year and coded as being less competitive if concentration was below the median.

Control variables. We controlled for other variables that may affect firm performance. 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, even if those shareholders have significantly less than majority stakes, through their power to make appointments to boards of directors (Clarke 2003; Fisman and Wang 2010). We reasoned that different types of controlling shareholders not only influence firm performance, they also affect what firms have to gain from their political connections (Walder 1996; Walder and Nguyen 2008). State-controlled firms can use political connections to maneuver for more advantageous positions in their markets (e.g., Allen et al. 2005; Cull and Xu 2005; Calomiris et al. 2010). Non-state-controlled firms can use political connections to get protection from competition and access to financing, information, and technology (e.g., Li and Atuahene-Gima 2001; Luo 2003; Li and Zhang 2007). As economic reforms intensify competition and expand business opportunities, such politically based advantages may be especially rewarding for non-state-owned firms.

Second, we controlled for *firm size* using sales, logged to normalize the distribution, because larger firms are more likely to have political connections, although smaller ones may be more likely

to actively use them (Guthrie 1998, 1999, 2002). In a robustness check, we used an alternative measure of size, based on assets, again logged to normalize the distribution. Third, in models of overall firm performance, we controlled for the *borrowing ratio* because access to debt financing facilitates expansion, which allows firms to achieve economies of scale and so enhances performance.

Model Specification and Estimation

We first conducted propensity-score matching to generate a subset of politically unconnected firms that were highly comparable, in important observable dimensions, to the set of politically connected firms in our sample. This allowed us to sharpen the inferences drawn from subsequent statistical analysis. We then adopted two different strategies to test our hypotheses: first, linear regression using the two continuous measures of market development; second, the difference-in-differences framework using the binary measure of market development.

Propensity-Score Matching

Politically connected firms may differ considerably from politically *un*connected firms in terms of many factors that affect the outcomes of interest. For example, large firms may be more likely to have executives or board members with political connections *and* more likely to perform well *independent of* their political connections. If so, regression analyses will be biased by selection into the "treatment condition" (having political connections) rather than the "control condition" (not having political connections). To put it simply, firm size may explain any observed association between the treatment (having political connections) and the dependent variable (firm performance).

Propensity-score matching helps alleviate such concerns by matching firms in the treatment and control conditions on potential confounds, thus eliminating spurious results (Rosenbaum and Rubin 1983). To employ this technique, we first estimated a logistic regression predicting having political connections, using firm size, borrowing ratio, state ownership, industry, and year. Then, for each firm each year, we calculated its predicted probability of having political connections – its "propensity score" for experiencing the treatment. We then constructed a subset of politically

unconnected firms with sufficiently high propensity scores (the "matching sample") that they resembled the set of politically connected firms 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 and within a set caliper. We began by sorting the firms in the treatment condition randomly and then matched each with the closest firm in the control condition. To eliminate poor matches, we made sure the distance between the two firms' propensity scores was below a set threshold.

To test the quality of the matching process, we assessed whether the sample of politically connected firms and the matching sample of politically unconnected firms were indeed sufficiently similar in terms of the observables. Table 1 reports this test for state ownership, firm size (the natural logarithm of assets), and borrowing ratio. (To save space, we did not report the balancing of the many industry and year indicator variables, although we did test whether those variables were well balanced, as we explain below.) All three of these covariates are well balanced: for all three, the percentage "bias" between the firms in matching sample (the control group) and the politically connected firms (the treated group) is smaller than commonly accepted threshold of 5% (Rosenbaum and Rubin 1983); moreover, the *t* test of differences between the two groups is not significant for the borrowing ratio, and it is only weakly significant for state ownership and firm size. For all industry and year indicator variables, the percentage of bias between the matching and control samples is smaller than 5%. Differences between the samples are not significantly different for the overwhelming majority of indicator variables: t tests yield $p>0.05$ for 92% of industry indicators and 97% of year indicators. These results suggest that the overall match is good: after pooling the two samples, political connections can be regarded as exogenous to the extent that we have ruled out selection on observables.

[Table 1 about here]

Statistical Models

Linear regression. First, we leveraged time-series variation by using measures of the extent to which the market portion of the Chinese economy has grown relative to the state portion and examined the interaction between market growth and political connections on firms' overall performance (ROA) and their access to bank loans. Our dependent variables are continuous, so we estimated ordinary least-squares (OLS) regressions. Because we have multiple observations on each firm and multiple observations on each year, our data points are not independent. To deal with this, our models included year and firm fixed effects, and we clustered standard errors at the firm level.

To test hypothesis 1, we used the measures of market development calculated for the nation as a whole. To test hypothesis 2, we used the measures calculated for the province where the focal firm's headquarters was located. To test hypotheses 3 and 4, we conducted subsample analyses. We tested hypothesis 3 by comparing the results of regressions across subsamples of firms split by the level of competition they faced in their primary industry. We tested hypothesis 4 by comparing the results of regressions across subsamples split based on firm size.

We used subsample analysis instead of estimating models containing three-way interactions between market development, political connections, and industry competition (or firm size) for three reasons. First, because of multicollinearity among the components of the three-way interactions, coefficient estimates do not yield valid results about any individual predictor that is highly correlated with others, which makes it difficult to estimate interaction effects. Second, subsample analysis 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. Third, it is more straightforward to interpret the results of subsample analyses than to interpret three-way interactions.

Difference-in-differences. Second, we estimated difference-in-differences models (Card and Krueger 1994; Meyer 1995), using the binary indicator variable for the milestone year, 2003. The goal is to mimic experiments' random assignment of observations (at the firm-year level) to the

treatment and control conditions (again, having or not having political connections), to clarify causation. Using the language of experimental design, the outcome of interest (overall performance in terms of ROA) is observed for two groups of "subjects" (firms) for two time periods (up to and including 2003 versus after 2003). One of the groups (the treatment condition) receives a treatment (having political connections), while the other (the control condition) does not. When the same units (firms) within a group are observed in each time period, the average change in the outcome of interest within the second group is subtracted from the average change within the first group. This technique removes biases from comparisons during the second (post-treatment) period between the two groups that could be due to persistent differences between those groups; it also removes biases from comparisons over time in the first (treatment) group that could be the result of temporal trends.

To deploy this technique, we compared the impact of market development on the overall performance of firms with political connections to the impact of market development on the overall performance of firms without political connections. Assuming that the two types of firms followed parallel trajectories, this technique allowed us to estimate the *joint* effect of market development *and* political connections. These models took the following general form:

$$Y_{it} = \beta_1 + \beta_2 X_{1i} + \beta_3 X_{2t} + \beta_4 X_{1i} \times X_{2t} + \gamma' \mathbf{Z} + \varepsilon,$$

where X_{1i} equals one when firm i has political connections, X_{2t} equals one after the milestone year of 2003, and $\mathbf{Z}$ is a vector of controls. Net of controls, the performance of firms without political connections up to and including 2003 is β_1, that of firms without political connections after 2003 is $\beta_1 + \beta_3$, that of firms with political connections up to and including 2003 is $\beta_1 + \beta_2$, and that of firms with political connections after 2003 is $\beta_1 + \beta_2 + \beta_3 + \beta_4$. Therefore, net of controls, the difference in performance due to the joint effect of having political connections and the occurrence of market reform (the period after 2003) is β_4.

The difference-in-differences models we estimated included fixed year and firm effects, which further bolster our claims about causation.[7] We clustered standard errors at the firm level to alleviate the concerns that conventional difference-in-differences standard errors may be understated (Bertrand, Duflo, and Mullainathan 2004).[8] Again, to test hypotheses 3 and 4, we conducted subsample analyses, comparing results on more- and less-competitive industries (hypothesis 3) and larger and smaller firms (hypothesis 4). Note that because the milestone year dummy is constant for the entire country, we could not use this method to test hypothesis 2.

Results

Trends over Time and across Space

Figure 1 plots the number of listed firms each year and the number each year that have political connections at the county level [*chu ji*] or above. It shows a striking pattern: over time, listed firms are increasingly likely to have politically connected executives and directors. In 1992, only seven of the 26 listed firms (27%) had political connections; the number rose to 378 out of 704 in 1998 (54%), then to 721 out of 1,051 in 2002 (69%), before declining very slightly to 908 out of 1,368 in 2007 (66%). This pattern suggests (although it certainly does not prove) that listed firms in China have discovered great value in ties to political actors.

[Figure 1 about here]

To which political actors are listed firms connected? The Chinese state is not a monolithic entity; instead, it is hydra-headed, with nested local, regional, and national levels (*cf.* Adams 1996; Kiser 1999). Therefore, the most relevant comparisons are across levels in the state hierarchy. Figure 2 compares the percentage of firms with political connections at different levels in the state hierarchy in each year. It shows that listed firms were more likely to have had ties to local political actors than to regional or national actors. Across our study period, 39% of listed firms' political

[7] Including year fixed effects does not confound inference about the effects of the period after the milestone year. Compared with models that do not included year fixed effects, models that include year fixed effects are more flexible and thus preferable (Wooldridge 2001).

[8] Two-way clustering of the standard errors at both the firm level and the year level, following Petersen (2009), yielded qualitatively similar results.

connections were at the municipal level, over half (56%) were at county the level, and only 6% were at the province or central state level. This pattern closely matches the distribution of listed firms' ownership across levels of the state hierarchy. It also suggests (but again, does not prove) that local political connections have greater value for most firms than connections to higher levels in the state bureaucracy (Parish and Michelson 1996; Guthrie 1998, 1999; Kennedy 2005).

[Figure 2 about here]

Figure 3 shows who within listed firms had these political connections and how the distribution of political connections across actors changed over time. It plots trends over time in the percentage of listed firms with political connections incarnated in their CEO or Chairman (solid dark shade), other top executives (diagonal pattern), dependent directors (solid light shade), independent directors (cross-hatched pattern), and supervisory directors (white dots on dark background). The percentage of listed firms with politically connected CEOs or Chairmen was 12% in 1992. This percentage peaked in 2000, when 26% of firms had politically connected CEOs or chairmen, and declined after that date to 18% in 2007. The percentage of listed firms with other politically connected executives was about the same and followed the same trajectory over time. Dependent directors – those who were either executives in the firm or employees of the firm's parent company or major shareholder – were the most likely to be politically connected. One-third of listed firms had politically connected dependent directors in 1993 and over half did between 2000 and 2002. The percentage of listed firms with politically connected dependent directors declined after that date, reaching 36% in 2007.

[Figure 3 about here]

In 2002, the Code of Corporate Governance issued by the China Securities Regulatory Commission (2002) required listed firms to adopt "best-practice" corporate governance structures, including adding independent directors to their boards of directors. Independent directors cannot be employees of the firm, its parent company, or its major shareholder. Before 2002, very few Chinese listed firms had independent directors: only 2 out of 208 (1%) in 1995, 11 out of 596 (2%) in 1997, 39 out of 801 (5%) in 1999, and 279 out of 994 (28%) in 2001, so the percentage of firms

with politically connected independent directors was also very low. By the end of 2002, virtually all listed firms (98%) had independent directors. The percentage of firms with politically connected independent directors rose steadily from 25% in 2002, the year regulations requiring independent directors were enacted, to 41% in 2007. The increase in the percentage of firms with politically connected *independent* directors may explain the decline in the percentage of firms with politically connected *dependent* directors – a newer type of tie, made possible by the law of 2002 substituted for an older type.

In addition to boards of directors, many Chinese firms have boards of supervisory directors, which were codified into Chinese corporate law in 1993.[9] Chinese firms' supervisory boards, like those of German firms, are charged with monitoring executives and the board of directors, while the boards of directors are responsible for the firm's daily operations. In some Chinese firms, one of the supervisory directors may be selected from among the employees. On average over our study period, almost 90% of firms had supervisory boards. The percentage of listed firms with politically connected supervisory directors rose slowly from 8% in 1992 to 17% in 2002, then fell slightly to 14% in 2007.

To illustrate temporal patterns in market development, Figure 4 plots the two continuous measures of market development, the logarithm of the percentage of the labor force working in non-state-owned firms each year and the logarithm of the percentage of all fixed-asset investments in non-state-owned firms each year, over time for the nation as a whole. Both markers of market development increased steadily during our study period. In 1992, the logged measures for employment and assets invested were .062 and .0082, respectively, reflecting the fact that that non-state-owned firm accounted for 16% of employment and 1.9% of assets invested. By 2007, these measures had risen to .226 and .150, respectively, reflecting the fact that non-state-owned firm accounted for 68% of employment and 41% of assets invested.

[Figure 4 about here]

[9] The "Company Law of the People's Republic of China," adopted by the Fifth Session of the Standing Committee of the Eighth National People's Congress on December 29, 1993.

To illustrate how market development varies across regions, Figure 5 plots the two continuous measures of market development for all provinces in 1999, the midpoint of our study period. It shows substantial variation, with coastal provinces such as Fujian and Guangdong having high levels of market development and inland provinces such as Qinghai and Gansu having low levels. The relative ranking of provinces was fairly stable throughout our study period. These measures of market development are not perfectly correlated: in some provinces (e.g., Hainan), the investment-based measure is far lower than the employment-based measure, while in others (e.g., Tianjin), they are more nearly equal. These differences reflect differences in the industries located in different provinces, and the patterns of ownership (state versus non-state) in those industries.

[Figure 5 about here]

Finally, Figure 6 charts competition, measured as the Herfindahl index of market concentration, for every industry, using two-digit Chinese Standard Industrial Classification codes, averaged over our study period. This figure shows tremendous variation across industries. Among the most competitive industries (the least concentrated) were machinery and industrial equipment, metal and non-metal products, and textiles and clothing, with Herfindahl indexes of .026, .054, and .056, respectively. Social services and finance were the least competitive industries (the most concentrated), with Herfindahl indexes of .842 and .933, respectively.

[Figure 6 about here]

Testing Hypotheses

Table 2 presents univariate statistics and correlations for all variables. None of the correlations, except among the various measures of market concentration, which are not included in the same regression models, are high enough to cause concern about multicollinearity.

[Table 2 about here]

Overall firm performance. Table 3 presents the first set of results on overall performance (ROA), using the (logged) percentage of employment in non-state-owned firms. Model 1 reports the main effects of the variables of theoretical interest, political connections and market development,

conditional on all control variables, while model 2 adds their interaction. Model 1 shows a positive but nonsignificant effect of political connections and a negative and statistically significant effect of market development. Model 2 shows that, as predicted, the interaction between political connections and the employment-based measure of market development was positive and statistically significant. This indicates that over our study period, political connections increasingly enhanced overall firm performance. This effect is quite large. Based on the estimates in model 2, when the employment-based measure of market development was at its mean, the predicted ROA of politically connected firms was larger, on average, than that of politically unconnected firms by 0.002. This is equivalent to an increase of 8.2% from the average value of ROA. When market development was one standard deviation above the mean, the predicted ROA of politically connected firms exceeded that of politically unconnected firms by 0.007, which amounts to an 27.3% increase from the average value of ROA. In other words, the gap in ROA between politically connected and politically unconnected firms increased as markets became more developed, which provides strong support for hypothesis 1.

[Table 3 about here]

To test hypothesis 2, model 3 replaces the measure of market development calculated for the *nation* as a whole with the measure calculated for the *province* where the focal firm was headquartered. It shows results that are largely consistent with those in model 1. Model 4 adds the interaction between province-level market development and the political connections dummy. It again shows a positive and statistically significant interaction between political connections and market development. The magnitude of the effect in model 4 is smaller than that in model 2, possibly because the province where a focal firm's headquarters was located did not capture the influence of market development on that firm's activities outside its home province.

To test hypothesis 3, models 5 and 6 compare more-competitive and less-competitive industries, based on a median split of our sample, using the country-level measure of market development. The interaction between political connections and market development is positive and statistically significant in model 5, and positive but nonsignificant in model 6. Comparing the

subsamples, a Chow test shows that the coefficients on the interaction terms are significantly different ($p<.01$). This pattern of results indicates that market development made political connections increasingly valuable to *only* firms in highly competitive markets, which supports hypothesis 3.

To test hypothesis 4, models 7 and 8 compare small and large firms, again based on a median split of our sample. While the interaction between political connections and market development is positive and statistically significant in both models, the magnitude of the interaction effect is greater in model 7 than in model 8. Comparing the subsamples, a Chow test shows that the coefficients on the interaction terms are significantly different ($p<.01$). This pattern of results indicates that market development made political connections increasingly valuable more for smaller listed firms than for larger ones, which supports hypothesis 4.

Table 4 replicates Table 3, substituting the measure of market development based on the (logged) percentage of capital investments in non-state owned firms in the focal year. The results in Table 4 are largely consistent with those in Table 3. In model 1, the main effect of political connections is positive but nonsignificant, while that of market development is negative and statistically significant. In model 2, the interaction between political connections and market development is again positive and statistically significant, indicating that political connections became more valuable as market development proceeded. This provides further support for hypothesis 1. Based on the estimates in model 2, when this measure of market development was at its mean, the predicted ROA of a politically connected firm was larger by .003 (equivalent to 9.7% of the average ROA) than that of a politically unconnected firm. When this measure of market development was one standard deviation above the mean, the gap in ROA between politically connected and politically unconnected firms increased to .007, on average, which is equivalent to 24.5% increase from the average value of ROA.

[Table 4 about here]

To test hypothesis 2, model 3 replaces the measure of market development calculated for the *nation* as a whole with the measure calculated for the *province* where the focal firm is headquartered.

It shows results similar to those in model 1. Model 4 adds the interaction between province-level market development and the political connection dummy. While the interaction term is positive, as predicted by hypothesis 2, it is not statistically significant. This may be due to the fact that, as discussed earlier, a focus on market development in the province where the focal firm is headquartered fails to account for its activities outside the province.

Models 5 and 6 compare more-competitive and less-competitive industries, based on a median split of our sample, to test hypothesis 3 again. As before, the interaction between political connections and market development is positive and statistically significant in model 5, and positive but nonsignificant in model 6, which indicates that market development made political connections increasingly valuable to *only* firms in highly competitive markets. A Chow test shows that the coefficients on the interaction terms are significantly different ($p<.01$). Models 7 and 8 compare smaller and larger firms, based on a median split of our sample, to test hypothesis 4 again. The interaction between political connections and market development is positive and statistically significant in model 7, and positive but nonsignificant in model 8, which indicates that market development made political connections increasingly valuable *only* for small listed firms. A Chow test shows the coefficients on the interactions terms are significantly different ($p<.02$). Taken together, the results in Table 4 strengthen the conclusions drawn from Table 3, as they indicate that our results are not very sensitive to the basis for measuring market reform.

Table 5 presents results using the difference-in-differences technique. It replaces the continuous, national-level time-series measures of market development with an indicator variable set equal to one in the years after 2003. Model 1 shows that the interaction between political connections and this measure of market development is positive and statistically significant, which indicates that market development increased the value of political connections for firms. Before and during the milestone economic reform year, the predicted ROA of politically connected firms is smaller than that of politically unconnected firms by 0.002, which is equivalent to 7.4% of the average ROA, but this negative main effect is offset by the large positive interaction between political connections and the post-reform milestone year. After the milestone year, the predicted

ROA of political connected firm was larger than that of unconnected firms by .009, which is equivalent to 33.3% increase from the average level of ROA.

[Table 5 about here]

Models 2 and 3 in Table 5 compare more-competitive and less-competitive industries, based on a median split of our sample, to test hypothesis 3 again. As before, the interaction between political connections and market development is positive and statistically significant in model 2, and positive but nonsignificant in model 3, which indicates that market development made political connections increasingly valuable only for firms in highly competitive markets. A Chow test shows that the coefficients of the interactions terms in the two subsamples are different ($p<.01$). Models 4 and 5 compare small and large firms, based on a median split of our sample, to test hypothesis 4 again. The interaction between political connections and market development is positive and statistically significant in model 4, and positive but nonsignificant in model 5, which indicates that market development made political connections increasingly valuable only for smallest listed firms. A Chow test shows that the coefficients on the interactions terms in the two subsamples are significantly different ($p<.03$). Taken together, this set of results further strengthens the conclusions drawn from Tables 3 and 4: they indicate that our results are not sensitive to choice of market-reform measure, whether continuous or discrete, whether based on the activities of listed firms or on the nature of state regulation.

Alternative explanations. One alternative explanation for the results we observe is that causality is reversed: state authorities might have appointed former bureaucrats to better-performing firms as a reward for their service. If this were true, we would expect to observe stronger effects of political connections for state-owned firms than for non-state-owned firms, because state authorities have more power over the appointment of CEOs and board members in the former than in the latter. To assess this possibility, we conducted separate analyses of state-owned firms and non-state-owned firms. Using the continuous country-level measures of market development, we found no statistically significant difference in the effects of political connections between state-owned and non-state-owned firms. Moreover, the analysis using the milestone year of 2003 and the difference-

in-differences technique showed *stronger*, not weaker, effects of political connections for non-state-owned firms than for state-owned firms. Taken together, these results indicate that reverse causality is unlikely.

In addition, we estimated models with firm fixed effects, which hold constant all firm-level confounding factors. Such models also make full use of temporal variation in our longitudinal data: they make within-firm comparisons over time rather than between-firm comparisons. In results not shown here, we also estimated random-effects models with lagged explanatory variables but without firm fixed effects. These 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). The results of these random-effects models are not only highly consistent with those generated by the fixed effect models, they are also stronger, with greater substantive and statistical significance in the effects of political connections as markets developed.

A second alternative explanation is that our results are driven by some factor that is not included in our analysis and that causes both the observed pattern of political connections and the observed pattern of firm performance, such as a common environmental shock. As long as such omitted factors are uncorrelated with how the sample is split, the suspected spurious relationship should persist in all subsamples. But our split-sample analyses indicate that the interaction between political connection and market development varies across subsamples: it is stronger in more-competitive industries than less-competitive industries, and in smaller firms than in larger firms. These patterns of results obviate concerns about spuriousness due to omitted variables.

Robustness checks. Our first robustness check is to substitute the binary indicator for political connections with a count of executives and directors who formerly served as state bureaucrats at the county level or above. Because this count was highly skewed, we logged it, after adding one to make it possible to calculate a logarithm for firms with no political connections. Across both measures of market development, the results, which are not shown here to save space, are very similar to those shown here. Interactions between the continuous measures of political connections and both continuous measures of market development are positive. These effects are also more pronounced

in more competitive industries than less competitive industries, and more pronounced among smaller firms than among larger firms. We then replaced this count with a proportion, and found virtually identical results.

Our second robustness check involved replacing the measure of firm size, based on assets, with a measure based on sales (logged to normalize the distribution). The results of the analysis using this alternative measure, which are not shown here to save space, are highly consistent with the results shown here: as markets develop, political connections benefit only smaller firms, not larger ones.

Access to debt financing. Political connections may benefit firms in many ways: they may help firms land government contracts, obtain state subsidies, gain protection from competition, get permission to use land (which is mostly owned by local state authorities) to house business activities, acquire material resources that are under state control, get loans from state-owned banks, and secure authorization for equity offerings on state-owned stock markets. To probe one potentially important mechanism by which political connections may benefit firms, we now investigate one important resource that political connections may help Chinese firms acquire: loans from state-owned banks.

Table 6 shows the results of our analysis of bank borrowing. It contains three models, each using a different measure of market development. Models 1 and 2 use OLS regression; model 1 uses the continuous measures based on the percentage of the labor force employed in non-state-owned firms, while model 2 uses the percentage of fixed asset investments in non-state-owned firms. Model 3 uses the difference-in-differences technique and the dummy variable for the milestone year, 2003. In all three models, the interactions between political connections and market development are positive. In models 2 and 3, the interactions are statistically significant ($p=.049$ and $p=.006$) but in model 1, the interaction is only marginally significant ($p=.061$). Taken together, these results indicate that, as markets developed in China, bank borrowing increased more among politically connected firms than among unconnected firms. Limited access to credit is an obstacle that

confronts many Chinese firms; therefore, these results suggest that one important mechanism through which political connections help firms is to facilitate their access to debt financing.

[Table 6 about here]

These effects are substantial. For example, when the employment-based measure of market development was at its mean, the predicted borrowing ratio of politically connected firms exceeded by that of politically unconnected firms by .001. This negative association was offset by the positive interaction with market development: when the employment-based (or investment-based) measure of market development was one standard deviation above the mean, the predicted borrowing ratio of politically connected firms exceeded that of politically unconnected firms by .009, which amounts to an 2.02% increase from the average borrowing ratio. For the investment-based measure of market development, an increase from the mean level (difference between politically connected and politically unconnected firms = -.002) to one standard deviation above the mean (difference = .007) yields a 1.72% increase in the average borrowing ratio.

Discussion and Conclusion

Some scholars argue that as markets develop in transition economies like China's, political connections provide fewer benefits for businesses; instead, market transition obviates the need for firms to rely on ties to state bureaucrats for access to resources or authorization of business activities (Nee 1989, 1991, 1996; Guthrie 1998, 1999, 2002; Fan, Wong, and Zhang 2007; Nee and Opper 2010, 2012). Other scholars contend that firms will continue to benefit from their ties to political actors and institutions (Hsing 1998; Wank 1999, 2002; Peng and Luo 2000; Tsai 2002; Li et al. 2008; Chen 2011). In this paper, we extended the second line of reasoning to argue that in the absence of political reforms that constrain the state's redistributive and regulatory powers, which characterized China's economic transition, economic reforms open up new opportunities for businesses to leverage their ties to state bureaucrats, and that these ties give businesses superior competitive advantages. Therefore, the value of political connections for business actually *increases* when markets develop in the absence of political reform.

Our analysis of data on all listed firms in China's domestic stock markets from 1992 to 2007 showed that economic reforms that promoted the development of market exchange (at both the nation and province levels) improved overall performance for politically connected firms more than for non-connected ones. This pattern was more pronounced in industries and regions that were more competitive than those that were less competitive. It was also more pronounced among smaller firms than among larger ones. Our analysis further revealed that one way political connections contribute to firm performance is by facilitating access to debt financing: the joint impact of political connections and market development was to increase firms' borrowing rates. Again, these effects were stronger in industries that are more competitive than those that were less competitive, and among smaller firms than among larger ones.

The insights generated in this paper are generalizable to many transition economies besides China – those where economic reforms have been accompanied by little, if any, political reform, such as Hungary and Russia (Róna-Tas 1994; Walder 1996, 2003). In all such political-economic contexts, we expect economic reform to create increased opportunities for bureaucrats to appropriate value from business, and so increase firms' incentives to use political connections to enhance their competitive position. The insights generated here are not generalizable to other countries, such as Vietnam, where the political advantages of bureaucrats dissipated quickly during the transition toward market capitalism (Walder 2003; Walder and Nguyen 2008).

Our results are subject to two caveats, due to the particularities of our sample. First, some scholars have argued that the advantages of state bureaucrats are greater in industry than in agriculture (Oi 1989; Róna-Tas 1994). We studied only industrial enterprises, not agricultural ones. Therefore, our sample may show stronger results than samples of business enterprises that include agricultural enterprises. Second, although they varied considerably in size, the firms we studied were generally the largest in China. Large firms may find it easier than small ones to forge ties to state bureaucrats; if so, our results may not generalize well to all firms in China. Nevertheless, because these firms dominate most industries, and there is an abundance of data available on them, they a strategic site for research on China's political-economic transition (Walder 2011).

This paper has clear implications for future research. Although we explored two ways in which political connections may benefit firms in countries where economic reforms are not accompanied by political reforms, much more needs to be understood about the specific source of these benefits. Do political connections increase the economic value of some market activities more than others, as some scholars have suggested (Nee and Opper 2010, 2012)? Do all kinds of reform policies affect the value of political connections to the same extent, or do some types of reform – specifically the development of rational-legal frameworks that support markets – preserve the value of political connections less than others (Guthrie 1998, 1999)? These questions open up new avenues by which future research may deepen our understanding of how economic transitions can alter the value of firms' connections to political actors and institutions.

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Figure 1: Number of Listed Firms and Number with Political Connections (at the County Level or Above)

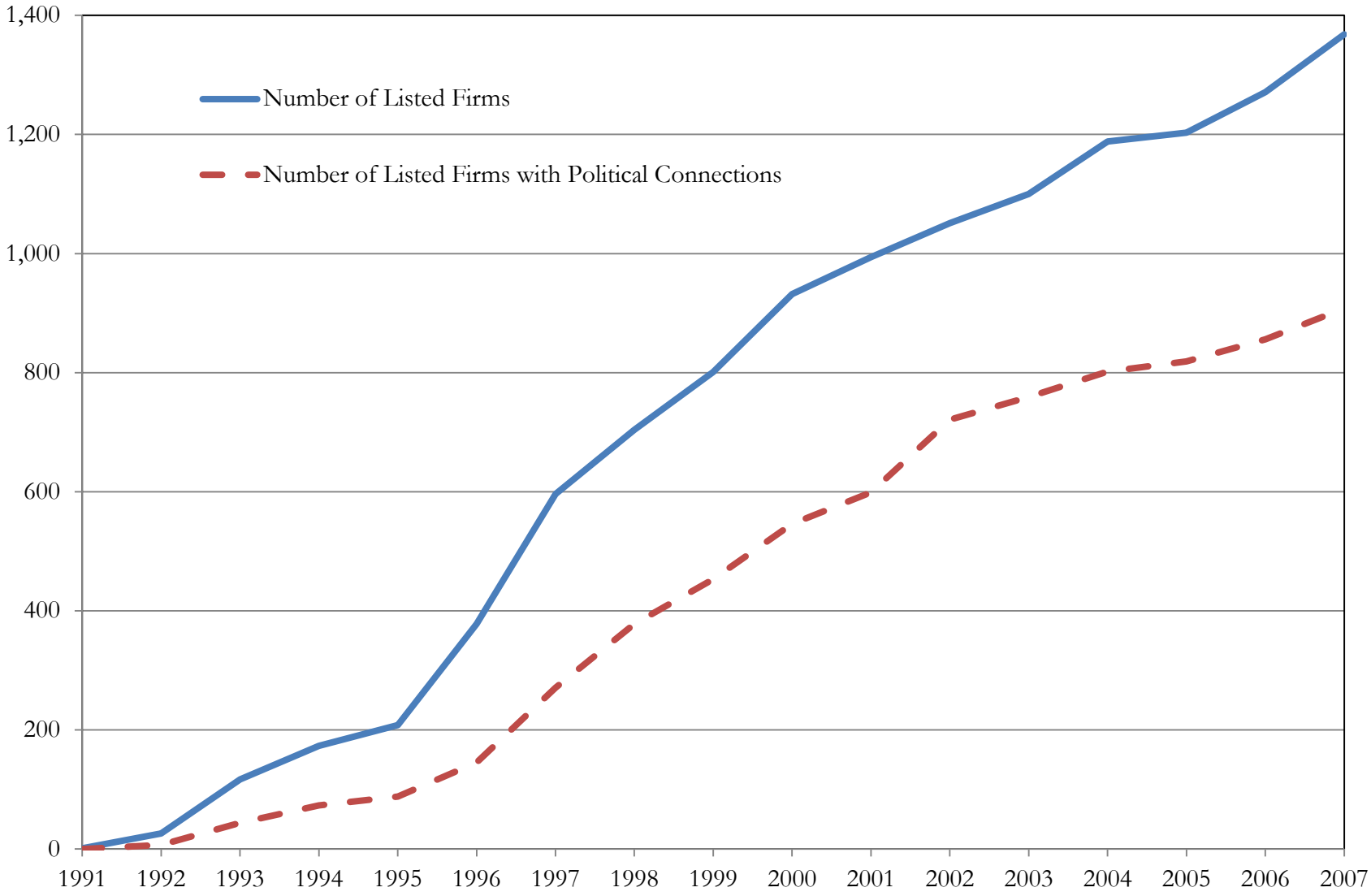

Figure 2: Distribution of Listed Firms' Political Connections across Levels of Government (City, County, or Province/Nation)

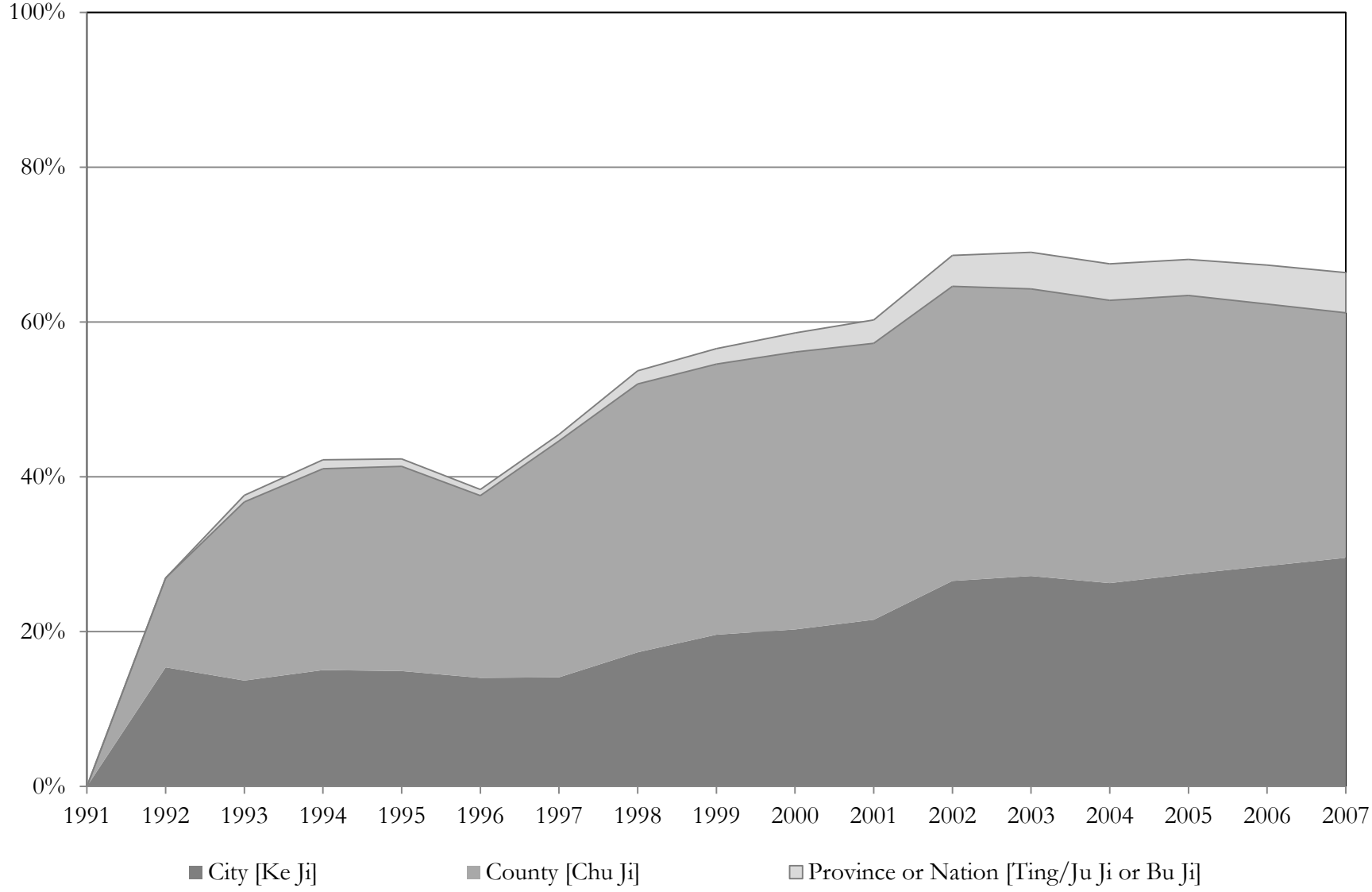

Figure 3: Who in Listed Firms Had Political Connections?

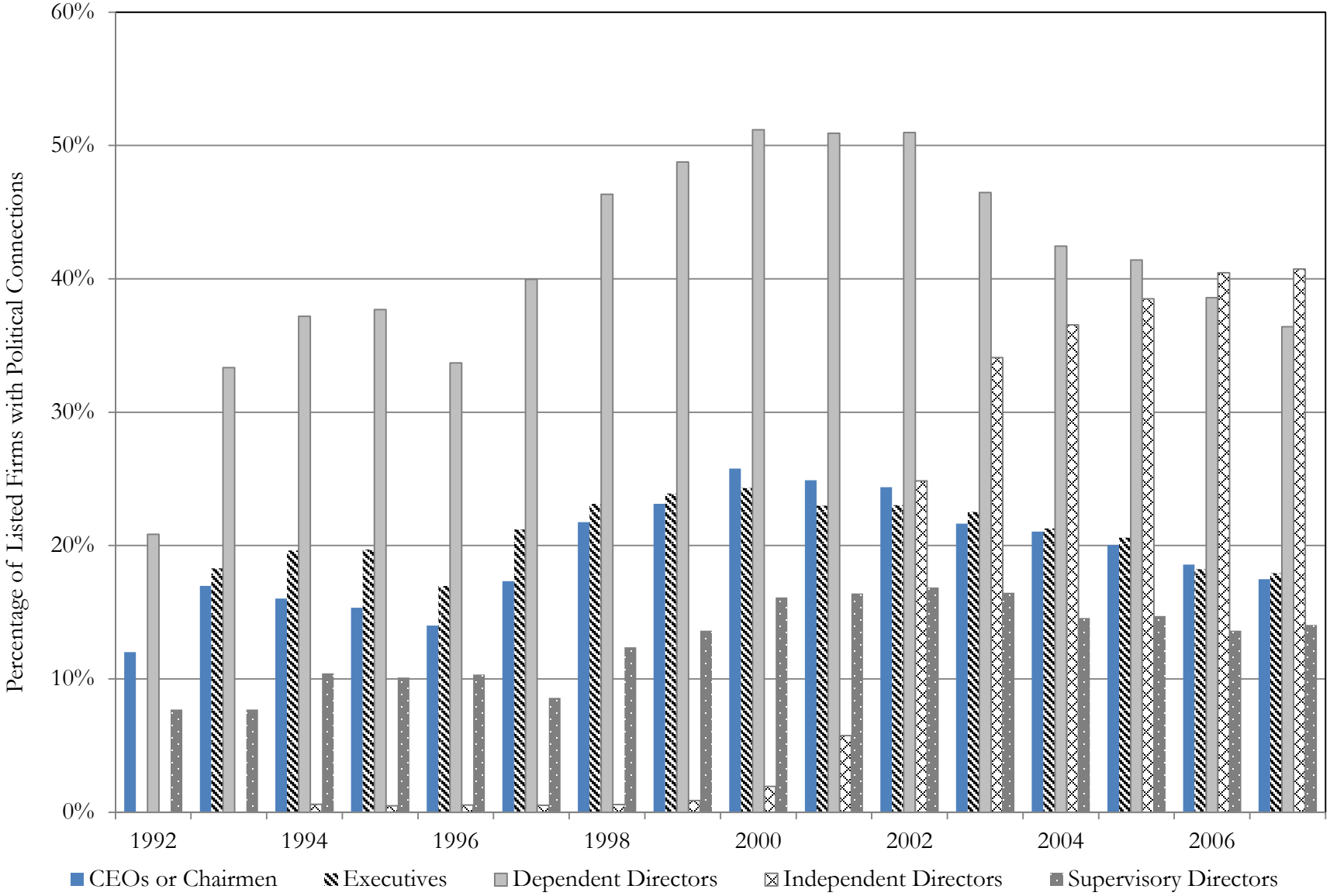

Figure 4: Trends in Market Development in China, 1992-2008

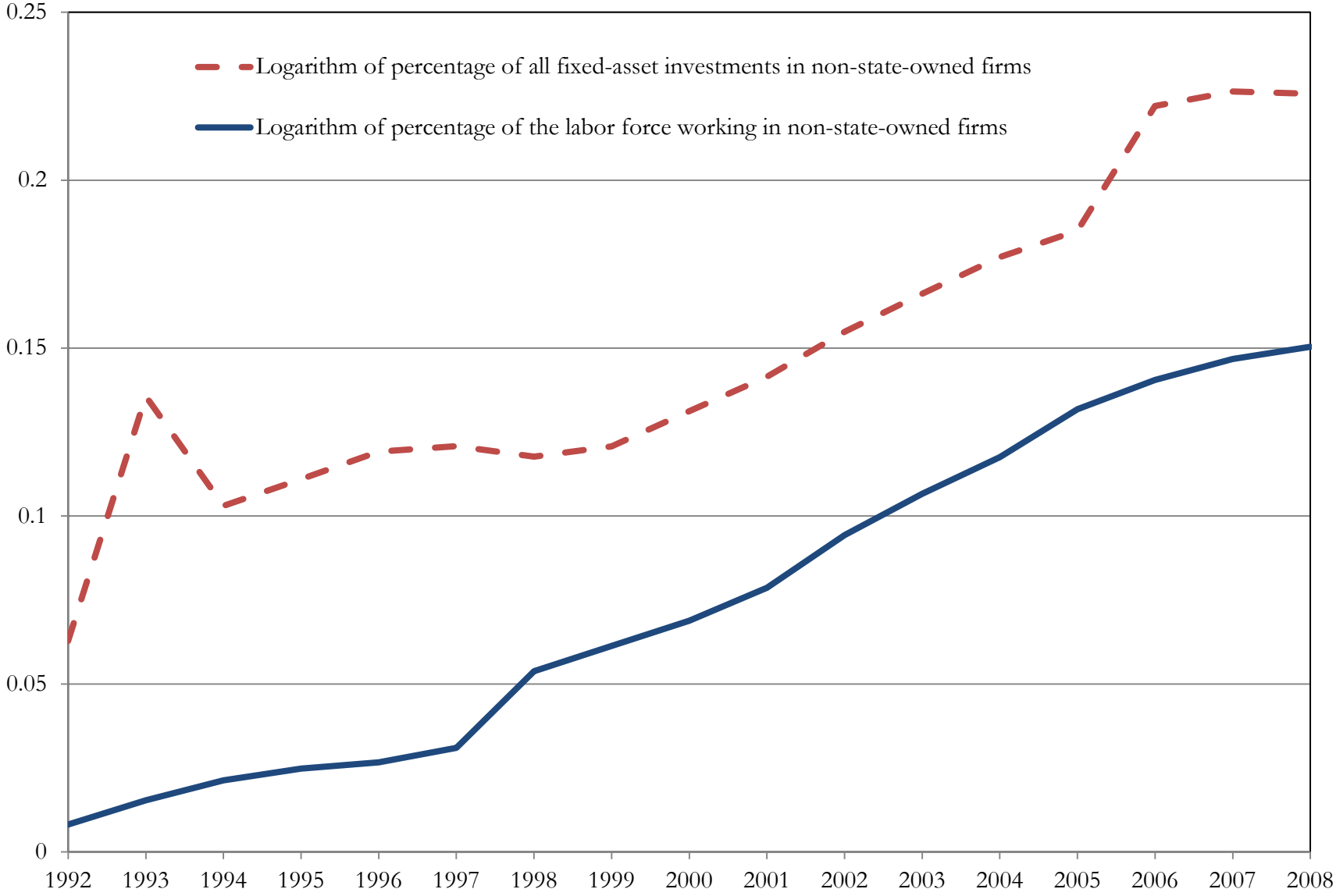

Figure 5: Regional Variation in Market Development in 1999

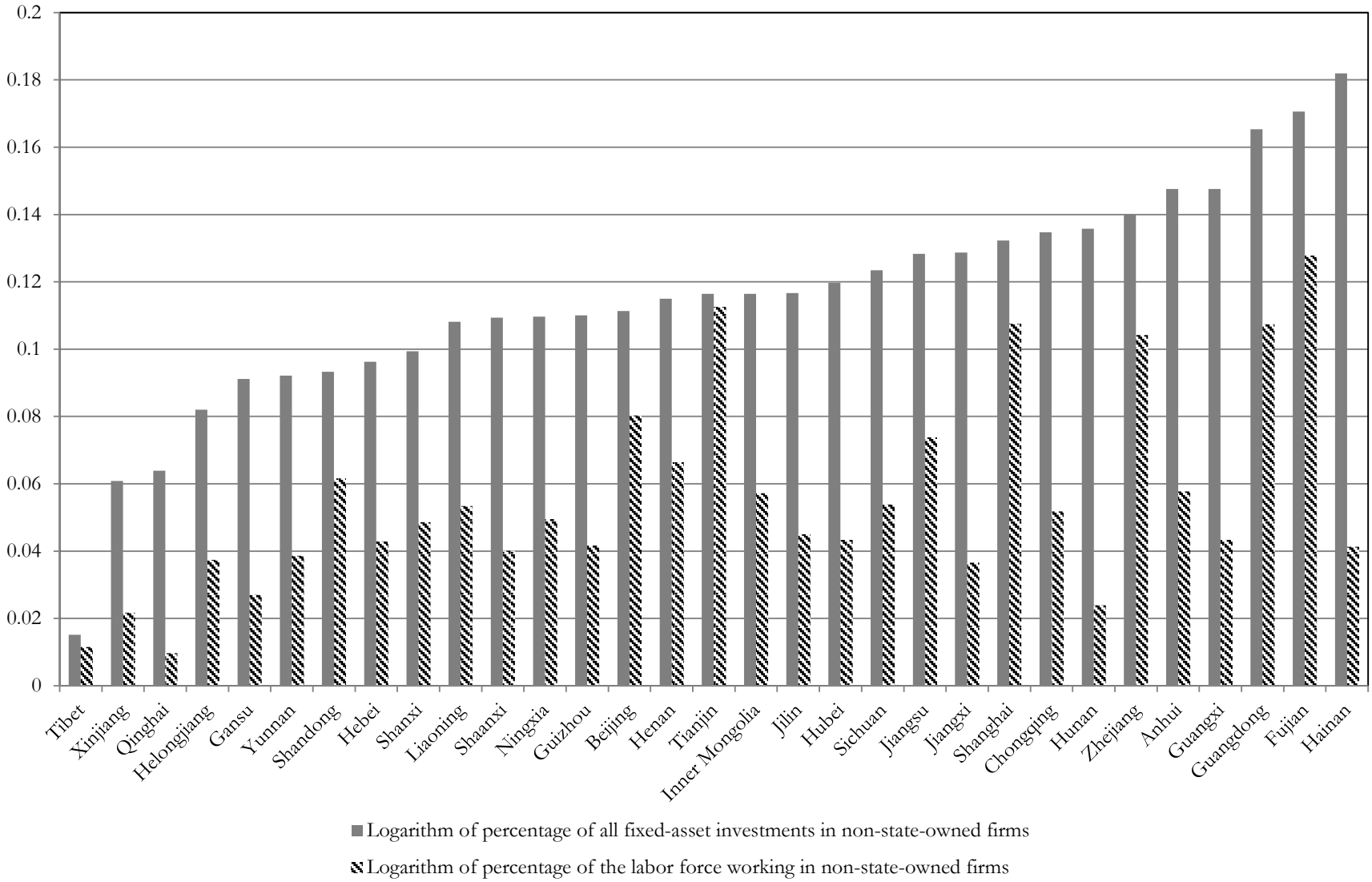

Figure 6: Level of Competition in Chinese Industries
(Herfindahl Index of Market Concentration, Average for 1992-2007)

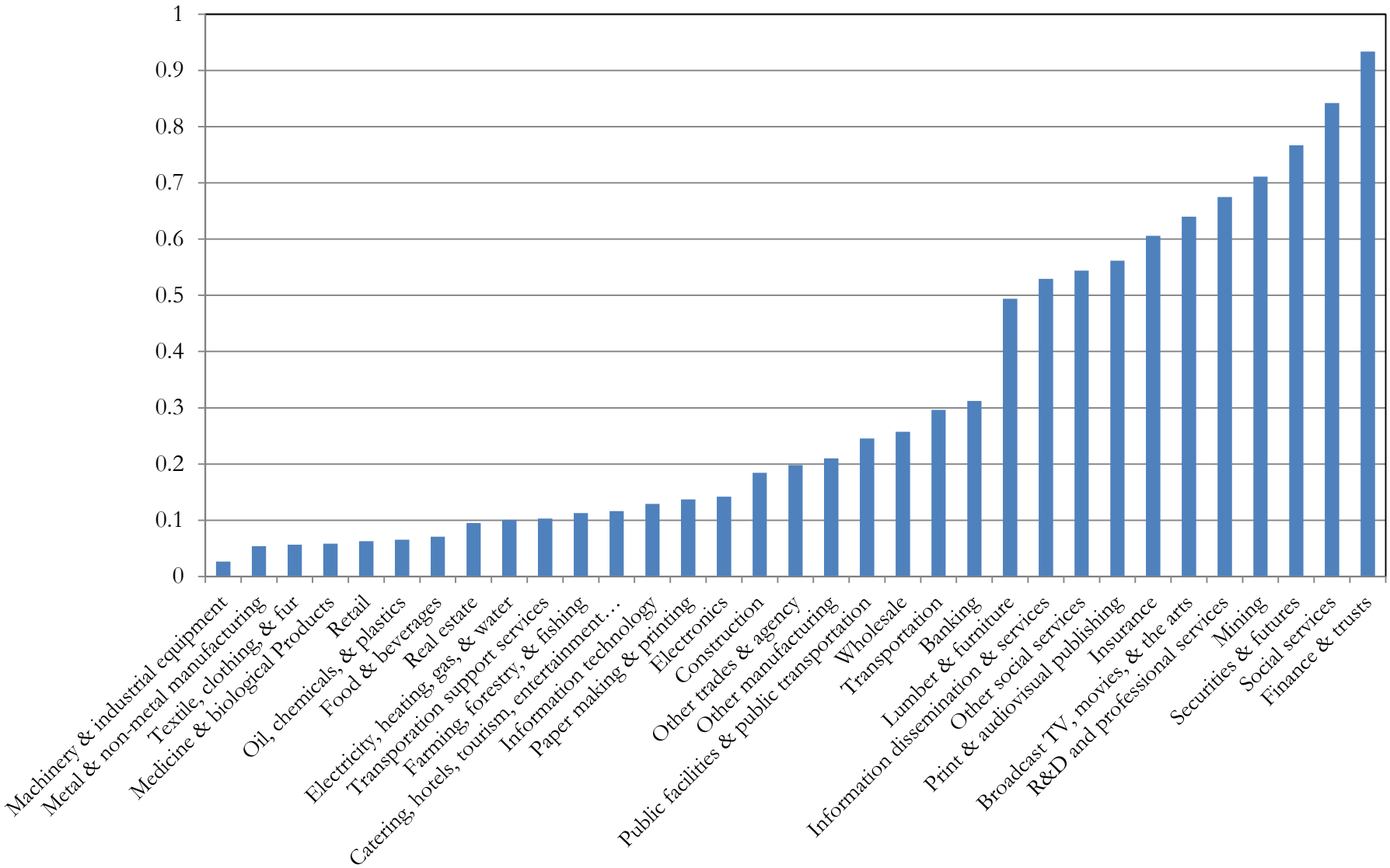

Table 1: Balancing Check of Matched Outcomes for the Propensity-Score Analysis

Variable	Mean			t test	
	Treated Group (politically connected)	Control Group (politically unconnected)	% bias	t	p>|t|
State-controlled firm (yes = 1)	0.832	0.813	5.0	1.79	0.073
Firm size (log assets)	20.78	20.74	4.8	1.72	0.086
Borrowing ratio	0.531	0.539	-3.3	-1.19	0.235

Note: To save space, this table does not report matching on industry and year fixed effects.

Table 2: Descriptive Statistics

	Variable	1	2	3	4	5	6	7	8	9	10	11
	Mean	0.027	0.447	0.609	0.778	0.089	20.986	0.244	0.454	0.275	0.463	0.378
	Standard deviation	0.076	1.007	0.488	0.415	0.114	1.021	0.112	0.131	0.158	0.185	0.485
	Minimum	-0.366	-60.334	0	0	0.020	14.937	0.019	0.156	0.003	-6.286	0
	Maximum	0.182	1	1	1	0.932	27.301	0.414	0.684	0.692	0.816	1
	# observations	11,140	10,982	11,145	11,145	11,092	11,140	11,244	11,244	11,232	11,224	11,145
1	Return on assets											
2	Borrowing ratio	0.194										
3	Political connections (yes = 1)	-0.014	-0.024									
4	State-controlled firm (yes = 1)	0.084	0.085	0.088								
5	Industry competition	0.058	0.002	0.054	0.062							
6	Firm size (log assets, RMB)	0.135	0.092	0.146	0.150	0.042						
7	Market development (employment) (logged % employees in non-state-owned firms in the country)	-0.183	-0.104	0.159	-0.178	-0.068	0.297					
8	Market development (investment) (logged % fixed asset investments by non-state owned firms in the country)	-0.138	-0.105	0.132	-0.178	-0.041	0.274	0.954				
9	Market development (employment) (logged % employees in non-state-owned firms in the province)	-0.089	-0.093	0.129	-0.135	-0.021	0.297	0.674	0.643			
10	Market development (investment) (logged % fixed asset investments by non-state owned firms in the province)	-0.131	-0.104	0.128	-0.151	-0.043	0.291	0.803	0.832	0.748		
11	Milestone year (>2003 = 1)	-0.132	-0.100	0.103	-0.164	-0.014	0.228	0.835	0.851	0.565	0.705	

Note: This table presents statistics on the treated and matched samples combined.

Table 3: Impact of Political Connections on Firm Performance (ROA), Contingent on Market Development (Employment)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sample	Full Sample	Full Sample	Full Sample	Full Sample	More-Competitive Industries	Less-Competitive Industries	Small Firms	Large Firms
Constant	0.307***	0.302***	0.194***	0.231***	0.529***	0.110	0.379***	-0.186**
	(0.041)	(0.041)	(0.046)	(0.041)	(0.114)	(0.084)	(0.086)	(0.079)
Political connections	0.002	-0.009**	0.002	-0.005	-0.010	-0.009	-0.009	-0.011*
	(0.002)	(0.004)	(0.002)	(0.004)	(0.008)	(0.005)	(0.007)	(0.006)
Market development	-3.852***	-3.516***	0.050**	0.030	-3.179*	-4.509***	-3.802***	-3.753***
	(0.865)	(0.893)	(0.020)	(0.022)	(1.738)	(1.012)	(1.173)	(0.651)
Political connections ×		0.046***		0.025**	0.059**	0.024	0.060**	0.043**
Market development		(0.016)		(0.012)	(0.028)	(0.020)	(0.026)	(0.021)
State-controlled firm	-0.013***	-0.014***	-0.014***	-0.014***	-0.019***	-0.010*	-0.016***	-0.014**
(yes = 1)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.006)	(0.005)	(0.006)
Firm size (logged assets)	-0.003	-0.003	-0.003*	-0.003	-0.014***	0.005	-0.007	0.017***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)	(0.004)	(0.004)
Borrowing ratio	0.021***	0.021***	0.022***	0.022***	0.013**	0.087***	0.016**	0.160***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.019)	(0.007)	(0.015)
Firm fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Market development – level of measurement	National	National	Province	Province	National	National	National	National
Number of observations	10,703	10,703	11,616	11,616	5,340	5,363	5,287	5,416
Adjusted R-squared	0.285	0.286	0.291	0.291	0.253	0.417	0.253	0.423

Notes: Robust standard errors (clustered on firms) are shown in parentheses. *** indicates p<0.01, ** p<0.05, and * p<0.10. Market development here is the (logged) percentage of the labor force employed in non-state-owned firms throughout the country in each year. In Models 3 and 4, market development is measured at the province level rather than the national level.

Table 4: Impact of Political Connections on Firm Performance (ROA), Contingent on Market Development (Capital Investment)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sample	Full Sample	Full Sample	Full Sample	Full Sample	More-Competitive Industries	Less-Competitive Industries	Small Firms	Large Firms
Constant	0.282***	0.282***	0.188***	0.234***	0.675***	0.082	0.359***	-0.207**
	(0.041)	(0.040)	(0.049)	(0.042)	(0.179)	(0.084)	(0.086)	(0.081)
Political connections	0.002	-0.011*	0.002	-0.005	-0.014	-0.008	-0.012	-0.012
	(0.002)	(0.006)	(0.002)	(0.006)	(0.010)	(0.008)	(0.010)	(0.008)
Market development	-0.311***	-0.306***	-0.016	-0.027*	-1.151*	-0.372***	-0.344***	-0.313***
	(0.070)	(0.070)	(0.013)	(0.016)	(0.620)	(0.081)	(0.092)	(0.046)
Political connections ×		0.030**		0.015	0.041**	0.010	0.039*	0.025
Market development		(0.013)		(0.012)	(0.020)	(0.016)	(0.021)	(0.016)
State-controlled firm	-0.013***	-0.014***	-0.013***	-0.014***	-0.019***	-0.009*	-0.015***	-0.013**
(yes = 1)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.006)	(0.005)	(0.006)
Firm size (logged assets)	-0.003	-0.003	-0.003	-0.003	-0.014***	0.005	-0.007	0.017***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)	(0.004)	(0.004)
Borrowing ratio	0.021***	0.021***	0.021***	0.021***	0.013**	0.087***	0.016**	0.159***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.018)	(0.007)	(0.015)
Firm fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Market development – level of measurement	National	National	Province	Province	National	National	National	National
Number of observations	10,703	10,703	10,685	10,685	5,340	5,363	5,287	5,416
Adjusted R-squared	0.285	0.286	0.285	0.285	0.417	0.417	0.252	0.423

Notes: Robust standard errors (clustered on firms) are shown in parentheses. *** indicates p<0.01, ** p<0.05, and * p<0.10. Market development is the (logged) percentage of all fixed-asset investments made by non-state-owned firms throughout the country in each year. In Models 3 and 4, market development is measured at the province level rather than the national level.

Table 5: The Impact of Political Connections on Firm Performance (ROA) before vs. after the Milestone Year (2003)

	(1)	(2)	(3)	(4)	(5)
Sample	Full Sample	More-Competitive Industries	Less-Competitive Industries	Small Firms	Large Firms
Constant	0.095**	0.338***	-0.097	0.233**	-0.362***
	(0.042)	(0.079)	(0.090)	(0.093)	(0.088)
Political connections	-0.002	-0.001	-0.005	0.000	-0.003
	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)
Milestone year (>2003 = 1)	0.005	-0.034**	-0.018*	-0.090***	-0.051***
	(0.005)	(0.014)	(0.009)	(0.019)	(0.008)
Political connections ×	0.011***	0.014***	0.003	0.015***	0.006
Milestone year	(0.003)	(0.005)	(0.004)	(0.005)	(0.004)
State-controlled firm	-0.014***	-0.019***	-0.010*	-0.015***	-0.013**
(yes = 1)	(0.004)	(0.005)	(0.006)	(0.005)	(0.006)
Firm size (logged assets)	-0.003	-0.014***	0.005	-0.007	0.017***
	(0.002)	(0.004)	(0.004)	(0.004)	(0.004)
Borrowing ratio	0.021***	0.013**	0.087***	0.016**	0.159***
	(0.007)	(0.006)	(0.018)	(0.007)	(0.015)
Firm fixed effects	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y
Number of observations	10,704	5,340	5,364	5,287	5,417
Adjusted R-squared	0.286	0.254	0.417	0.253	0.422

Notes: Robust standard errors (clustered on firms) are shown in parentheses. *** indicates $p<0.01$, ** $p<0.05$, and * $p<0.10$.

Table 6: The Impact of Political Connections on Borrowing, Contingent on Market Development

	(1)	(2)	(3)
Constant	1.265***	1.292***	1.054***
	(0.195)	(0.166)	(0.087)
Political connections	-0.023*	-0.035**	-0.010
	(0.013)	(0.017)	(0.006)
Market development	3.362	0.232	0.182***
	(5.199)	(0.418)	(0.013)
Political connections ×	0.090*	0.073**	0.023***
Market development	(0.048)	(0.037)	(0.009)
State-controlled firms (yes=1)	0.020**	0.020**	0.020**
	(0.008)	(0.008)	(0.008)
Firm size (logged sales)	-0.040***	-0.040***	-0.040***
	(0.005)	(0.005)	(0.005)
Firm fixed effects	Y	Y	Y
Year fixed effects	Y	Y	Y
Measure of market development	Employment	Investment	Milestone year
Number of observations	9,983	9,983	9,984
Adjusted R-squared	0.630	0.630	0.630

Notes: Robust standard errors (clustered on firms) are shown in parentheses. *** indicates $p<0.01$, ** $p<0.05$, and * $p<0.10$. In model 1, market development is the (logged) percentage of the labor force employed in non-state-owned firms each year; in model 2, it is the (logged) percentage of all fixed-asset investments made by non-state-owned firms each year; in model 3, it is a binary indicator set equal to zero before and during the milestone year of 2003, and one after.

Appendix: The Milestone Year of 2003

The year 2003 marks a milestone in China's economic reforms for several reasons. The foremost is the country's accession into the World Trade Organization (WTO) at the end of 2001. This event represented a dramatic shift in the rules of the economic game as it was played in China; it also represented a recognition on the part of China's political elite that the game was increasingly being played on a global stage. Most basically, accession into the WTO offered China the opportunity to participate in global production networks and improved the country's ability to carve out higher-value-added niches in those networks. The increased competition that would result from joining the WTO was expected to spur China's economic development.[10]

At the start of the year after it joined the WTO, the Communist Party developed a strategic plan to guide the country's economic development over the next decade, with the explicit goal of building a "well-off society."[11] To implement its strategic plan, the Party issued a landmark policy document in 2003 titled "Decision of the Central Committee of the Communist Party of China on Some Issues Concerning the Improvement of the Socialist Market Economy," which mapped out major economic reforms and economic development plans for China over the next decade.[12] Following this plan, the Party and state bureaus at all levels implemented substantial economic reforms in 2003 in many sectors of the economy, including commercial banking, capital investment, state-owned enterprises, and regulated industries.

In banking, landmark ownership reforms required the major state-owned commercial banks to be listed on the domestic stock exchanges. In December 2003, the central State Council

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[10] "Joint press conference of the President and Premier Zhu Rongji of the People's Republic of China," Office of the Press Secretary, The White House, April 8, 1999.

[11] For more details, see Jiang Zemin's report at the Sixteenth National Congress of the Communist Party of China in 2002, which was published by the Xinhua News Agency and is available online at http://news.xinhuanet.com/newscenter/2005-01/16/content_2467718.htm.

[12] For more details, this document, which was released by the Xinhua News Agency, is available online at http://news.xinhuanet.com/newscenter/2003-10/21/content_1135402.htm. See also interpretations of this document in the Chinese press: "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); "CPC plenary session set to push reform: Experts," *China Daily*, October 13, 2003 (http://english.peopledaily.com.cn/200310/13/eng20031013_125921.shtml).

approved and established the Central Huijin Investment Company to represent the state as the controlling shareholder in state-owned banks and to infuse state funding into the banks before they went public; in the following year, three major state-owned banks (Bank of China, China Construction Bank, and Industrial and Commercial Bank of China) were restructured and listed on the stock exchanges in mainland China and Hong Kong.[13] This effort was motivated by the prospect that, under the World Trade Organization agreement, the banking sector would be opened to foreign banks at the end of 2006 and thus competition would intensify (Podpiera 2006).

The system of capital investment in China also experienced major regulatory changes in 2003. For example, most non-state investment projects no longer required state approval, and the process of issuing corporate bonds was simplified while the rules became stricter.[14] Major reforms in other sectors of the economy included further restructuring of the management of state assets in state-owned firms, experiments with a new tax system in rural areas, reforms of some regulated industries such as the domestic airline industry, and the restructuring and consolidation of the administrative system at a number of central government ministries and agencies into the central State-Owned Assets Supervision and Administration Commission (SASAC). This development was emulated by local state authorities, which established their own SASACs to administer their ownership stakes in listed firms and other productive enterprises.

The reforms of 2003 were milestones because they clearly specified new general guidelines that were usually implicit in previous economic reforms – if they were included at all. These guidelines included an emphasis on the social consequences, in addition to the economic consequences, of economic reform. For example, explicit goals were set for reducing the gap in economic development between regions and within regions between urban and rural areas, for balancing economic development and environmental protection, and for balancing the development

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[13] "Report of the State Council on Promoting the Shareholding System Reform of State-owned Commercial Banks and Deepening the Financial System Reform," December 26, 2006, issued by the State Council (http://www.lawinfochina.com/display.aspx?lib=law&id=5938#).

[14] "China to reform investment system next year," *People's Daily*, December 2, 2003, (http://english.peopledaily.com.cn/200312/02/eng20031202_129479.shtml).

of the domestic economy and opening up the economy to competition from foreign firms.[15] These guidelines were critical shifts in policy focus compared with the previous courses of reforms; they also influenced many reforms that unfolded in subsequent years.

Politicians publicly called for substantial economic reforms. Headed by Hu Jintao and Wen Jiabao, the fourth generation of Chinese leadership was under considerable political pressure, soon after its rise to power in 2002, to undertake consequential economic reforms as a demonstration of their abilities to lead the country. The reforms of 2003 were the first major political undertaking of the fourth-generation Chinese leadership (Portiakov 2004). The 16th Communist Party of China Third Plenary Session, which issued the strategic plan in 2002, coincided with the anniversaries of historic political conventions that have become monumental in contemporary China's history of economic reforms, further contributing to political pressure.[16] It is worthwhile to note that these dramatic economic reforms were not accompanied by any substantive reforms of the political system.

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[15] "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).

[16] Specifically: "25 years ago in December 1978, the Third Plenary Session of the 11th CPC Central Committee launched the policy of economic reform and opening up, and ten years ago in October 1993, the Third Plenary Session of the 14th CPC Central Committee declared the final transition of the reforms in the PRC to the market and designated a program for laying the foundations of a socialist market economy in the country" (Portiakov, 2004: 1).