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Bringing Market Transition Theory to the Firm

1. Introduction

Market transition theory has specified general mechanisms to explain change in the balance of power between political and economic actors in transition economies. These mechanisms drive the endogenous construction of informal institutions of a market society; moreover, it is within the context of an on-going change in relative power that the formal institutions of the emerging market economy arise. The theory makes clear predictions on the declining value of political capital as a consequence of progressive *marketization*, which incrementally results in transformative change in the direction of more relative autonomy between the political and economic spheres, not dissimilar from established market economies (Kornai 1995; Evans 1995; Nee 2000; Lindenberg 2000; Ricketts 2000). In sum, the predicted change in relative power between redistributors and producers explains not only bottom-up entrepreneurial activity, but also the emergence of a market economy in departures from state socialism.

Although the evolving market transition debate has been fruitful in stimulating a robust research program in sociology and economics with over twenty-five empirical research reports published in peer-reviewed journals in sociology and economics (see Appendix 1; King and Szélenyi 2005; Keister forthcoming), the potential of the theory is far from exploited. While the theory in its original formulation (Nee 1989) sought to explain dynamic power shifts from redistributors to producers as a consequence of marketization, the emerging research program,

however, almost exclusively followed the first set of derived hypotheses and its focus on determinants of household income.

Subsequent research employed readily comparable ordinary least squares (OLS) models—the standard human capital model of income determination (Mincer 1958, 1974)—adapted to include measures of political capital (Nee 1989; Xie and Hannum 1996). Empirical evidence, however, remained mixed and inconclusive and controversy over the fate of political capital in new market economies seems unresolved. This is reflected in the anomaly of a near even split between the articles reporting results consistent with the prediction of decline in value of political capital caused by competitive markets (Nee 1989, 1991, 1996) and those that report the opposite (Walder 1996, 2003; Parish and Michelson 1996) or tender competitive hypotheses (Róna-Tas 1994; Bian and Logan 1996).

The aim of this paper is to revitalize the theory's original focus on dynamic power shifts between redistributors and producers by extending the theory's empirical application to a firm-level analysis. The firm, as the ultimate generator of income provides the most direct approach to analyze the interplay between market power, political capital and economic outcome. By contrasting firm-level transactions across institutional domains representing various levels of marketization and state control, it is possible to directly examine the effect of political capital on distinct economic outcomes. If observed political benefits are manifest predominantly in state-controlled institutional domains, this would support market transition theory predicting a direct link between marketization and the value of political capital. However, if political capital is just as fungible in marketized as it is in state-controlled domains, this would lead to a decisive rejection of the theory's claim. Instead, such a result would support the assertion of the theory's

critic that markets have no causal significance in enabling, motivating and guiding economic action (Walder 1996).

The remainder of this essay proceeds as follows: First, we identify general advantages connected with a focus on firm-level studies and highlight some of the inherent problems of income attainment models. Section 3 then extends the original propositions of market transition theory to firm-level analysis. Section 4 provides some cursory evidence and section 5 concludes. Overall, with descriptive and qualitative evidence, we show that the value of political capital is closely linked with the type of institutional domains in which agents use political connections to secure advantages.

2. From household to firm level analysis

To highlight general advantages of firm-level analysis for tests of market transition theory, it is useful to begin with a review of inherent problems of studies applying income attainment models. Oberschall (1996) raised early doubts about whether income and income inequality can “give us any clue about the shape of emerging institutions” (Oberschall, 1996). Similarly, Guthrie (1997) warned that income related studies on elite change “show no direct or concrete evidence about the fate of the hierarchy of former command economies” and suggested instead a focus on firm-level studies (Guthrie 1999). The problem is income attainment models cannot reveal whether economic advantages captured by politically connected households or individuals come from their ongoing exchange in political markets or from persisting advantages in competitive markets. Moreover, the reliability of household-level research hinges critically on the use of reliable proxies of marketization to control for the quality of the corresponding household environment.

We identify three measurement approaches widely used in the market transition literature: First, an intuitively convincing way to measure the extent of market allocation has built on the assumption that market exchange depends on the existence of private property rights (Kornai 1990). A related approach to measurement has focused on the proportion of industrial output produced by private, collective and state-owned enterprises (Nee 1996, Nee and Cao 1999), firm ownership (Parish, Zhe and Li 1995; Wu 2002), the proportion of household income in non-agricultural production (Walder 2002b), and the degree of privatization (Opper, Wong and Hu 2002). Second, time has repeatedly been used as a proxy for the duration of market transition. This approach assumes a linear progression in the development of a market economy, which may be true in the long term, but not necessarily in the shorter run. Moreover, the use of time as a proxy for marketization risks overlap with confounding causes such as regional business cycle, labor market fluctuations, capital investments and locally restricted reform initiatives, which are difficult to control for due to severe data limitations at the local level. Finally, a whole host of other measures have been used, which measure concepts other than marketization. A number of tests of market transition theory relied on measures of economic growth (Xie and Hannum 1996; Walder 2002a, 2002b; Hauser and Xie 2005) or structural change (Parish and Michaelson 1996; Walder and Zhao 2006). Validity problems of these measures are palpable. Economic growth and structural change are macroeconomic performance measures, determined by a complex set of factors including technology development, labor and capital input, among which marketization may but not need to play a decisive role.

Given so many different measurements of the same underlying concept, it is obvious that some will correlate only weakly with *market transition* defined as the “decisiveness of the shift to reliance on the market mechanism in the allocation and distribution” of goods and services

(Nee 1989:667). An enormous variation in correlation coefficients between the different measures of the extent of marketization underlines the severity of the measurement issues. This is seen in using the standardized marketization index constructed by the National Economic Research Institute (NERI) (Fan and Wang 2003) to calculate correlation coefficients with measures most commonly used in the market transition literature. Using provincial-level data covering the period from 1997 to 2003 (see Table 1), Nee's (1996) measure based on the proportion of non-state industrial production shows the highest correlation coefficient with the marketization index (0.81). Also comparatively high is the correlation coefficient of rural income (0.72), indicating a closer overlap with marketization. However, the lower correlation coefficient of 0.62 between rural income and proportion of non-state industrial production indicates that both proxies capture different concepts connected with marketization. All remaining measures are only weakly correlated. The use of GDP-growth measure seems particularly problematic. Though Hauser and Xie (2005) defend the use of GDP-based measures with reported close correlations between GDP and marketization (NERI), this is true only for absolute values but not for growth rates. Finally, passage of time captures marketization inadequately. With a correlation coefficient of 0.14, repeated surveys over relatively short periods of time are unlikely to properly signal the effects of market transition on predicted outcomes.

[Insert Table 1 about here]

The consequences of the vast diversity of measurement of the key causal concept—marketization—are non-trivial. This is seen in the close correspondence between the choice of measurement and the validation of market transition theory (see Appendix 1). Only one of the

nine studies, which actually measures the extent and scope of marketization, rejects the hypothesis of decline in the value of political capital. On the other hand, out of nineteen studies using the proxies of economic growth and structural measures or time or no measure of marketization, sixteen studies reject the power-decline hypothesis. This yields an odds-ratio of 42.7, i.e. the odds of confirmation are about 43 times higher when proxies of market transition are used instead of measures of structural change or development. Inadvertently, a large proportion of the contributions to the market-transition controversy in fact tested alternative theories on the association between economic growth and structural changes and the value of political capital. The consistent finding of these studies (Xie and Hannum 1996; Walder 2002a, 2002b; Hauser and Xie 2005; Parish and Michaelson 1996) is that *economic growth and structural change do not adversely affect the market value of political capital of the established elite.*

Our review underscores the need for more direct ways to study the connection between marketization and the value of political capital based on positional power in the government and communist party. We assert that a revitalization of the theory's original focus on producers provides an alternative approach to examine the association between market transition and the valuation of political capital. A firm-level analysis does not critically depend on the choice of proxies for marketization. We contend that in order to determine whether the prediction of a decline of political capital in price-making markets is accurate, empirical tests need to focus on discrete economic transactions linked to well- defined institutional domains of the transition economy. In this way it is possible to discern with greater reliability whether political capital loses its direct advantage in transactions in market exchange or, alternatively, maintains or possibly even gains advantage in such transactions. Clearly, this approach promises a more direct

way to explore whether political connections really help managers and entrepreneurs “to get more out of their *effort* because of their power and connections” (Walder 1996:1067).

3. Market transition theory: The producer perspective

In the early period of hypothesis testing, the original set of derived hypotheses and subsequent empirical applications focused on agricultural households as the new producer class of the 1980s. But following the expansion of producer activities beyond the agricultural sector, conditions of income generation in non-agricultural firms emerged as an important new application for empirical confirmation. We briefly reconcile market transition theory’s three interrelated theses with the expansion of the scope of marketization beyond the agricultural sector, and derive testable hypothesis that allow a direct application to industrial and commercial enterprises.

The *market power thesis* asserts that replacement of state bureaucratic allocation by market allocation involves a shift of power favoring direct producers relative to redistributors. This assertion is enormously consequential for understanding change in the institutional environment of firms. Almost imperceptibly, but accelerating following tipping points, self-reinforcing shifts in the institutional environment cause traditional state-owned enterprises of the old redistributive economy to lose market share to hybrid and private ownership forms (Nee 1992, 2005). Furthermore, increasing competition and dependence on market outcomes raises the costs of political interference (Boycko et al. 1993; Opper, Wong and Hu 2002; Fan, Wong and Zhang 2007; Nee, Opper and Wong 2007). Concurrent with these trends, greater organizational autonomy embedded in decentralized markets enable economic actors to construct informal arrangements that build from ground-up the informal institutions of a private enterprise

economy. From informal lending arrangements to provide private capital for start-up firms to far-flung supply and distribution networks, informal economic institutions emerged to facilitate the expansion of private sector entrepreneurial activities challenging the state-directed economy from below.

A direct extension of the market power thesis suggests that with marketization, the economic success of producers is increasingly independent of the involvement of redistributors. In a general formulation, firms will experience a decline in the value of their political connections. This, however, does not imply, as some have interpreted, a complete devaluation of political connections. After all, political capital is fungible in all types of economies, from transitional to mature market economies. In all market economies, political connections matter for firms lobbying to secure most-favored treatment by government (Stigler 1971; Krueger 1974). It follows that in market economies, political capital, as a fungible form of capital, has greatest valuation in those institutional domains where government restricts economic activity. Analogous to the original derivation specifying income effects at the household level, we assert:

H1: The more market exchange replaces the redistributive mechanism, the less the value of political capital relative to capital stemming from the capabilities and market performance of the firm.

The *market incentive thesis* emphasizes changes in the structure of incentive stemming from market transition. With marketization, rewards are increasingly based on performance rather than the strength of political ties, which creates positive incentives for entrepreneurial activities and innovativeness. Further, as market competition intensifies, firms face growing pressure to invest in capabilities in order to survive the withering competition. Whether

entrepreneurial activity is for the sake of the fruits of success, or for success itself, in price-making markets rewards are based on the competitive sorting and matching of quality and price. It is thus the restoration of consumer and producer sovereignty in transition economies, which activates market incentives. The specification of the market incentive thesis is close to Baumol's (1990) supposition that the most effective way to stimulate productive entrepreneurial activity is to diminish relative rewards to unproductive or destructive rent-seeking and increase payoffs to productive entrepreneurial activity. While Baumol's entrepreneurial theory is referring to within-system variation in market economies, the market incentive thesis emphasizes the transfer from a planned economy to a system primarily based on market exchange.

As a direct extension of the incentive thesis, capability development of firms should be correlated with the extent of marketization and inter-firm competition. The most important entrepreneurial response to market incentives is through innovation. In increasingly competitive markets, firms have incentives to innovate to extend their profit margin or to come up with new products, which help to escape competitive pressure until imitators come up with similar product or production technologies. In general, we expect:

H2: The transition from state socialist redistribution to markets increases the value of a firm's capability development.

Finally, the *opportunity thesis* emphasizes the markets' crucial role in enabling entrepreneurial activities. The opportunity thesis goes beyond the idea of resource availability allocated through markets. The price-finding mechanism signals disequilibria of supply and demand, wherein high or increasing prices indicate demand and attract new producers to establish new or neglected lines of production. The market mechanism also offers economic

actors a means to assess potential opportunities from entrepreneurial activities as well as opportunity costs for failing to invest in productive activities (Hayek 1978). The emergence of markets thus endogenously expands the opportunities for entrepreneurs and firms to identify new markets and prospects for profit-making. Given the central role of free markets for opportunity identification, we derive the following hypotheses:

H3: In transitions to a market economy, the development of free markets provides the opportunity structure for new market entry by direct producers.

4 Evidence from a transaction-focused analysis

At the most cursory level, a focus on China's increasing diversity of organizational forms signals an ongoing devaluation of political capital. The graph in figure 1 uses non-agricultural employment data to illustrate the accelerating ownership diversification between 1990 and 2002. What is notable here is not only the rapid decline of the relative share of state-owned firms, but also the rapid growth of private ownership, both in the form of private or individual enterprises and also in the form of rural private and individual firms formally registered as township village-enterprises.

[Insert figure 1 about here]

Ownership diversification *per se*, however, may not yet indicate that political capital is truly devaluating. Political capital, independent of the formal ownership form, might still facilitate access to resources controlled by the state, or in the case of new organizational forms confer legitimacy. For example, the so-called "red hat" firms in the early reform period were predominately private firms in the guise of township and village enterprises owned by local

government (Huang 2008). Confirmation of hypothesis 1 therefore hinges on a closer review of the relation between political capital and firm performance.

To reliably confirm a possible link between the value of political capital and marketization, we follow Nee's (1991:279) assertion that the "value of personal connections with cadres is a function of the extent to which the allocation of resources ... remains bounded by the redistributive economy." Because firms operate simultaneously in a great variety of institutional domains, we assert that a comparative analysis of regions or even industrial sectors would still leave a great leeway for potential ambiguity on the link between marketization and the fungibility of political forms of capital. Instead, we suggest a transaction-focused approach to study more directly the association between marketization and positional advantages stemming from political connections. Such approach acknowledges institutional diversity within distinct economic systems and shifts focus to examine the nature of institutional domains in which economic actors compete and cooperate to secure rewards. If the value of political capital is unaffected or even increases for economic transactions in liberalized markets, we can infer that we will see rising from the ruins of state socialism a hybrid type of economy where the economic and political spheres remain blurred, and interventions by political actors constitute an integral part of the economic order. If, on the other hand, political capital is devalued *because of marketization*, then we can expect a devaluation of political capital, not dissimilar from established market economies (Nee 2000).

A central advantage of a transaction-focused analysis is the more nuanced view of the fungibility of political connections. Moreover, we respond to criticism that reference to "partial reform" when results fail to confirm a decline in value of political connections, renders market transition theory "immune to falsification" (Róna-Tas 1994:44). While earlier income-based

approaches left the escape hatch to attribute lack of confirmation to insufficient levels of marketization (Nee 1991, 1996), a transaction-focused approach using comparative analysis of different institutional domains leaves no room for such interpretation.

Simultaneously the comparative assessment of the value of political capital in different institutional domains provides a more direct test of market transition theory's contending perspective which called attention to the capacity of political actors to adapt and profit from new elite opportunities stemming from marketization (Staniszkis 1991; Oi 1992; Burawoy and Krotov 1992; McAuley 1992; Shirk 1993; Walder 1995, 2003; Parish and Michaelson 1996; Gerber 2001, 2002). If strategically placed political connections continue to provide access to valuable business information, giving communist cadres a first-mover advantage in emergent markets (Róna-Tas 1994) or help to provide priority access to state assets, then a transaction-focused approach should be able to identify the exact sources of such advantage.

For illustration of a transaction-focused analysis we choose four specific institutional domains, exemplifying different levels of market liberalization. Following our first hypothesis we expect that political capital will devalue the more marketized the institutional domain of the respective economic transaction.

The product market is clearly China's most competitive market. Except for few restricted monopolies such as tobacco, power, telecommunications, and railway, market entry barriers are relatively low, allowing for easy market access particularly in those industries, which require only small amounts of start-up capital and simple production technologies. China's industrial concentration ratios are low even by international standards. Price controls have been widely abolished. Whereas in the beginning of reforms in China, price controls applied to 93% of agricultural products and 100% of industrial production materials, the shares of price controls

were down to 10% and 14% respectively by 2000 (Pei 2006; 125). Market success thus critically depends on time to market, price-quality match and quality of after-sales services. In parallel, local protectionism, a serious temporary problem during the mid 1980s, has weakened significantly (Li et al. 2004) giving rise to rapid growth in interprovincial trade and competition. To measure a firm's success in the product market we build on a key feature of entrepreneurial competence, the firm's ability to successfully launch new product lines. Specifically, we explore whether political connections are associated with a higher share of new products in total sales.

In addition, we examine a continuum of three partly liberalized markets with increasing degrees of state power in resource allocation. We select the public electricity market as a state-controlled factor market. In this industry, government assumed direct responsibility for electricity production. Not until after 1999, under pressure of growing industry demand for electricity, did regional initiatives begin to experiment with non-state forms of production. The restructuring of the electricity sector proceeded quickly. By 2003, only 35% of electricity was generated by state-owned firms; already 25% of electricity was generated by foreign-invested companies, including investments from Hong Kong, Taiwan and Macao (*China Data Online*). As a performance measure for transactions in the electricity market, we explore the price per kw/h that firms have to pay.

It is well known that governments worldwide utilize government-owned banks to distribute political favors (Sapienza 2004; Dinc 2005). As a third institutional domain we include the state-dominated banking sector. Political involvement in financial markets is particularly pervasive in China (Cull and Xu 2000). In spite of market entry by non-state domestic and foreign banks, the four state controlled commercial banks controlled about 70% of deposits and loans in 2003 (*Datastream*). In the same year, private firms and individuals received only about

1% of short-term loans of China's state commercial banks, including the four state commercial banks, policy banks and agencies of postal savings (China State Statistical Yearbook 2005: 674). Based on the legitimate assumption that any firm has a latent demand for external finance (Lummer and McConnell 1989; Uzzi 1999), we examine whether politically connected firms actually enjoy better access to the formal credit market than their unconnected competitors.

Finally we look at the role of political capital in the market for government contracts. Whether in mature market economies, or in China, the market for government contracts is inherently vulnerable to favouritism and bribery. Although the Chinese government has invested great efforts in streamlining public bidding procedures in line with international practice, many of our interviewees doubt free and fair competition among bidders. A young Hangzhou entrepreneur in the business of manufacturing products useful for highway construction projects relies entirely on contracts with local government. His firm submits bids throughout Zhejiang province following the standard guideline for government contracts. Although others manufacturers bidding for the same contract are known to him through public access listing, he occasionally looks into the background of the winning bid, and suspects that the firm won the competition because it has connections in local government. To explore the value of political connections in the market for government contracts, we review to what extent firm's total annual sales volume accrues to government contracts.

In addition to interviews with entrepreneurs in the Yangzi Delta which we conducted from 2004 to 2008, we use data from the World Bank Invest Climate Survey, covering a sample of 2400 firms of mixed ownership forms in a total of 18 large cities surveyed in the year 2003 to explore the interplay between political capital and transaction outcomes in these distinct institutional domains. From the dataset we select four different measures of political capital to

assess the value of political connections. First of all, we identify whether firm managers hold a party position either as deputy secretary or party secretary. Secondly, we cover whether the government was involved in CEO-recruitment decisions. Further, we include the so-called *xia-hai* entrepreneurs as a distinct type of cadre entrepreneur. Finally, we control board membership of government officials. We noticed in a firm that specialized in producing industrial pumps for irrigation and hydroelectric projects that one of its board members held a provincial government position. In another firm, the founding entrepreneur came from the same government agency that contracted his firm to do evaluation research for local government. Obviously, government appointed managers of privatized firms, government officials on the firm's governance structure, and *xia-hai* entrepreneurs who formerly were cadres in local government constitute clear signals of the expected value of political connections.

Table 2 summarizes sample mean comparison tests comparing the performance of firms with political capital with unconnected firms. The pattern we identify is consistent with *hypothesis 1*. Political capital secures no advantages in the highly competitive product markets but captures increasing advantages in weakly marketized institutional domains. This is consistent with what we learned in many face-to-face interviews with entrepreneurs manufacturing products for the consumer market. Even in very successful large firms, where the CEO was not only the party secretary of the factory's party branch, but active in local business and civic associations, the substance of their political involvement in government sponsored organizations and associations is often a merely ceremonial involvement to secure legitimacy, as opposed to reliance on political ties motivated by resource dependence. Many of these CEOs were approached for political office, only after they had successfully built up their firms and had become local celebrities and entrepreneurial role-models.

In the electricity market only firms with board membership of government officials seem to secure lower electricity prices, while the remaining types of political capital are not associated with significantly lower electricity prices. In the two tightly state-controlled markets (the credit market and the market for government contracts) political capital plays a stronger role. Firms with CEOs who are actively holding party positions and firms with government officials serving as board members have better access to credit. Also, firms with political capital linked to government involvement in recruitment decisions and operated by cadre entrepreneurs win significantly more government bids than unconnected firms. While mean comparison tests only suggest general tendencies, regression analyses confirm the predicted pattern under inclusion of a standard set of control variables (size, firm age, industrial sector, and firm location) commonly used in firm-level analysis (see Appendix 2). Consistent with *hypothesis 1*, political capital is not connected with advantages in liberalized institutional domains, while politically connected firms capture significant economic benefits in government controlled institutional domains.

[Insert table 2 about here]

Economic transactions of firms are naturally not limited to markets of private goods. Equally important, political connections could help firms create market value in their dealings with government authorities and regulators (Róna-Tas 1994; Parish and Michelson 1996). Due to the continuing role of the state as the sole supplier, network advantages and political ties could easily secure preferential treatment in markets for public goods and regulatory markets. We include taxation, licensing and the legal system as institutional domains, which have an inherent potential for rent-seeking activities. All these domains have repeatedly been cited in the literature as key areas, where the political elite may enjoy vast opportunities to create “new market value

for official discretion” (Walder 2003:901). Specifically, we review the firm’s access to tax exemptions, import and export licenses. We also include the perceived security of property rights to respond to the common notion that political capital may in the first place provide an insurance mechanism which lends firms legitimacy and allows for long-term planning security in the absence of rule-by-law.

Table 3 summarizes sample mean comparison tests. Among the four types of political capital reviewed in our tests, only firms with government officials serving as board members seem to consistently secure advantages (in three out of four transactions under review). In addition, CEOs who are holding a party position perceive a greater security of their property rights. These apparent advantages, however, are not consistently confirmed by regression analysis under inclusion of control variables (see Appendix 3). Only board membership of government officials is associated with a higher probability of holding an export license. Otherwise, the regression results do not suggest systematic advantages for politically connected firms in the regulatory market. Also the perceived higher security of property rights by firms with politically active managers disappears once we control for firm size and firm age. This signals that perceived property rights security is rather a matter of company legitimacy stemming from local market power than pure political affiliation of firm managers. This is consistent with information collected in our field interviews. Many of the interviewed entrepreneurs feel that local governments tend to be more accommodating, once firms have reached a critical threshold in terms of economic power and local influence. It should be noted, that our statistical analysis did not include the procedural aspects of public service provision, such as costs or time spent on securing specific services. Several of our interviewees mentioned that political ties may help to

secure faster service and easier information access, while they did not expect a different decision outcome to result from their political capital.

Striking are the remaining results presented in Table 3, which indicate that politically connected firms may even suffer certain disadvantages in the regulatory market. Firms with politically inactive managers, and firms without government involvement in management appointment decisions, for instance, are on average more successful in securing tax exemptions than firms with political ties. Also, firms without government involvement in management recruitment and firms not run by cadre entrepreneurs are on average more successful in securing direct export and import licenses than their politically connected counterparts. In the cases of tax exemptions and export licensing, standard regression analysis confirms that politically connected firms are likely to fare worse (see Appendix 3).

[Insert table 3 about here]

With a general decrease of the value of political capital in market transactions, firms need to invest in other forms of capability development in response to increasing marketization. Given a close linkage between the external environment and a firm's strategic response (Saloner, Shepard and Podolny, 2001), the gradual replacement of the redistributive mechanism by market allocation and the resulting empowerment of economic actors combine to motivate strategic adjustments to the emergent market economy, which in turn undermine the previous institutional foundations of firm survival. The greater importance that firm managers attach to the development of firm capabilities is evidenced by rapid strategic adjustment processes. Widespread experimentation with new organizational forms, gradual divestiture of state ownership and the emergence of new property arrangements illustrate the search for a better fit between firm strategy and external environment (Nee 1992). Also rapidly increasing

investments in research and development confirm a general shift in the firm's assessment of capability development. By 2003, aggregate R&D expenditures had surpassed India's and had increased to 1.3% from only 0.9% in 1999 (National Bureau of Statistics/Ministry of Science and Technology, 2005). Aggregate provincial level data supports the linkage between markets and the development of firm capabilities. Figure 2 shows a scatterplot of R&D-input development and marketization at the provincial level (measured by the NERI-marketization index) for the period from 1997 to 2003. Consistent with hypothesis 2, the transition from state socialist redistribution to a market allocation is accompanied by intensified capability development. Nee et al. (forthcoming) confirm these mechanisms at the micro-level. Using a cross-sectional data set covering more than 3900 firm observations, they show that marketization increases inter-firm competition, creates new opportunities for entrepreneurship, and subsequently motivates innovative activity. Their study yields two important findings: First, they confirm a close link between marketization and higher innovative activity by firms. Moreover, their study suggests, that marketization is associated with a higher effectiveness of innovative activities and R&D networks.

A final prediction of market transition theory points at the crucial role of the opportunity structure provided by markets. Empowerment of economic actors will be most rapid, where marketization opens opportunity structures for new entrepreneurial activities (*hypothesis 3*). It is worth noting, that the empowerment of direct producers by the law on the books need not precede the emergence of entrepreneurial activities. Instead, we assert that marketization itself creates opportunities and corresponding social structures, that endogenously trigger problem-solving mechanisms at the grass-root-level giving rise to a self-reinforcing process of empowerment of direct producers. We follow White's (1981) conception of markets as self-reproducing social structures wherein market players establish a pecking order arranged by

signals of perceived quality (White 1981). Conceived as such, built into decentralized markets are social mechanisms that enable economic actors to develop endogenously the norms and conventions of cooperation, exchange and competition (Nee and Ingram 1998; Greif 2006). Through networks and embedded norms, China's private entrepreneurs built institutional arrangements that enable them to compete effectively. This includes mutual lending agreements, joint technology development, and network based horizontal structures linking manufacturers with private sector suppliers and distributors. Although private enterprises lacked the formal institutions – legal status and secure property rights – the informal institutional arrangements of entrepreneurship sustained rapid growth of the private economy.

This bottom-up nature of China's private firm development is clearly reflected by the spatial distribution of private firm development. Direct producers first emerged in rural areas, where the state did not control all distribution channels, and where survival outside of the state-dominated system was easier. In urban state-dominated markets, discriminatory rules and barriers to entry were effectively enforced. Hence, formally registered private companies first operated in isolated rural and peri-urban niche markets where local regulatory control was less restrictive. Not until 2003, when the private enterprise economy was fully established as the most dynamic sector of the Chinese economy, did the central government grant full constitutional recognition of the legitimacy of private ownership forms. Employment data covering the period from 1978 to 2006 (see figure 3) illustrate that the main locus of privately owned firms shifted from rural and peri-urban markets to urban China only after the government had formally granted legal equality in 2003 (prior to 1990, official data did not distinguish between rural and urban areas).

[Insert figure 3 about here]

Consistent with the rural origin of entrepreneurs, multiple surveys confirmed, that the newly emerging class of private producers in the early stages of transition was not fuelled by the privileged political elite. Instead, founders came from modest educational and class background, often without alternative career prospects as employees or bureaucrats in the state sector and typically without close relations with government officials (Zhang 2007). By 1991, only about 12% of the rural entrepreneurs had held prior positions as factory or village leaders (Huang 2008:65). Clearly, entrepreneurship was initially a low status affair, as confirmed by a study on social status of entrepreneurs conducted in 1987, where entrepreneurs ranked 23rd out of 38 occupations (Chen, Li, and Matley 2006).

Typically, rural revitalization of private production followed and accompanied the opening of free markets. Wenzhou municipality, the role model of individual private firm development in southern Zhejiang province, provides a typical example. Wenzhou benefited from decades of state neglect during the pre-reform era, when the municipality's state and collective enterprises received only modest state investment appropriations (Whiting 2000:70). Total state investments reached barely 655 million RMB between 1949 and 1981, while the neighbouring municipality of Ningbo had received 2.8 billion RMB (Huang, Zhang and Zhu 2008). This left Wenzhou with a relatively underdeveloped state-owned manufacturing sector employing only 8% of Wenzhou's total workforce in 1978 (Wenzhou City Yearbook 2004). Per capita income was 55 RMB, compared to the national average of 165 RMB. These conditions virtually forced the population to develop alternative sources of income generation, when market opportunities first opened up

in the late 1970s. New producers focused initially on simple goods neglected by large-scale state production such as shoes, toys, textiles etc.

Producers in Wenzhou were relatively quick to understand the crucial role of market places. It is not a coincidence that Wenzhou witnessed massive clustering of new enterprises. Such cluster effects were supported by the government's lenient and liberal role in promoting local markets as venues for exchange of goods and information that fuelled the entrepreneurial miracle. By 1985, the city registered already 472 market places, with 120 specialized factor markets Liu (1992: 297). Scatterplots of the development of provincial product markets and the corresponding share of non-state industrial production value between 1997 and 2005 support the assumed opportunity-effect of marketization (see figure 4).

[Insert figure 4 about here]

6 Discussion and Conclusion

Our transaction-focused approach opens the way for a quantitative comparative institutional analysis to examine the value of political capital as a context-bound outcome of different types of economic transactions in distinct domains of China's market economy. We show that for transactions in competitive markets, firms with political capital enjoy no significant advantage over firms that have not invested in political connections. We confirm Nee's prediction that political capital persists as a fungible form of capital in markets where government restricts economic activity and controls access to scarce resources. Surprisingly, however, we cannot identify systematic disadvantages of politically connected firms in the regulatory markets. This indicates the emergence of a level playing field with respect to public

goods provision, which is consistent with the view that China has managed to build a rational-legal government bureaucracy since the start of economic reform. Exceptions are certainly possible. Administrative decisions on public listings, for instance, seem to involve a great deal of political favouritism making market access for politically unconnected firms difficult. Overall, however, we infer from our results that in China's emerging market economy firms that rely solely on unproductive rent-seeking are unlikely to emerge as winners in the intense market competition.

Whether as insurance or fungible form of capital, our transaction-focused approach opens the way for developing a quantitative comparative institutional analysis useful not only in studies of transition economies, but also in advanced market economies. Indeed, with respect to political capital, the deepening global financial crisis has increased the value of political connections to firms for largely the same underlying reasons. For example, the *Wall Street Journal* quipped in reflecting on the rapid increase in the value of corporate connections with Senator Tom Daschle, whose windfall profit of \$5.2 million after leaving the Senate became a source of growing controversy in his confirmation hearings. What was of concern was not the failure to pay in a timely manner personal income tax. Instead, "The real story is the massive transfer of power and wealth now underway from the private sector to the political class. Mr. Daschle could make so much money and achieve such prominence because he was expected to be a central broker in that wealth transfer....Had Mr. Daschle been confirmed, he would have been the most important man in a health-care industry expected to be \$2.5 trillion in 2009, which is larger than the economy of France." (February 4, 2009: A12).

Whether in China or in the U.S., political connections are valued by firms in transactions that are directed towards securing competitive advantage to acquire resources controlled by the

state. Our findings suggest that such advantages, however, are unlikely to be decisive for overall firm success in China's intensely competitive market economy. Other empirical studies failed to uncover positive performance effects (based on return on assets, return on equity or stock returns) for politically connected firms (Qi, Wu and Hua 2000; Fan, Wong and Zhang 2007; Li et al. 2008). Two main reasons come to mind: First, transactions in state-controlled institutional domains often do not constitute the critical component for survival and profits when viewed from the perspective of the overall range of a firm's business operations. Second, even if politically connected firms rely heavily on repeat transactions in state-controlled institutional domains, the firm's capability development, combined with management's ability to detect and react to market opportunities, are likely to constitute more decisive prerequisites to pass the market test.

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Table 1: Correlation Matrix of provincial-level measures, 1997-2003 (N = 230)

Measure / Marketization proxy	Studies	1	2	3	4	5	6	7	8
Marketization									
1 Marketization index	Li et al 2006	1.00							
2 Non state industrial production ratio	Nee 1996, Nee & Cao 1999	0.81	1.00						
Economic Structure									
3 Share of agricultural in GDP	Walder 2002b, Walder and Zhou 2006	-0.03	-0.004	1.00					
4 Non-farm labor ratio	Parish & Michelson 1996;	0.14	0.02	-0.78	1.00				
Growth and Development									
5 GDP-growth / per capita GDP growth	Xie & Hannum 1996; Hauser & Xie 2006	-0.12	0.13	0.02	0.01	1.00			
6 Per capita Gross Industrial Output	Walder 2002a	0.57	0.53	0.13	-0.11	0.20	1.00		
7 Rural income	Walder 2002b	0.72	0.62	0.003	0.03	0.16	0.91	1.00	
Time									
8 Year	Nee 1989; Bian & Logan 1996, Zhou 2000; Murdoch & Sicular 2000; Choi & Zhou 2001	0.14	0.08	-0.04	0.09	0.22	0.15	0.16	1.00

Source: Provincial Data from National Statistical Bureau of China, China State Statistical Yearbook, 1998-2004; Marketization index from Fan and Wang 2003

Table 2: Sample mean comparison tests: Markets for Private Goods

Institutional domain	Product market			Electricity market		Credit Market		Market for government contract	
Performance measure	N	Share of new products in total sales	N	Price paid for one kw/h	N	Access to bank loan	N	Share of sales to government	
CEO holds party position	No	477 36.83	1343	0.77	1322	0.20***	1269	4.81	
	Yes	363 34.07	970	0.73	966	0.27***	894	4.39	
Government was involved in CEO appointment	No	665 35.25	1726	0.76	1707	0.23	1631	3.85***	
	Yes	181 37.07	602	0.76	597	0.22	551	6.50***	
CEO is a former government bureaucrat	No	815 35.56	2200	0.76	2177	0.23*	2060	4.19***	
	Yes	34 34.62	140	0.74	138	0.17*	130	11.08***	
Government is represented on the Board of Director ^{a)}	No	363 34.98	836	0.79**	824	0.26***	785	4.49	
	Yes	183 36.14	349	0.70**	352	0.35***	332	4.90	

* p<0.10, ** p<0.05, *** p<0.01

a). Sample includes firms only which have a board of directors (listed firms, limited liability companies, joint stock companies).

Data source: World Bank Investment Climate Survey

Table 3: Sample mean comparison tests: Regulatory Market

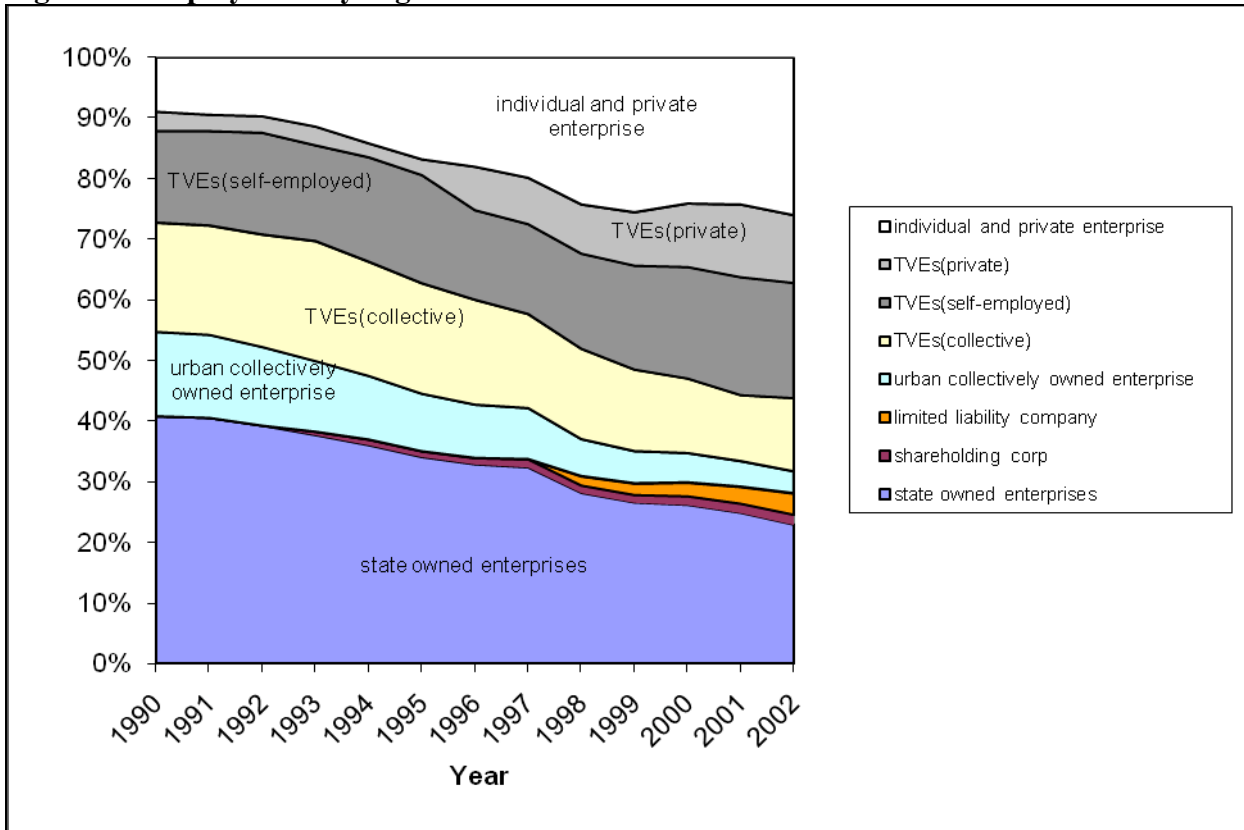
Institutional domain	Taxation		Licensing		Legal system				
	N	Enjoys tax exemption	N	Holds an import license	N	Holds an export license	N	Likelihood that legal system will uphold property rights	
CEO holds party position	No	1362	0.25**	1277	0.10	1300	0.21	1158	62.89*
	Yes	988	0.21**	924	0.10	937	0.19	873	65.83*
Government was involved in CEO appointment	No	1755	0.26***	1639	0.11***	1681	0.24***	1518	64.05
	Yes	611	0.17***	575	0.06***	569	0.12***	526	65.15
CEO is a former government bureaucrat	No	2235	0.24	2096	0.10*	2131	0.21***	1928	64.40
	Yes	142	0.19	129	0.05*	130	0.12***	124	59.34
Government is represented on the Board of Directors ^a	No	845	0.31***	790	0.15**	812	0.31***	742	64.75
	Yes	356	0.39***	339	0.19**	342	0.41***	309	68.10

* p<0.10, ** p<0.05, *** p<0.01

a). Sample includes firms only which have a board of directors (listed firms, limited liability companies, join stock companies).

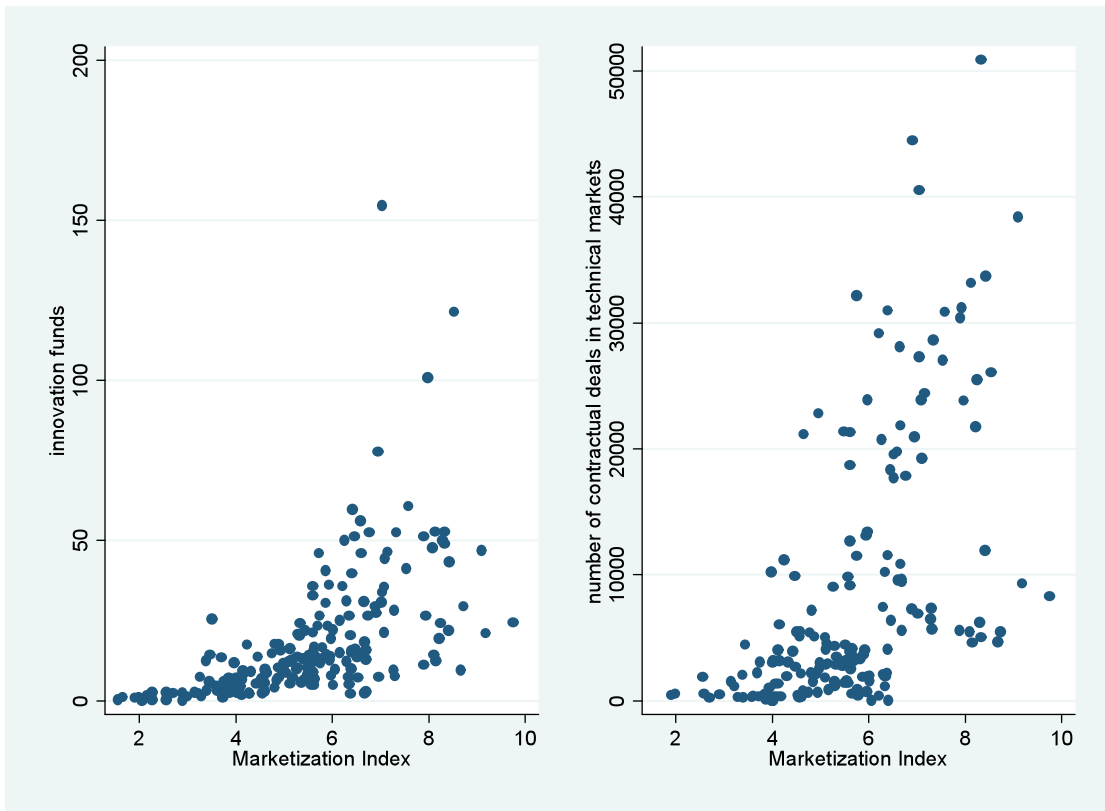
Data source: World Bank Investment Climate Survey

Figure 1: Employment by organizational form



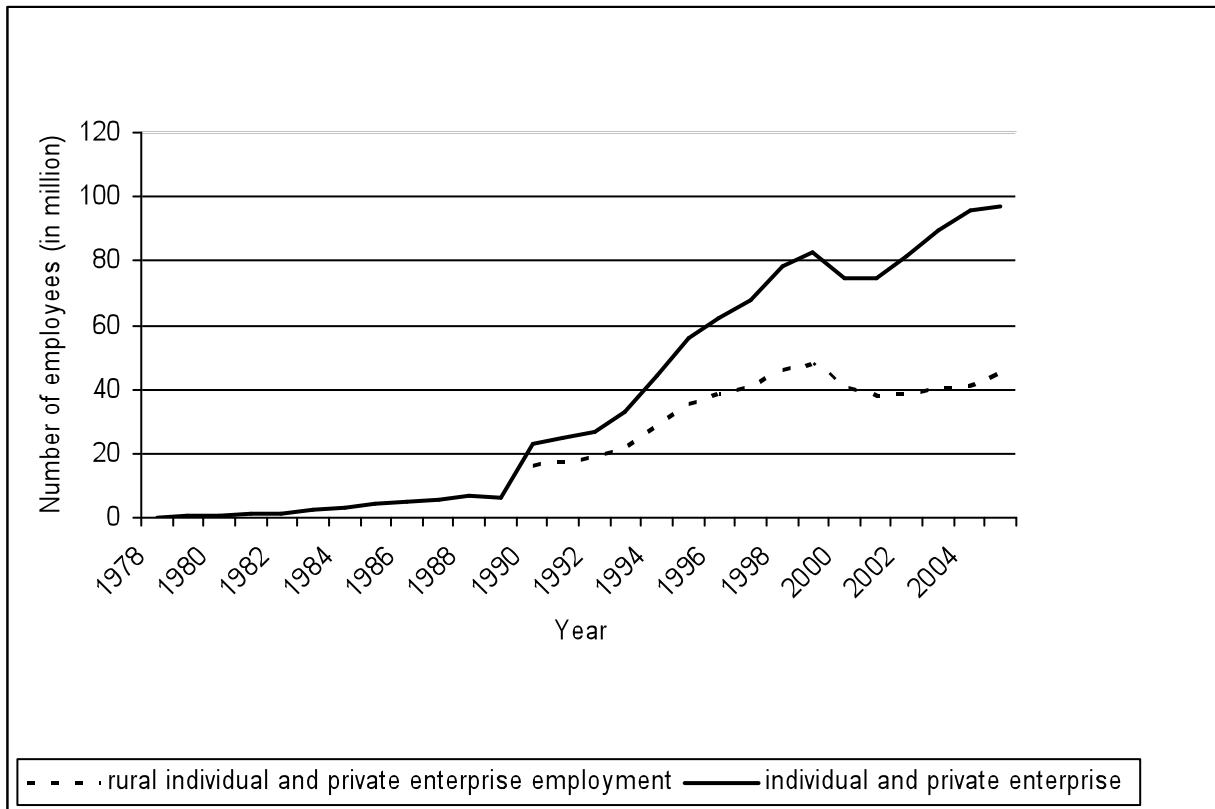
Source: National Bureau of Statistics of China, various years.

Figure 2: Innovation activities and marketization, 1997-2003



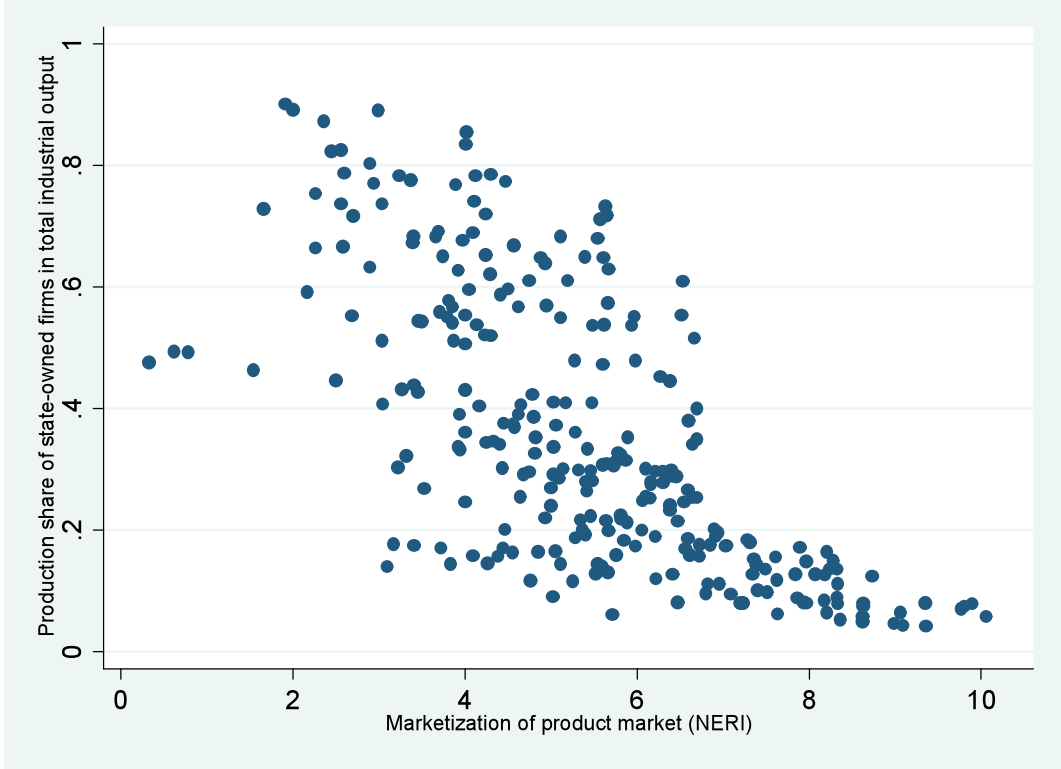
Source: Fan and Wang 2003 and National Bureau of Statistics and Ministry of Science and Technology 2005.

Figure 3: Individual and private enterprise employment, 1978-2006



Source: National Bureau of Statistics of China, 1991-2006. Disaggregated private employment data for rural and urban sector is not available for the years before 1990.

Figure 4: Provincial-level product market development and relative shares of state production in gross industrial output, 1997-2005



Source: National Economic Research Institute 2007.

APPENDIX 1: MODEL SPECIFICATION OF STUDIES ON MARKETIZATION AND POLITICAL ELITE SURVIVAL

Author	Data	year	OPERATIONALIZATION			Confirmation of MTT (decline of political capital)
			Dependent variable	Measures of political capital	Measures of marketization (<i>italics indicate indirect / proxy measures</i>)	
Nee 1989	China, rural, Fujian Province	1985	Household income	Cadre position; former brigade/ team position	- <i>before market reform,</i> - <i>after market reform</i>	YES
Nee 1991	China, rural, Fujian Province	1985	Household Income	Cadre position, former brigade/ team position	NO	YES
Róna-Tas 1994	Hungary, national	1989, 1991	Household Income Employment	Former cadre position	NO	NO NO
Parish, Zhe & Li 1995	China, rural, Eastern two-thirds	1993	Income Employment	Administrative position in family	- repeated regressions by firm ownership	YES MIXED
Domanski & Heyns 1995	Poland, whole nation	1982, 1987, 1991	Income	Party membership	<i>repeated tests over time</i>	YES
Nee 1996	China, rural, whole nation	1989-90	Household Income Employment	Cadre status, cadre relations	- regions (sorted by relative industrial output of private, collective, and state-owned firms)	YES MIXED
Parish & Michelson 1996	China, rural, whole nation	1988	Household Income Employment	Administrative position	- <i>regions (sorted by ratio of non-farm labor)</i>	NO NO
Xie & Hannum 1996	China, urban, whole nation	1988	Household Income	Party membership	- <i>regions (sorted by economic growth)</i>	NO
Bian & Logan 1996	China, urban, Tianjin	1988, 1993	Household Income	Party membership	- <i>different years</i> - <i>professional categories</i>	NO

APPENDIX 1 CONT.

Nee & Cao 1999	China, rural, whole nation	1998	Household income Employment	Cadre status	- regions (sorted by relative industrial output of private, collective, and state-owned firms)	MIXED YES
Adamchak et al. 1999	China, Guangzhou	1993	Total monthly income	Party membership	subsamples for workers in non-profit institutions and profit-making firms	YES
Dickson & Rublee 2000	China, urban	1988	Household income	Party membership, cadre status	<i>dummy variables for firm ownership</i>	NO
Gerber 2000	Russia, national	1993	Income	Party membership	<i>no measure of marketization, time (only one year after start of reforms)</i>	NO
Zhou 2000	China, urban, selected areas	1998	Income	Party membership;	<i>repeated years</i>	NO
Murdoch & Sicular 2000	China, rural, Shandong province	1990-1993	Household income	Party membership, cadre	<i>time (1990-1993)</i>	NO
Róna-Tas & Guseva 2001	Russia, national	1993	Income	Party membership	<i>private sector, branch, professional category</i>	NO
Gerber 2001	Russia, national	2000	Income	Party membership	<i>-professional categories -industrial branches</i>	NO
Choi & Zhou 2001	China, national	1993	Firm profits	Former cadre	<i>repeated years</i>	NO
Walder 2002a	China, national, rural	1996	Household income	Cadre position	<i>per capita industrial output</i>	NO

APPENDIX 1 CONT.

Walder 2002b	China, national, rural	1996	Household income	Cadre position	<i>village level context (measured by average household income, non-agricultural development, proportion of private household income in non-agricultural production, wage-labor economy, wage employment)</i>	NO
Bian & Zhang	China, national, urban	1988, 1995	Individual income	Party membership, Cadre position	<i>ratio of non-agricultural labor in non-state sectors over the state sector; ratio of foreign investments to total investments in fixed assets; industrial growth</i>	NO
Wu 2002	China, selected cities	1993	Individual income	Party membership, administrative rank	firm ownership (private versus state)	YES
Zang 2002	China, Zhongshan City	2000	Income	Party membership	firm ownership (private, versus collective and state ownership)	YES
Opper, Wong & Hu 2002	China, national	2000	Decision Making Power of Party Com. in Firms	-	- marketization - privatization	YES
Hauser & Xie 2005	China, national urban	1988, 1995	Income		<i>annual growth rate in pc gdp growth (city level)</i>	NO
Li, Meng & Zhang 2006	China, national	2002	Political participation of firm managers	Party membership, management experience in public firm	provincial marketization index	YES
Gerber 2006	Russia	1998	Per capita household income; contracted wage ----- ----- Actual wage	CPSU-member	<i>economic branch, dummy for firm type, regional controls mean wages, unemployment, small business scale</i>	NO ----- ----- YES
Walder & Zhao 2006	China, national rural	1996	Household income	Cadre rank, cadre relations	<i>regions (sorted by relative proportion of agricultural production)</i>	NO

YES indicates that results are consistent with market transition theory

APPENDIX 2: POLITICAL CAPITAL AND MARKETS FOR PRIVATE GOODS

	Share of new products in total sales Coeff (std. dev.)	Electricity price per one kw/h Coeff (std. dev.)	Access to credit Coeff (std. dev.)	Share of government contracts in total sales Coeff (std. dev.)
Political Capital				
CEO is party secretary	-0.423 (-0.156)	0.010 (0.295)	0.329*** (4.072)	1.515** (2.048)
Government involvement in CEO recruitment	-3.054 (-0.793)	0.100 (1.572)	-0.122 (-0.747)	3.531*** (5.443)
CEO is former government official	7.229 (0.977)	0.002 (0.060)	-0.075 (-0.262)	12.160*** (14.673)
Government official is BoD member	0.048 (0.018)	-0.069* (-1.797)	-0.080 (-0.707)	3.712*** (5.249)
Control variable				
Log of sales volume (lagged)	1.009 (1.512)	-0.018** (-2.590)	0.269*** (14.093)	0.308*** (3.401)
Log of firm age	-0.797 (-0.420)	-0.030 (-1.495)	-0.018 (-0.247)	-1.738*** (-4.606)
Industrial dummies	-8.490 (-1.506)	0.051 (0.617)	0.131 (0.618)	16.650*** (26.144)
Region	-11.056 (-0.613)	0.140 (1.035)	5.316*** (13.597)	155.022*** (117.354)
City dummies	8.675 (0.725)	-0.020 (-0.198)	0.268*** (2.939)	-4.936*** (-6.396)
_cons	38.816*** (3.442)	1.197*** (5.705)	-8.460 .	-171.697*** (-183.498)
Model	Tobit	OLS (city clustered)	Probit (city clustered)	Tobit
Adj. R2 / Pseudo R2	0.014	0.065	0.191	0.040
N	523	1136	1119	1075

* p<0.10, ** p<0.05, *** p<0.01

APPENDIX 3: POLITICAL CAPITAL AND REGULATORY MARKETS

	Firm enjoys tax exemption	Firm holds export license	Firm holds import license	Perceived security of property rights (percent)
	Coeff (std. dev.)	Coeff (std. dev.)	Coeff (std. dev.)	Coeff (std. dev.)
Political capital				
CEO is party secretary	-0.240** (-2.024)	-0.093 (-0.812)	0.102 (0.659)	1.140 (0.247)
Government involvement in CEO recruitment	-0.227* (-1.725)	-0.222** (-2.152)	-0.215 (-1.080)	3.534 (0.521)
CEO is former government official	-0.129 (-0.554)	0.060 (0.241)	0.222 (0.687)	-5.781 (-0.541)
Government official is BoD member	-0.056 (-0.685)	0.166* (1.733)	-0.005 (-0.044)	-1.373 (-0.281)
Control variable				
Log of sales volume (lagged)	0.262*** (12.292)	0.220*** (5.855)	0.225*** (6.155)	1.888 (1.537)
Log of firm age	-0.308*** (-3.407)	-0.138* (-1.726)	-0.169** (-2.148)	-3.063 (-0.939)
Industrial dummies	3.370*** (7.889)	3.245*** (7.050)	2.790*** (4.129)	-7.528 (-0.487)
Region	0.880*** (4.312)	-0.231 (-1.087)	0.095 (0.548)	3.620 (0.463)
City dummies	1.119*** (7.369)	0.692*** (6.354)	-0.231 (-1.335)	31.342* (1.777)
_cons	-7.493	-6.343	-5.328	9.961 (0.416)
Adj R2 / Pseudo R2	0.231	0.258	0.209	0.018
	Probit (city clustered)	Probit (city clustered)	Probit (city clustered)	Tobit
N	1150	1101	1007	1008

* p<0.10, ** p<0.05, *** p<0.01