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*Red Capitalists: Political Connections and the Growth and  
Survival of Start-up companies in China*

by

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# **Red Capitalists: Political Connections and the Growth and Survival of Start-up Companies in China**

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## **Abstract**

This paper analyses the role of political connections in the post-entry performance of private start-up companies in China. It documents robust evidence that political affiliation enhances firms' survival and growth prospects, even if politically neutral start-ups enjoy faster productivity improvements. In addition, the benefits of political connections are largely confined to firms associated with local or top level governments, and they are more pronounced in capital-intensive industries.

**JEL classification:** P16, D2.

**Keywords:** China, political connections, growth, survival

## **Outline**

- 1. Introduction*
- 2. Private firms and the body politic in China*
- 3. Econometric specification*
- 4. Database description*
- 5. Main findings*
- 6. Conclusions*

## Non-Technical Summary

In spite of improving legal protection for private firms, market-supporting mechanisms are still weak in China, and private entrepreneurs suffer from political and institutional discrimination. In response to these market and institutional failures, a sizeable proportion of private entrepreneurs in China adopt the so-called "red hat strategy": forging close political ties with local, regional and central governments. However, there are those who fear that the alliance between business and the body politic is likely to foster rent seeking among entrepreneurs and cadres, and reduce the competitiveness of the market.

This research paper tries to understand the role of political connections on the post-entry performance of private start-up companies in China. It documents robust evidence that political connections enhance firms' growth and survival prospects, although politically neutral firms enjoy faster efficiency improvements. The close association between the state and a segment of the business community is thus leading to sub-optimal resource allocation in the economy by interfering with the process of market selection.

So more than a quarter of a century after Deng Xiaoping's famous pronouncement that the colour of the cat does not matter as long as it catches mice, it seems that the cat in a red hat is somewhat more privileged than the one without. Growing calls for a level playing field are likely to be heard in the future, though almost certainly not from the red capitalists who appear to thrive in the current political economic milieu.

## **1. Introduction**

Uncertainty in the policy making process creates substantial transaction costs for firms (Williamson, 1991; Henisz and Zelner, 2004). Consequently, business organisations engage in political behaviour to internalise these costs and influence the policy process in ways favourable to them. Corporate political strategies such as lobbying and party contributions are widely employed by US firms, and these have been the subject of many academic studies (e.g. Stratmann, 2003 and Drazen et al., 2007). The political sophistication of large European firms and their role in shaping the EU policy agenda is also documented (Coen, 1997).

The current paper is concerned with political strategies adopted by firms in China. A significant number of private-owned enterprises adopt the so-called “red hat” strategy by seeking political affiliation with the Communist Party and various governmental entities. Some scholars see this strategy as a means of circumventing problems associated with the lack of secure property rights and institutional discrimination, such as the lending bias of China’s state-dominated banking system against indigenous entrepreneurs (Li, 1999; Huang, 2003), heavy government regulations and extralegal fees (Johnson et al, 2000; Guriev, 2004). This view is consistent with the “helping hand” theory of government-business relationship (Che and Qian, 1998). However, theory also predicts that government bureaucrats tend to be more interested in rent-seeking, extraction and political objectives rather than corporate efficiency and maximising firm value. This is known as the “grabbing hand” hypothesis (Shleifer and Vishny, 1998).

Given that politics and business have always been interrelated, it is perhaps surprising to observe that there is a paucity of work analysing the corporate performance implications of political connections. The few studies in this area include Fisham’s (2001) estimation of the value of political affiliations to firms in Indonesia and the analysis of Leuz and Oberholzer-Gee (2006) on the financing strategy of politically connected Indonesian firms. For Malaysia, Johnson and Milton (2003) uncover a strong positive correlation between stock market performance and political connections in Malaysia in the presence of capital controls. Using a survey of 3259 private enterprises in China in 2002, Hongbin et al (2007) find that Communist Party membership of private

entrepreneurs is important to firm profitability, especially in regions with weaker market institutions.

The purpose of this paper, therefore, is to contribute to this sparse literature by evaluating the effects of political connections on the survival and growth prospects of newly formed private enterprises in China. Our study is based on more than 106,000 private firms that entered the market between 1999 and 2004, 23% of which are politically affiliated with government at some level. We argue that China is a particularly interesting country for studies of political connections and firm performance for three main reasons.

First, in spite of its ever-increasing importance to the economy in the post-reform era, the private sector had been lacking proper legal protection or even official recognition. It was not until 1999 that the National People's Congress introduced an amendment to the constitution stipulating that the non-state sector is an integral element of the socialist market economy. In a remarkable U-turn, the Communist Party is now actively encouraging domestic capitalists to join its ranks (Guiheux, 2006). It is therefore interesting to see how this newfound alliance between the political elite and (some) private firms is shaping market dynamics in this important emerging economy.

Second, in spite of a centralised political system, China's process of economic liberalisation has been highly decentralised, with various levels of governments having autonomous policymaking powers within their jurisdictions. In this regard, it can reasonably be hypothesised that firms affiliated with higher levels of government (e.g. central and regional) are likely to enjoy better political protection, securer property rights and easier access to bank loans. However, as Li (1999) and Qian (2003) observed, although lower level (i.e. local) governments have less leverage to protect enterprises under their jurisdiction, they have more incentive to make them as efficient and profitable as possible. This is because under China's system of fiscal federalism, local governments have no subordinate governments to extract revenue from and their interests are sharply aligned with those of local businesses. The case of China thus offers useful variation in the type of political connections that can be exploited to identify heterogeneous relationships between political behaviour and economic performance.

Third, China's WTO (World Trade Organisation) accession stipulates several compulsory provisions on government relationships (Li, 2003), including the absence of discriminatory economic policy. In this respect, it is important to determine the extent to which political cronyism is distorting market mechanisms. If the business environment in the country is not providing a level playing field for all markets' participants, it is not only politically unaffiliated domestic firms that would be discriminated against. Foreign firms in China's trading partner countries are also going to loose out in light of China's ever-deeper integration into the world economy. Thus, a study of the business-politics nexus in China has wider implications beyond the narrow confines of the domestic political economy sphere.

Our econometric analysis yields five major conclusions: (i) political connections significantly enhance firms' survival prospects; (ii) conditional on survival, firm growth is faster for politically affiliated firms; (iii) conditional on survival, politically unaffiliated private firms perform better in terms of productivity growth; (iv) the benefits due to political connections are largely confined to firms associated with local and high levels of government; and (v) the effects of political connections are more pronounced in capital intensive industries where firms require a wider range of resources for their growth, and the "helping hand" of government is presumably needed more.

The rest of the paper is organised as follows. Section 2 discusses the evolution of private firms-government relationship in China. Section 3 presents the empirical model, and Section 4 describes the data set used in the analysis. The main findings of the paper are discussed in Section 5. Finally, Section 6 concludes.

## **2. Private firms and the body politic in China**

In the first decade of the reforms (1978-88), the legal framework governing the private sector was rather shaky. Although private firms were accorded some official recognition - their existence was formally sanctioned in the 1982 Constitution - they were not viewed as an integral part of the economy (Young, 1989) and lacked genuine legal and property rights. This is perhaps best crystallised by Article 11 of the Constitution

which stipulates, “the state guides, assists and supervises the individual economy by administrative control.” Furthermore, private firms were not allowed to hire more than eight workers (e.g. Li, 2007), presumably because of Karl Marx's categorisation in *Das Kapital* of producers employing eight or more workers as exploitive capitalists (Guiheux, 2006).

It was not until April 1988 that Article 11 of the Constitution was amended, laying down that “the state guarantees the rights and interests of the private economy in conformity with the law.” The process of official recognition continued with the introduction in 1999 of a new modification to the Constitution which stipulates that “the private economy and other forms of the non-state economy are important components of the socialist market economy”. The insertion in 2004 of an article in the constitution that guarantees that “the lawful private property of citizens is inviolable” marked for the first time in the history of modern China the endorsement of the legal status of private property.

In 2003, the private sector accounted for 59.2% of the value-added generated in China and employed 196.2 million people<sup>1</sup>. The sector’s contribution to the prosperity of the country is praised by the political hierarchy, and private entrepreneurs are now courted by the Chinese Communist Party (Guiheux, 2006). The country has indeed come a long way from the time of the Cultural revolution when entrepreneurs were prosecuted as “tails of capitalism” (Young, 1989). However, in spite of improving legal protection for private firms, market-supporting institutions are still weak in China. Indeed, private entrepreneurs still suffer from political and institutional discrimination (Young 1995; Li et al., 2007). Li et al (2006) documents evidence that private entrepreneurs’ response to market and institutional failures is to engage in political behaviour—the strategy of “wearing a red hat”. A study conducted in 2002 revealed that 80 percent of the entrepreneurs surveyed had become members of the party before starting a business (Guiheux, 2006). Other ways entrepreneurs participate in politics include: serving as delegates in local or national People's Congresses, contesting elections for local administration posts and joining business associations that link the state and the private sector (Guiheux, 2006). Part of the reason for joining the political hierarchy is easier

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<sup>1</sup> Source: OECD Economic Surveys: China (2005).

access to resources such as land and bank credit, information on regulations and new policies, and protection from competition (see for example Li et al., 2007).

Yet another way in which firms engage in political behaviour is affiliation with some level of government administration. A large number of private enterprises in China have political connections with governmental bodies whose functions include offering credit guarantees and political protection in return for “management fees” (Huang, 2003). Broadly speaking, firms can be politically affiliated with five different levels of government (e.g. Li, 2004). These are (in decreasing order of hierarchy): central, provincial, prefecture, county and township (local) governments. The relationship between different levels of government has been shaped by the revenue sharing system (fiscal federalism). The system requires lower level governments to hand over a fixed amount of their revenue to the higher tier of government. Since township governments have no lower level governments from which to extract revenue, their main sources of income are the firms under their jurisdiction. Thus, it is expected that local governments have more incentive to support productive non-state enterprises. As Qian (2003) and Li (2004) observe, fiscal federalism has aligned the interests of local governments with local business, implying that it might pay-off for private firms to be affiliated with their local governments. However, it is also reasonable to suppose that firms associated with higher levels of government (i.e. central and provincial) are likely to enjoy better protection and more privileges e.g. access to export and import licences, favourable bank loans and lucrative public contracts.

There are those who fear that the alliance between business and the body politic is likely to foster rent seeking among entrepreneurs and cadres. This will reduce the competitiveness of the market. As Dickson (2003) argues, “red capitalists” have little incentive for structural changes that favour the private sector as a whole.

### **3. Econometric specification**

In this section, we describe the empirical strategy to identify the effects of political behaviour on the post-entry performance of private firms in China. We estimate two types of models: a nonlinear model of the probability of firm exit and linear models

of firm and productivity growth. Firm growth is defined as employment growth, which is a standard measure in the industrial economics literature. As a measure of productivity, we consider total factor productivity because it is widely accepted to be the chief determinant of long-run growth.

***Modelling the impact of political behaviour on firm survival:***

We model the probability of firm exit using a hazard rate specification. The hazard or the probability of exit for firm  $i$  in period  $t$ , conditional on having survived up to that point is expressed as

$$h_i(t | X, P) = h_0(t) \exp(\beta'X_{it-1} + \gamma'P_{it-1} + \delta D) \quad (1)$$

where  $h_0(t)$  is the baseline hazard. We choose a flexible specification for the baseline hazard and employ the Cox proportional hazard model, which imposes a proportional characteristic-specific shift on the baseline hazard.

In the above equation,  $P$  is a vector of 3 binary variables indicating the government level (high, middle and local) the firm is affiliated with. Start-ups without political connection are the base group.  $D$  is a set of time, sectoral and regional dummies and  $X$  is a vector of control variables. In line with the empirical literature (see Geroski, 1995) we include firm size (measured by employment), age and productivity as control variables. It appears to be a stylised fact that larger, older and more efficient plants have better survival prospects than smaller, younger and inefficient ones. We also hypothesise that firms that are export oriented, enjoy access to finance and are engaged in innovative activity, have lower likelihood of market exit. The vector  $X$  also includes three industry level variables, namely industry exit and entry rates and industry concentration. In all cases, lagged values of the covariates are used to mitigate concerns about endogeneity. Table 1 gives the precise definition of the variables used in the econometric analysis.

Another source of concern in the estimation of hazard models is the issue of unobserved heterogeneity. As shown by Lancaster (1990), unobserved heterogeneity, if neglected, would bias the proportionate response of the hazard to variation in each regressor at any survival time. For this reason, we estimate the hazard model with unobserved heterogeneity that follows a gamma distribution.

### ***The impact of political affiliation on firm and productivity growth:***

In order to isolate the impact of political affiliation on firm growth, we estimate the following model:

$$Y_{it} = \beta'Z_{it-1} + \gamma P_{it-1} + \delta D_{it} + \varepsilon_{it} \quad (2)$$

The dependent variable  $Y$  denotes either firm (employment) growth or total factor productivity growth,  $P$  and  $D$  are defined as in Equation (1),  $Z$  is a vector of covariates hypothesised to impact on firm growth,  $f$  is a term capturing firm-specific heterogeneity and  $\varepsilon$  is a random error term. In the above model,  $Z$  consists of exporting intensity, innovation intensity, age, access to finance, initial size / productivity and industry concentration.

There is a large body of empirical evidence that finds firm (productivity) growth has a negative relationship with initial size (productivity), suggesting convergence in firm size (e.g. Geroski, 1995). The positive correlation between performance and exporting has been widely documented across a number of countries, including China (see Kraay, 1999). The growth enhancing effects of innovation and labour quality have also been recognised in the literature (e.g. Gort et al, 1993 and Jovanovic, 1982). By contrast, higher market concentration is generally believed to have a detrimental impact on firm performance. The finance-growth nexus is well researched in the economic literature (Levine, 2005). Some theoretical models predict that firms with debt contracts tend to grow faster than otherwise similar firms (e.g. Aghion et al, 1999). In these models, debt is hypothesised to reduce the amount of free cash to managers, giving them the incentive to reduce managerial slack and seek innovative ways to boost efficiency.

A potentially serious estimation problem is that the growth variables are, by definition, only observed for firms that have survived up to a particular point in time. It is therefore important to correct for selection bias due to survivorship. A prominent method for correcting selection bias is due to Heckman (1976). However, this technique does not deliver consistent estimators in panel data settings. Fortunately, Wooldridge (1995) has extended Heckman (1976)'s method to linear panel data models, and we use this extended estimator to identify the selectivity-corrected effects of political behaviour on

firm growth and performance. The variables included in the selection equations are the same as those used in the survival model described above.

Recall that in the baseline model the political connection variables are lagged by one period so that they are predetermined with respect to the growth variables. Nevertheless, we also investigate the merits of a GMM estimator that explicitly controls for the potential endogeneity of political connections. To this end, we made an exploratory analysis on the determinants of political connection. The marginal effects from two probit regressions are reported in the Appendix. We first estimate a model with firm level variables only, and the results suggest that politically affiliated firms tend to be larger at birth, have higher initial productivity and enjoy greater access to finance. These firm level variables in the probit regressions cannot serve as exogenous instruments since they are also part of the set of control variables in the growth regressions. When we next add a variety of regional and industrial characteristics to the model, the predictive power of the probit model increased significantly (to nearly 80% correct predictions). The regression estimates show that firms in a region with greater financial development and competition, presence of lawyers and intellectual property rights are less likely to engage in political behaviour. At the industry level, the share of the private sector has a negative relationship with the propensity of start-ups to join the political bandwagon. We employ these regional and industry characteristics as exogenous instruments for the political connection variables in the GMM estimations and ascertain their validity using the Sargan test of overidentifying restrictions.

#### **4. Database description**

Our econometric analysis draws on the Annual Report of Industrial Enterprise Statistics compiled by the National Statistical Bureau of China (NSB). The report covers the population of state-owned enterprises and all non-state firms with an annual turnover of over five million Renminbi (just above \$600,000). It is estimated that the firms contained in the data set account for about 85-90% of total output in most industries. The

NSB performs several logic tests to ensure the accuracy of the information in the report and identify illogical data.<sup>2</sup>

The data set includes information on firm ownership structure, industry affiliation, geographic location, establishment year, employment, gross output, product innovation, R&D, value-added, net fixed assets, exports, R&D and employee training expenditures.<sup>3</sup> The data set available to us spans the period 1999 to 2005, and comprises more than 1.3 million firm-year observations. It is worth noting that we used the whole sample to construct industry-level variables (e.g. industry entry and exit rates). However, in view of the objective of this paper, the econometric work is confined to the new, private, domestic-owned enterprises that entered the market. The NSB assigns to each firm in the database a categorical variable indicating ownership status. Nevertheless, it is also possible to construct a continuous measure of ownership composition from the database by looking at the fraction of paid-in capital contributed by state, private and foreign investors. Using this measure of ownership, we define a firm as being private if it is not in receipt of any state funds or foreign investment and private individuals are majority investors in the firm.

A firm is defined to be a new entrant at time  $t$  if its establishment year is given as time  $t$  and it is observed in the database for the first time at time  $t$ . This tight definition helps avoid measurement error problems in the establishment year variable. A nice feature of the database is that it maintains a unique enterprise identifier irrespective of the dynamics of ownership change. This feature is useful when it comes to distinguishing private firms that are liquidated (i.e. exited the market) and those that have experienced ownership change (e.g. acquired by foreign investors). A firm is designated to have exited the market at time  $t+1$  if it is observed at the time  $t$  or earlier, but not in subsequent periods.

We identified 106,718 private entrants over the period 1999-2004 that have the necessary information for econometric estimation. Some quarter of a million observations on these firms provide the basis of our analysis. Table 1 gives the definition of the

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<sup>2</sup> Different versions (in terms of coverage) of this data set are used by academics (e.g. Hu et al, 2005 and Jefferson et al. 2006).

<sup>3</sup> Nominal values are deflated using industry-specific ex-factory price indices obtained from China Statistical Yearbook 2006.

variables used in the analysis along with some summary statistics, while Table 2 tabulates the frequency distribution of entry by level of political affiliation and industry. About 23% of new entrants are politically affiliated, and more than half of these are associated with local governments.

## **5. Main findings**

### ***Does political affiliation affect firms' survival probability?***

Table 3 reports the econometric estimates from the proportional Cox hazard model with unobserved heterogeneity. Reassuringly, the coefficients on the control variables of the hazard model are broadly consistent with expectations. For example, larger, more productive and innovative firms enjoy higher survival probabilities and firms in highly concentrated industries face higher likelihood of exit. Also export activity and access to external finance enhances firms' survival probability.

The importance of political affiliation for the survival prospect of firms can be seen from the magnitude of the hazard ratio coefficients given in the second column of Table 3. A firm that is affiliated with a high level of government (i.e. central and provincial) faces a hazard rate that is only 62.6% of the hazard faced by a firm without political association. The benefits due to affiliations with local and middle level governments are also positive and economically significant. Figure 1 shows the estimated hazard lines by level of political connections, and it is evident that firms without political affiliation face higher probability of exit. Results in Table 3 indicate an inverted-U shaped relationship between the level of government affiliation and its impact on firm survival. This is also demonstrated in Figure 1, which also shows that this inverted U-shaped relationship persists over time. Start-ups associated with higher levels of government benefit the most, followed by those affiliated with local governments, with middle level governments conferring the least advantage on their protégées. This is in line with the conjecture discussed in Section 2. Incidentally, the four curves in Figure 1 appear to be parallel, suggesting that the proportionality assumption underlying the Cox hazard model is quite plausible in our context. Finally, it is worth noting that the survival effects of political affiliations are more pronounced in capital-intensive industries. Perhaps not surprisingly, in a labour-abundant country like China, the “helping hand” of

government is more effective in sectors where access to capital is relatively more important.

It is a stylised fact that new entrants are exposed to high risk of exit, especially in the first post-entry year. As Geroski (1995) put it, “the most palpable consequence of entry is exit”. Influential theoretical models such as Jovanovic (1982) and Pakes and Ericson (1998) predict that firms’ growth and survival performance depend on expectations about their own efficiency and the uncertainty associated with this expectation. Having entered the market with some prior belief about their performance, start-ups continuously update this belief based on their observed post-entry efficiency. Depending on their updated knowledge and the level of uncertainty they face, economically rational firms decide whether to grow, decline or exit the market. In light of this discussion, a plausible channel through which political connections may help enhance firms’ survival prospects is by reducing the uncertainty regarding the future.

### ***Firm growth and political behaviour***

Table 4 reports the selection-bias corrected econometric estimates from the firm growth model. Conditional on survival, smaller firms tend to grow faster, rejecting Gibrat’s Law and suggesting convergence in firm size. Exporting intensity, access to finance and innovation all have a positive impact on employment growth. In contrast, higher product market concentration and firm age have adverse growth effects.

In line with the results from the survival regressions, we uncover evidence that political affiliation with higher levels of government is most beneficial for the post-entry growth of start-ups. Controlling for a host of variables affecting employment growth and survivorship bias, we find that firms in capital (labour) intensive sectors that are affiliated with a central or provincial government grow 3.4 (2.5) percentage points faster than politically neutral firms. Affiliation with local governments also confers distinct, albeit less marked, advantage on firm growth. By contrast, the growth benefits associated with middle level of governments fall short of statistical significance.

This finding of positive correlation between political behaviour and start-ups growth is consistent with theoretical models that postulate internal uncertainty as a key driver of firm growth. Firms that receive political protection and all the attendant benefits

in terms of access to resources get positive signals about their future prospects and grow larger as a result. On the other hand, because of greater uncertainty regarding their future, it takes longer for start-ups without political masters to determine their optimal firm size. Consequently, their post-entry growth rate tends to be lower than that of otherwise similar “red hat” firms.

### ***Does the productivity of politically affiliated firms grow faster?***

Table 5 reports estimates from the productivity growth model. The most striking finding is that, conditional on survival and a number of control covariates; private firms without political affiliations exhibit higher productivity growth than firms with political connections. The total factor productivity growth of start-ups affiliated with central and provincial (middle level) governments is, on average, 1.7 (2.37) percentage points lower than “pure” private firms. It is also interesting to note that the productivity growth differential between start-ups with and without political behaviour is smallest for firms affiliated with local governments. In other words, amongst politically connected firms, those affiliated to local government enjoy the highest productivity growth. This is consistent with the notion that China’s system of fiscal federalism has been more successful in aligning local business interests with those of local government than with those of higher levels of government. Alternatively, this finding can also be explained by the fact that local government has fewer firms per head under their protection, and might as a result be able to provide effective assistance conducive to efficiency improvement. A final explanation could be that since local government bureaucrats are subject to less frequent rotations than provincial or prefecture officials, their decision making process is subject to less acute time inconsistency problem (Huang, 2003).

## **6. Conclusion2**

This paper sought to understand the role of political connections on the post-entry performance of private start-up companies in China. It documents robust evidence that political connections enhance firms’ growth and survival prospects, even if politically neutral start-ups enjoy faster efficiency improvements. So more than a quarter of a century after Deng Xiaoping’s famous pronouncement that the colour of the cat does not

matter as long as it catches mice, it seems that the cat in a red hat is somewhat more privileged than the one without.

Assessing the aggregate ramifications of political cronyism in China is beyond the scope of this paper. However, in view of our finding that private firms with no political ties tend to exhibit faster productivity growth and yet are more likely to exit the market, it is safe to conjecture that the close association between the state and a segment of the business community is leading to sub-optimal resource allocation in the economy by interfering with the process of market selection. Growing calls for a level playing field are likely to be heard in the future, though almost certainly not from the red capitalists who appear to thrive in the current political economic milieu.

**Reference:**

- Aghion, P., Dewatripont, M., Rey, P. (1999) "Competition, financial discipline and growth", *Review of Economic Studies*, 66, 825-852.
- Coen, D (1997), "The evolution of the large firm as a political actor in the European Union", *Journal of European Public Policy*, 1, 91-118.
- Dickson, B. J (2003), *Red Capitalists in China: The Party, Private Entrepreneurs, and Prospects for Political Change*. Cambridge: Cambridge University Press, 2003.
- Drazen, A, Limão, N and Stratmann, T (2007), "Political contribution caps and lobby formation: Theory and evidence", *Journal of Public Economics* 91, 723-754.
- Fisman, R. (2001), "Estimating the value of political connections" *American Economic Review* 91, 1095-1102.
- Geroski, P.A. (1995), "What do we know about entry?" *International Journal of Industrial Organization* 13, 421-440.
- Greenwood, J., Jovanovic, B., (1990), "Financial development, growth, and the distribution of income", *Journal of Political Economy*, 98, 1076-1107
- Gort, M., Bahk, B.H. and Wall R.A (1993), "Decomposing technical change", *Southern Economic Journal* 60, 220–234.
- Guiheux, Gilles (2006), "The political "participation" of entrepreneurs: challenge or opportunity for the Chinese communist party?" Special issue China in Transition, 219-244.
- Guriev, S. (2004), "Red Tape and Corruption", *Journal of Development Economics*, 73, 489-504
- Heckman, J. (1976) "The common structure of statistical models of truncation, sample selection and limited dependent variables and a simple estimator for such models, *Annals of Economic and Social Measurement* 5 ,475–492.
- Henisz, W. and Zelner, B.A (2004) "Explicating political hazards and safeguards: a transaction cost politics approach", *Industrial and Corporate Change*, 13, 901-915.
- Huang, Y. (2003), *Selling China*. Cambridge University Press.

- Johnson, S., Kaufmann, D., McMillan, J., Woodruff, C., (2000), “Why do firms hide? Bribes and unofficial activity after communism”, *Journal of Public Economics*, 76, 495-520.
- Johnson, S. and Mitton, T. (2003) “Cronyism and capital controls: evidence from Malaysia”, *Journal of Financial Economics* 67, 351-382.
- Jovanovic, B., (1982), “Selection and evolution of industry”, *Econometrica* 50, 649-670.
- Kraay, A., (1999), “Exports and economic performance: Evidence from a panel of Chinese enterprises”, *Revue d’Economie du Développement* 1, 183-207.
- Li, Hongbin, Meng, Lingsheng, and Zhang, J (2006) “Why do entrepreneurs enter politics? Evidence from China, *Economic Inquiry*, 44, 559-578.
- Li, Hongbin, Meng, Lingsheng, Wang, Qian, and Zhou, Li-An (2007), “Political connections, financing and firm performance: evidence from Chinese private firms”, *Journal of Development Economics*, in press.
- Li, S (2004). The puzzle of firm performance in China; An institutional explanation, *Economics of Planning* 37, 47-68.
- Li, S., Li, S, and Weiyang, Z (1999) “Cross-regional competition and privatisation in China”, *MOCT-NOST* 9, 75-99.
- Leuz, C. and Oberholzer-Gee, F. (2003) “Political relationships, global financing, and corporate transparency: Evidence from Indonesia”, *Journal of Financial Economics* 81, 411-439.
- Lancaster, T., (1990). *The Econometric Analysis of Transition Data*. Cambridge University Press.
- Levinsohn, J., Petrin, A., (2003), “Estimating production functions using inputs to control for unobservables”, *Review of Economic Studies* 70, 317-342 .
- Pakes, A and Ericson R (1998) “Empirical implications of alternative models of firm dynamics”, *Journal of Economic Theory* 79, 1–45
- Qian, Yingyi (2003). How Reform Worked in China. In Rodrik, Dani (Ed), *In Search of Prosperity: Analytic Narratives on Economic Growth*, Princeton University Press, pp. 297-333.
- Shleifer, A and Vishny R (1998). *The Grabbing Hand: Government Pathologies and Their Cures*. Harvard University Press, Cambridge, MA.

- Stratmann, T. (2003) “Can special interests buy congressional votes? Evidence from financial services legislation”, *Journal of Law and Economics* 45, 345–375.
- Williamson, O. (1991) “Comparative economic organization: The analysis of discrete structural alternatives”, *Administrative Science Quarterly*, 36. 269–296.
- Wooldridge, J.M. (1995), “Selection corrections for panel data models under conditional mean independence assumptions”. *Journal of Econometrics* 68, 115-132.
- Young, S. (1989),” Policy, practice and the Private Sector in China”, *Australian Journal of Chinese Affairs*, 21, 57-80.

**Table 1**  
**Definition and summary statistics**  
**of key variables**

Variable	Definition	Mean (std. dev )
Size	Log of total number of employees	4.36 (0.064)
Firm growth	Year on year growth rate of total employment.	6.36% (0.490)
Total factor productivity (TFP)	Total factor productivity (TFP) estimated using the Levisohn and Petrin, (2003) approach.	0.036 (0.401)
TFP growth	Year on year growth rate of total factor productivity growth.	2.28% (0.605)
Age	Years since birth	2.17 (1.420)
Export	Share of export sales in total sales	0.109 (0.286)
Innovation	Share of output involving new product and process divided by total output.	0.023 (0.129)
Finance	Domestic bank loans divided by total asset.	0.556 (1.567)
Industry concentration	Three-digit level Herfindhal index of concentration.	0.759 (0.115)
Industry entry	Number of new entrants in industry as a proportion of total firms in industry.	0.358 (0.140)
Industry exit	Number of exitors in industry as a proportion of total firms in industry.	0.190 (0.052)
High level political affiliation	Dummy for entrants that are politically affiliated with central or regional governments: (total number = 1,053).	1.12%
Middle level political affiliation	Dummy for entrants that are politically affiliated with middle level governments, i.e. prefecture and towns: (total number = 8,983).	9.91%
Local level political affiliation	A dummy variable for private firms politically affiliated with local governments: (total number = 12696).	12.40%
No political affiliation	Private firms with no political affiliation: (total number = 83,986).	76.57%
Number of new entrants	106, 718	
Maximum number of observations used in the econometric analyses	251179	

**Table 2**  
**Entry by private firms in the Chinese manufacturing sector, 1999-2004:**  
**Frequency distribution by political affiliation and industry**

Two-digit industry classification	Level of political affiliation			
	High	Middle	Local	None
13-Food Processing*	60	825	988	5157
14-Food Production*	34	337	343	1542
15-Beverage Industry*	15	302	178	915
16- Tobacco*	9	2	1	7
17-Textile Industry*	64	737	1228	10325
18-Garments and Other Fibre Products*	19	205	643	4135
19-Leather, Furs, Down and Related Products*	4	76	258	2044
20-Timber Processing*	10	185	467	2789
21-Furniture Manufacturing*	3	47	142	965
22-Papermaking and Paper Products*	16	253	373	2453
23-Printing and Record Medium Reproduction*	22	124	185	1178
24-Cultural, Educational and Sports Goods*	5	31	118	949
25-Petroleum Refining and Coking	21	119	119	811
26-Raw Chemical Materials and Chemical Products	74	940	1063	5459
27-Medical and Pharmaceutical Products	37	403	181	1008
28-Chemical Fibre	5	45	79	662
29-Rubber Products*	8	74	115	786
30-Plastic Products*	32	316	642	4149
31-Nonmetal Mineral Products*	80	866	1152	6202
32-Smelting and Pressing of Ferrous Metals	14	408	458	3366
33-Smelting and Pressing of Nonferrous Metals	33	240	374	1902
34-Metal Products*	57	339	704	5319
35-Ordinary Machinery	90	506	748	6240
36-Special Purposes Equipment	76	356	395	3087
37-Transport Equipment	87	354	472	3259
39-Other Electronic Equipment	60	450	625	4769
40-Electric Equipment and Machinery	80	228	219	1888
41-Electronic and Telecommunications	29	121	67	804
42-Instruments and meters	9	94	359	1816

<b>Total</b>	1053	8983	12696	83986
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**Notes:**

- a. Authors calculations based on the database used in this paper.
- b. The numbers preceding the industry description refer to the two-digit codes used by the State Statistical Bureau of China.
- c. \* indicates more labour-intensive industries.

**Table 3****Political behaviour and firm survival:****Hazard ratio estimates from Cox model with unobserved heterogeneity**

<b>COEFFICIENT</b>	<b>ALL</b>	<b>Labour intensive</b>	<b>Capital intensive</b>
<b>Productivity</b>	0.899*** (-5.90)	0.903*** (-4.24)	0.895*** (-4.10)
<b>Size</b>	0.774*** (-37.2)	0.776*** (-28.1)	0.770*** (-24.5)
<b>Age</b>	1.026*** (6.65)	1.027*** (5.15)	1.025*** (4.22)
<b>Finance</b>	0.990*** (-2.82)	0.987*** (-2.93)	0.995 (-0.91)
<b>Export</b>	0.620*** (-20.7)	0.607*** (-17.8)	0.647*** (-10.8)
<b>Innovation</b>	0.507*** (-12.7)	0.534*** (-7.34)	0.490*** (-10.4)
<b>Industry concentration</b>	1.044** (2.69)	0.913 (-0.95)	1.138** (2.58)
<b>Industry entry rate</b>	0.919 (-0.56)	0.975 (-0.13)	0.795 (-0.90)
<b>Industry exit rate</b>	4.028*** (8.05)	3.089*** (5.36)	6.633*** (6.19)
<b>High level</b>	0.626*** (-2.69)	0.917** (-2.30)	0.503*** (-3.08)
<b>Middle level</b>	0.709*** (-5.81)	0.691*** (-3.96)	0.699*** (-4.30)
<b>Local level</b>	0.635*** (-6.54)	0.659*** (-4.80)	0.603*** (-4.49)
<b>Observations</b>	175648	102210	73438

*Notes:*

a. Asymptotic standard errors are given in parentheses

b. significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

c. All specifications include time, sectoral and regional dummies

d. Note that the coefficients in the above table give hazard ratio. Hence a coefficients greater (less) than one implies a higher (lower) hazard rate. For example, the hazard ratio of 0.659 on “Local level” in the second column of Table 3 suggests that a private firm that is politically affiliated with local governments have a 34.1% less hazard of exit than an otherwise equivalent firm with no political affiliation.

Table 4  
Firm growth and political affiliation

COEFFICIENT	Selectivity-corrected			GMM		
	ALL	Labour intensive	Capital intensive	ALL	Labour intensive	Capital intensive
<b>Finance</b>	0.00591*** (6.98)	0.0128*** (5.09)	0.00551*** (4.93)	0.0704*** (8.02)	0.0462*** (3.99)	0.0994*** (7.38)
<b>Age</b>	-0.015*** (-14.8)	-0.015*** (-5.37)	-0.015*** (-11.3)	-0.0140*** (-13.4)	-0.0137*** (-9.97)	-0.0147*** (-9.21)
<b>Initial size</b>	-0.121*** (-54.6)	-0.157*** (-36.9)	-0.125*** (-40.7)	-0.134*** (-55.0)	-0.146*** (-47.2)	-0.119*** (-30.7)
<b>Innovation</b>	0.0623*** (5.78)	0.569*** (16.5)	0.0589*** (3.52)	0.0926*** (8.48)	0.0689*** (3.92)	0.108*** (7.70)
<b>Export</b>	0.0707*** (11.3)	0.421*** (27.5)	0.0739*** (9.19)	0.0914*** (18.7)	0.0973*** (16.6)	0.0845*** (9.54)
<b>Industry concentration</b>	-0.0129 (-0.92)	-0.0676* (-1.76)	-0.0443* (-1.96)	-0.0626 (-0.35)	-0.0776*** (-2.66)	0.0429* (1.90)
<b>High level</b>	0.028*** (5.28)	0.025*** (4.52)	0.034** (2.13)	0.0211*** (3.50)	0.017* (1.90)	0.0257*** (2.63)
<b>Middle level</b>	0.016 (1.40)	0.008 (0.75)	0.0380 (0.057)	0.00190 (0.083)	-0.00559 (-0.20)	0.0128 (0.33)
<b>Local level</b>	0.019* (1.77)	0.011*** (3.88)	0.0253** (2.82)	0.009*** (4.22)	0.0078*** (3.12)	0.0103*** (2.70)
<b>p-value-- Sargan test</b>				0.710	0.801	0.712
<b>Observations</b>	251179	224636	145185	130186	75783	54403

Notes:

- a. Asymptotic t-statistics are given in parentheses
- b. significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%
- c. All specifications include sectoral, regional and time dummies
- d. All regressors are lagged by one period.

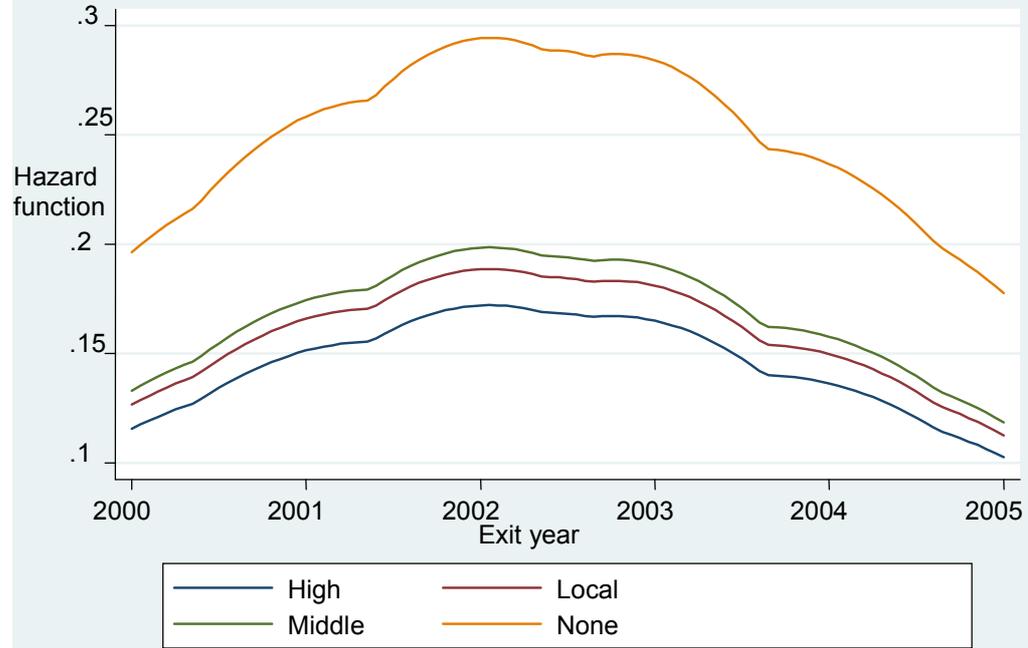
Table 5  
Productivity growth and political affiliation

COEFFICIENT	Selectivity-corrected			GMM		
	ALL	Labour intensive	Capital intensive	ALL	Labour intensive	Capital intensive
<b>Finance</b>	0.0031*** (3.77)	0.0036*** (3.32)	0.00217* (1.67)	0.0142*** (10.1)	0.0116*** (6.20)	0.0165*** (7.76)
<b>Age</b>	-0.0384*** (-39.4)	-0.0350*** (-27.9)	-0.0431*** (-28.0)	-0.0657*** (-43.8)	-0.0614*** (-31.6)	-0.0699*** (-30.0)
<b>Innovation</b>	0.0853*** (8.45)	0.115*** (7.45)	0.0741*** (5.30)	0.217*** (12.1)	0.225*** (7.55)	0.180*** (8.35)
<b>Export</b>	0.0270*** (4.63)	0.0266*** (3.72)	0.0320*** (3.20)	0.0224*** (3.92)	0.0199*** (2.80)	0.0271*** (2.70)
<b>Industry concentration</b>	0.0211 (1.55)	-0.00287 (-0.13)	0.0302* (1.66)	-0.189*** (-6.48)	-0.194*** (-3.83)	-0.158*** (-4.52)
<b>Initial productivity</b>	-0.869*** (-253)	-0.877*** (-198)	-0.862*** (-157)	-0.142*** (-44.6)	-0.159*** (-38.0)	-0.129*** (-27.2)
<b>High level</b>	-0.017** (-2.87)	-0.0281** (-2.35)	0.0012 (0.067)	-0.0278*** (-11.9)	-0.063*** (-8.53)	-0.010*** (-7.97)
<b>Middle level</b>	-0.0237*** (-5.08)	-0.0261*** (-4.21)	-0.0204*** (-2.89)	-0.076*** (-13.5)	-0.0434*** (-8.73)	-0.0541*** (-10.9)
<b>Local level</b>	-0.0076* (-1.70)	-0.0054 (-0.95)	-0.012* (-1.69)	0.016 (1.52)	0.012 (1.30)	0.075 (0.17)
<b>p-value-- Sargan test</b>				0.453	0.670	0.332
<b>Observations</b>	251179	145185	105994	130186	75783	54403

*Notes:*

- a. Asymptotic t-statistics are given in parentheses
- b. significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%
- c. All specifications include sectoral, regional and time dummies
- d. All regressors are lagged by one period.

**Figure 1: Hazard function by level of political affiliation**



## Appendix

**Table A**  
**The determinants of political connection:**  
**Marginal effects from probit regressions**

COEFFICIENT	Firm level variables only	Adding regional and industrial variables
Productivity	0.00704** (1.98)	0.0203*** (6.14)
Size	0.0502*** (39.0)	0.0260*** (20.8)
Finance	0.00865*** (11.0)	0.00577*** (7.60)
Financial development		-5.482*** (-22.0)
Lawyers per population		-0.000748** (-2.33)
Intellectual property right		-0.00466*** (-12.7)
Financial competition		-0.0330*** (-25.9)
Labour intensive sector		-0.0214*** (-8.75)
Share of private sector		-0.142*** (-17.3)

Pseudo R-squared	0.014	0.176
Percent of correct predictions	62.5%	79.2%
Observations	106718	106718

*Notes:*

- a. Asymptotic t-statistics are given in parentheses
- b. significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%
- c. All specifications include time dummies.