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Friends with Benefits: How Political Connections Help to Sustain Private Enterprise Growth in China

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By analysing data from a survey of 511 Chinese private enterprises, we find that their owners respond to government discrimination by developing political connections with government officials. A one-standard-deviation increase in the insecurity of property rights has the effect of increasing the number of 'friends' in the government by a substantial 22%. These 'friends' significantly help to mitigate by half the negative effect arising from the difficulties of obtaining land and excessive regulations on enterprise growth. This explains why an institutional environment of weak property rights has not stopped private enterprises in China from developing rapidly.

INTRODUCTION

A puzzling feature of economies undergoing gradual economic transition is that despite the many market imperfections and lack of property rights enforcement that firms face in the emerging private sector, they are still able to experience sustained growth (e.g. McMillan and Woodruff 2002; Allen *et al*. 2005; C. Xu 2011). China provides a striking example of this paradox. From its meagre beginnings at the outset of economic reforms (in the early 1980s) to accounting for nearly 70% of total enterprises and over 40% of total industrial output approximately a quarter of a century later,[1] the private sector in China has seen remarkable growth. Expansion of the role of the market during the reform process notwithstanding, the private sector has in fact never enjoyed the same level of access to key resources as their state-owned counterparts.[2] Additionally, many private enterprises have suffered from the 'grabbing hand' of local government officials, who allegedly have imposed a variety of discriminatory taxes and fees on them (e.g. Cull and Xu 2005; Li *et al*. 2006).

The key question in this connection is how private enterprises still manage to achieve sustained, rapid growth in a weak property rights environment. Specifically, how do they overcome the wide array of obstacles that clearly stand in their way? Our explanation is that in a weak property rights environment, many private business owners devote time and money to developing political connections with the government—a version of the general practice known as cultivating *guanxi* or personal ties in China. In return they seek business favours such as looser regulation and easier access to bank loans. Stated differently, political connections serve to alleviate, to a significant extent, the negative effect arising from weak property rights.

We examine our hypothesis based on a unique survey conducted among 511 private enterprise owners in eight Chinese provinces in 2004. We assess the insecurity of property rights from the answers to the five survey questions designed to solicit private enterprise owners' evaluations of the difficulties that they had experienced in procuring key resources allocated outside the scope of the market (bank loans, land, and others), and of any discriminatory regulatory requirements, taxes and fees imposed on them. To address the concern that property rights is endogenous, we employ the exogenous geographic distribution of mineral resources to be our instrumental variable. This identification

strategy is premised on the reasoning that the degree of policy discrimination against private enterprises in a well-defined locale is likely correlated with the dominance of state-owned enterprises (SOEs), who most probably chose to set up operation back in the 1950s–1970s at locations close to the mineral resources—in particular coal and oil. The geographic distribution of minerals thus serves as an exogenous indicator of the property rights environment that private enterprises face, while also satisfying the requirement of a sound instrumental variable that it should have no direct impact on political connections and private enterprise growth several decades later.

We measure political connections using the number of friends that an enterprise owner claimed to have in the government and/or in the Communist Party. This is arguably a more appropriate measure in the Chinese context than those employed in other studies and contexts, such as direct participation in politics or providing financial support to politicians. To ensure that we are studying the connections deliberately cultivated by enterprise owners in response to weak property rights rather than the connections that they may have inherited from their family's political capital, we control for whether an enterprise owner was ever a government/Party official or a senior manager in an SOE prior to setting up his business, and whether any of his family members was (or still is) a government/Party official.

Based on the finding that a one-standard-deviation increase in the insecurity of property rights has the effect of increasing the number of friends in the government and/or Party by a substantial 22 percentage points, our result confirms that a weaker property rights environment does have the expected effect on enterprise owners' political connections. In particular, when we break our property rights measure down into various aspects, we further find that the difficulties involved in obtaining land and reducing the extent of 'red tape' required for doing business are likely to have driven the private enterprise owners to cultivate political connections with the officials concerned. The reason is simply that while there are other conceivable means by which private enterprise owners can obtain financing, such as through loans provided by family members, and to avoid heavy taxes and fees, or by manipulating their account books, to obtain land and to reduce the 'red tape' involved in doing business, there are no alternatives but to deal with the officials directly.

To examine whether political connections help to mitigate the negative effect of weak property rights on enterprise growth, we include in our estimation an interaction term between property rights and political connections. We find that in the absence of political connections, weak property rights would likely impede enterprise growth. For those who have experienced difficulty in obtaining land, for instance, their assets are 53% lower in value than those who have not been confronted with such a problem. But this difference narrows to 30% for those with friends in the government/Party. The same is true for those who found the regulatory environment 'excessive'. These results remain robust even after we control for both the time and monetary costs—that is, the percentage of time an enterprise owner spent mingling with government officials on a daily basis, and the actual amount of money spent in a variety of entertainment activities in developing political connections.

While the idea that political connections help to combat weak property rights and thus facilitate enterprise growth in transitional economies may not be entirely novel (e.g. Pearson 1997; McMillan and Woodruff 2002; Li *et al*. 2006; Nee and Opper 2010), few have verified it empirically using specific measures of property rights ranging from access to key resources to regulatory burden and taxes and fees extortion with which private firms in China have been confronted. Doing so enables us to identify explicitly the

specific areas of weakness in property rights to which the owners of private enterprises respond in order to survive and thrive in an emerging economy.

Additionally, the finding that private enterprise owners do not reduce investment despite a weak institutional environment helps to shed light on the fact that they are patently aware of the costs of conducting business in these economies, and that the benefits accrued to the connections they purposively cultivate with government officials somehow exceed these costs.[3] In this vein, our study may also add to the literature that examines political connections' contributions to firm performance (e.g. Agrawal and Knoeber 2001; Fisman 2001; Khwaja and Mian 2005; Ferguson and Voth 2008; Li *et al*. 2008; Du and Girma 2010; Chen *et al*. 2011; Guo *et al*. 2014; Cull *et al*. 2015).

The remainder of this paper is organized as follows. The next section examines the hypothesized relationship between weak property rights and sustained private enterprise growth in China. Section II puts forward the 'political connections' hypothesis. In Section III we examine the effect of weak property rights on political connections, followed by the effect of political connections on enterprise growth. Section IV concludes this study.

I. Rapid Growth of Private Enterprises Amid Weak Property Rights

The idea that property rights are weak in transitional economies is not novel; many have attempted to explain how economic reforms could still be feasibly carried out in the absence of a thorough privatization (e.g. Shleifer 1997; Che and Qian 1998; Hellman *et al*. 2003). Private ownership was banned entirely after the founding of the People's Republic of China in 1949. While some restrictions on private businesses were lifted in 1982, further liberalization had to wait until 1997, when the Chinese Communist Party finally acknowledged at its Fifteenth National Congress that the private sector is an 'important component of China's socialist market economy'. However, the private sector has, in fact, never enjoyed the same property rights as its state-owned counterparts.

Weak property rights are manifested in, among other dimensions, expropriations (more commonly known as the 'grabbing hand') by the government officials (Shleifer 1997), or, more subtly, policy discrimination in favour of those firms whose owners have close relationships with the officials (Acemoglu and Johnson 2005). Both of these apply in the Chinese case. To begin with, compared to SOEs, private enterprises do not have equal access to a number of key resources required for enterprise growth, as these resources remain by and large monopolized by the government whose policy still favours SOEs. Bank loans provide a good example. While commercial loans are supposed to be allocated by the market, most commercial banks in China remain owned by the state, and the majority of loans had been provided to enterprises in the public sector (Asian Development Bank 2003).[4] This is consistent with the IMF's finding that self-financing accounted for more than 90% of the overall financial needs of private enterprises in China (Gregory and Tenev 2001).

Weak property rights in China are also the consequence of local governments seeking rents by levying taxes and fees on the private enterprises. In the Chinese context, the variety of taxes and fees extorted by various levels of the local governments from private enterprises is astounding (McMillan and Woodruff 2002; Li *et al*. 2006). For instance, fees can be charged in the name of administering businesses, to support associations set up by the government of which membership is mandatory, and so forth.[5] Consistent with these incidents, the Chinese Academy of Social Sciences found in a survey in 2003 that 70% of the profits of private enterprises went to fees imposed on them by the local authorities—not to mention the high transaction costs arising from 'red tape' or over-

regulation in dealing with local governments.[6] The Polity IV measure 'constraint on the executive' for China is also sympathetic with these anecdotal accounts; the country's score of 3 (out of 7, with 7 indicating the highest constraint) during 1989–2010 is substantially lower than the global average of 4.5–5.[7]

Despite the adverse institutional environment in which private enterprises in China find themselves, China's private sector has grown from obscurity at the outset of its sanctioned revival (in the early 1980s) to accounting for nearly 70% of total enterprises (in terms of sheer number) and over 40% of total industrial output approximately a quarter of a century later. Moreover, private enterprises have blossomed. The total assets of private enterprises grew at an annual rate of around 50% between 1989 and 2010, a period when GDP growth was only approximately 10%.[8] In fact, the increasing importance of private businesses in the overall landscape of China's economy was eventually recognized by the Communist Party, which revised the Constitution at the Sixteenth National Party Congress to even allowing (encouraging) private entrepreneurs to become members of the Party.

The survey and the measure of property rights

To substantiate the narrative that a weak property rights environment did not necessarily retard the growth of private enterprises in China, we analyse a dataset obtained from a survey of private industrial enterprises that we uniquely designed with the assistance of the Chinese Academy of Social Sciences. Conducted in 2004, the survey was designed, among other objectives, to gauge the evaluations by owners of private enterprises of the business environments in which they operated. A total of eight provinces were selected on the basis of ensuring geographical representation. The provinces were Liaoning in the northeast, Shaanxi in the northwest, Shandong on the North China Plain, Jiangsu and Zhejiang on the eastern seaboard, Guangdong and Hunan in the south, and Sichuan in the southwest. To ensure that enterprises of all sizes were adequately represented, the sample was selected at various administrative levels—from municipality and county down to the township level.[9]

The resulting sample of 511 domestically-owned industrial enterprises was chosen using stratified random sampling. These enterprises included examples of private sector sole proprietorships, partnerships and joint-stock corporations. The survey involved an intensive interview with the enterprise owner, asking detailed, structured questions covering several aspects of the enterprise's operations as well as regarding the owner's characteristics.

As we have already pointed out, weak property rights faced by Chinese private enterprises are primarily manifested in two respects. The first pertains to policies that systematically discriminate the private enterprises vis-à-vis the SOEs, whereas the second concerns the 'grabbing hand' of the government in extorting a variety of unregulated taxes and fees from the private enterprises. On the basis of these stylized facts we thus designed five specific questions in our survey to gauge enterprise owners' past perceptions of these policy discriminations—specifically 10 years before the survey was conducted.[10] Three of these questions, indeed, concerned the enterprise owner's perceived difficulties in getting access to bank loans, land and other types of key resources allocated outside the scope of the market.[11] A fourth question asked about regulations, specifically the official procedures required by the government for running a business. A final question inquired about the 'grabbing hand'—the variety and magnitude of taxes and fees imposed by various government authorities. We believe that these questions adequately cover the

difficulties most commonly encountered by the owners of private enterprise in China. They have, in fact, been used similarly by other researchers to proxy for weak property rights in other transitional economies (e.g. Johnson *et al*. 2002; Hellman *et al*. 2003).

The answers to these five questions were graded on a scale of 1 to 10, with 10 indicating extreme perceived difficulty or a complete lack of property rights. To measure the strength of property rights in a firm's business environment, we formulate a single index by taking the simple average of the scores for the five questions (which we call the 'property rights index'), assuming that these scores are additive and strongly correlated with each other (at the 1% level of significance and with the coefficients of 0.50–0.73). Doing so also helps to attenuate the measurement error in the score for each individual question.

Recall that our measure of property rights is based on the evaluations of the enterprise owners. These evaluations are easily subjected to the due influence of factors beyond those that we are able to observe—factors that may simultaneously affect also enterprise growth. The unobserved ability of an enterprise owner is a good case in point. Measurement error presents an additional challenge, especially as different enterprise owners likely have different criteria in their evaluation of property rights. To deal with these concerns, for each property rights variable we employ its mean value for all but one ($n - 1$) of the enterprises located in the same prefecture as our baseline measure of property rights (which we call 'local property rights'). The logic underlying this alternative measure is that while enterprises within the same prefecture would likely face a roughly similar institutional environment, the unobserved characteristics of an enterprise —say an owner's ability—should have no correlation with the evaluations of the property rights environment by other enterprise owners.[12] Moreover, to the extent that the property rights of private enterprises are embedded within the institutions and policies established by the local governments (C. Xu 2011), using average evaluations by $n - 1$ enterprise owners helps to differentiate the regional—specifically prefectural—variations in property rights environment, not to mention attenuating the measurement error in the property rights measures caused by enterprise owners' perceptions (L. Xu 2011).

Figure 1 shows the spatial distribution of the scores for the five questions and the property rights index at the provincial level. What they clearly reveal is that private enterprises face radically different constraints in property rights. For example, Guangdong, Zhejiang and Jiangsu provinces all seem to possess a relatively favourable property rights environment—a finding consistent with the higher growth record of these coastal provinces in the southeastern part of China, in sharp contradistinction to the northern provinces such as Shandong and Shaanxi, in which a relatively hostile property rights environment prevails.[13] Moreover, Figure 1 also agrees with other studies that find a similar regional pattern in the strength of property rights (e.g. Fan *et al*. 2010).[14]

Figure 1 also shows the variations in the strength of property rights among the five measures. In most provinces, the difficulties in obtaining resources (bank loans, land and so forth) are clearly more severe than the government's 'grabbing hand' (of taxes and fees extortion). When we evaluate these variations at the mean, we further confirm that the difficulties expressed by the private enterprise owners in obtaining the critical resources (7.5–7.9 on a 10-point scale) are greater than that of taxes and fees extortion (of 6.3; see Table 1). This suggests that different aspects of property rights may impact enterprise growth differently. Thus it would be meaningful to single out those factor(s) that may have inhibited enterprise growth the most, by addressing the enterprise owners' answers to the five questions separately in the regressions, in addition to using the property rights index to examine the overall effect of property rights environment on enterprise growth.

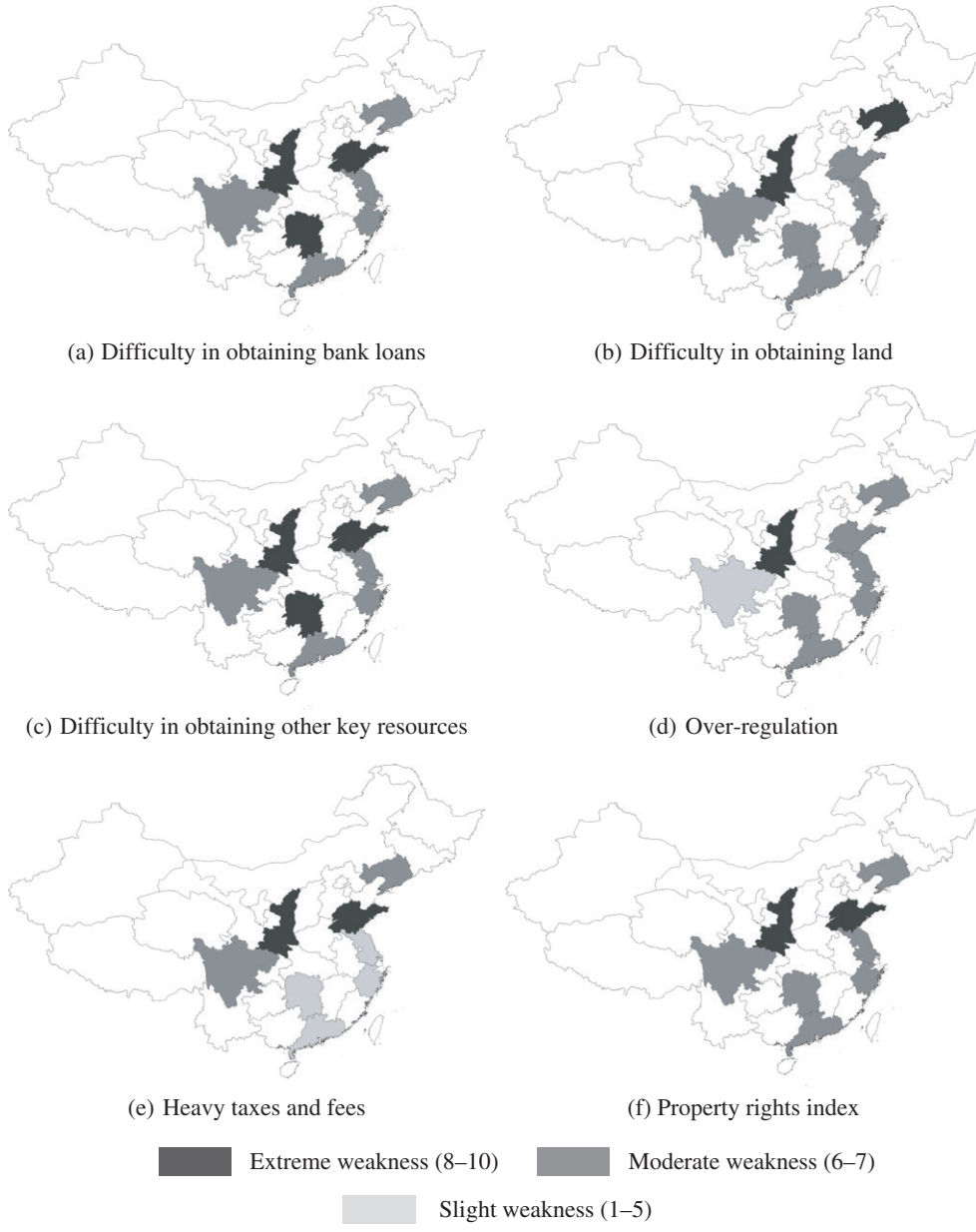

FIGURE 1. Spatial distribution of the weakness of property rights using different measures.

Empirical strategy

We examine whether any significant relationship exists between the property rights environment and private enterprise growth in a manner as specified in the following equation:

$$(1) \qquad Growth_i = \beta_1 Property_i + \mathbf{X}_i' \Gamma + \varepsilon_i.$$

TABLE 1
DESCRIPTIVE STATISTICS

Variable	Obs.	Mean	S.D.	Min.	Max.
Local property rights (1994)					
Difficulty in obtaining bank loans	510	7.9	1.3	4.7	10
Difficulty in obtaining land	509	7.3	1.2	4.5	10
Difficulty in obtaining other resources	510	7.5	1.4	4.7	10
Over-regulation	510	7.1	1.3	1	10
Taxes and fees	510	6.3	1.7	1	10
Property rights index	511	7.1	1.1	1	9.4
Enterprise property rights (1994)					
Difficulty in obtaining bank loans	303	7.9	2.8	1	10
Difficulty in obtaining land	309	7.4	3.3	1	10
Difficulty in obtaining other resources	268	7.5	3	1	10
Over-regulation	301	7.2	3.3	1	10
Taxes and fees	315	6.4	3.6	1	10
Property rights index	373	7.2	2.9	1	10
Enterprise growth					
Total assets (in 10,000 yuan)	506	2330.8	6232	2	62,368
Total fixed assets (in 10,000 yuan)	501	1327.7	3800	0.5	40,000
Total employment	509	171.6	418.7	3	7000
Total sales volume (in 10,000 yuan)	503	2877.6	10,595	0	160,000
Total assets growth	500	0.3	0.4	−0.5	3.2
Total fixed assets growth	482	0.3	0.5	−0.9	5.2
Total employment growth	503	0.2	0.5	−0.7	8
Total sales volume growth	494	0.3	0.7	−1	9
Bank loans	485	12.3	15.9	0	80
Profits	503	10.7	2.3	2	14
Political connections					
Friends	484	18.5	27.8	0	186
Friends (graded index)	484	2.2	1.6	0	5
Instrumental variable					
Mineral abundance	26	8.5	6	0	25
Control variables					
Enterprise owner's education	510	4.3	1	1	7
Enterprise owner's age	511	44.1	8.4	22	72
Previously a private firm manager	511	0.2	0.4	0	1
Previously an SOE manager	511	0.5	0.5	0	1
Previously a government/Party official	511	0.2	0.4	0	1
Family's political capital	511	0.7	0.5	0	1
Enterprise age	511	8	5.5	0	26
Privatized from an SOE	503	0.3	0.5	0	1
Expected profitability	511	10.7	1	3	14
SOEs are one's major competitors	511	0.4	0.5	0	1
Time spent on officials	499	9.2	8.3	0	65
Entertainment cost (in 10,000 yuan)	481	73.4	217	0	3200
Prefectural GDP per capita in 1994 (in 10,000 yuan)	26	0.6	0.4	0.2	6.5

To measure private enterprise growth, we employ as the pertinent proxies, enterprise size or specifically the logarithm of current total assets in 2004, and the compound annual growth rate of total assets between the starting year and 2004.[15] For robustness, we also

employ total fixed assets, employment, sales volume and their annual growth rates as alternative measures of enterprise growth. β_1 represents the effect of weak property rights on enterprise growth. $\mathbf{X}_i'$ stands for a vector of control variables; they include the educational level and age of the enterprise owner, a dummy variable indicating whether or not the owner was a manager of another private enterprise before setting up his own business, the logarithm of the enterprise's initial total assets, the enterprise's age, a dummy variable indicating whether or not the enterprise had been spun off from an SOE, enterprise expected profitability and sector dummies.[16] ε_i is the error term. The descriptive statistics of all the variables employed in the regression analyses are detailed in Table 1.

The main challenge in estimating the relationship between property rights and enterprise growth reported in equation (1) is that property rights ($Property_i$) are endogenous. Although using the past prefectural average of the property rights measure can attenuate the problems of measurement errors and reverse causality, it cannot rule out every single conceivable (omitted) factor that may bias our estimate of property rights.

To address this concern, we employ the exogenous variation in the distribution of mineral resources across China to be the pertinent instrumental variable (IV). Our empirical strategy is motivated by the premise that the degree of policy discrimination that private enterprises face is unlikely to be the same, but varies according to the spatial distribution of ownership—public versus private. That is, in areas dominated by the SOEs, local authorities are obliged to provide these enterprises—many of which they own—with the scarce resources (most notably bank loans and land) that are crucial for their development and survival. Moreover, where SOEs operate inefficiently, local officials may even have to make up for the revenue shortfall by laying their 'grabbing hand' on private enterprises. Only in regions where the SOEs have had a weak presence would local officials find it less constraining to rely more on the development of private enterprises for both revenue and promotional purposes; in these circumstances, private enterprises will likely find themselves operating in a more friendly policy environment. Indeed, we find that SOE dominance and the weakness of property rights faced by private enterprises are positively correlated at the 1% level of significance and with a coefficient of 0.18.[17]

An important reason why the spatial distribution of SOEs was primarily determined by the regional distribution in mineral abundance is attributable to the historical fact that these enterprises, the majority of which were established during the 1950s to the 1970s (the period of 'socialist industrialization'), either were engaged overwhelmingly in the direct exploitation of mineral resources or relied heavily on its supply for downstream operations (Lu 1990; Dorian 1994; Wang 1998).[18] To economize on the costs of transportation and logistics, these heavy industries were sited in close proximity to where the mineral resources—especially *energy* minerals like coal and oil—were located. In other words, we expect to see a positive relationship between the regional distribution of mineral resources and the dominance of SOEs.

We chose the spatial distribution of mineral abundance as our instrument because its distribution is strictly random and exogenous, and should thus have no direct effect on private enterprise growth except through the channel of property rights. Certainly, it is also possible that mineral abundance may affect private enterprise growth via other channels. To the extent that regions rich in natural resources (especially minerals and fuels) are more likely to have underdeveloped—and hence less competitive—markets (Sachs and Warner 2001; Bulte *et al*. 2005), mineral abundance may have a negative impact on private enterprise growth. This 'resource curse', however, is difficult to observe. As a second-best approximation, we use prefectural GDP per capita as the pertinent proxy, premised on the reasoning that a resource curse will most likely retard economic

growth. Moreover, insofar that mineral abundance affects the regional distributions (and dominance) of SOEs, it follows that such variations may directly (and negatively) affect the development of private enterprises. In an industrial sector dominated by public enterprises, for instance, chances of entry and growth for private enterprises are likely to be slimmer. To address this concern, the regressions included a dummy variable indicating whether SOEs were a firm's main competitors. Last but not least, mineral abundance may directly impact the growth of mining enterprises. Fortunately, this is unlikely to be a serious problem, since mining enterprises account for a mere 2% or 10 enterprises in our entire sample. To ensure that our instrumental variable satisfies the exclusion restrictions requirement, we will thus exclude these mining enterprises from our sample.

Data on oil and coal abundance were obtained from the *Minerals* volume of the *China Natural Resources Series* (*Zhongguo ziran ziyuan congshu: kuangchan juan*) (Committee of China Natural Resource Series 1995), and from the *Mineral Resources of China* (*Zhongguo kuangchan*) (Chinese Institute of Geology and Mineral Resources Information 1993). These two sources provide useful, consistent information on the geographical distribution of each mineral type (and their corresponding reserve levels) at the prefecture level for the entire period from the 1950s to the 1970s. In China, not only does the state own the natural resources, but its monopoly over exploration and the utilization of those resources limits prospecting activity to National Geological Prospecting Teams. This ensures a uniform standard of prospecting activity and consistent reporting on mineral abundance, minimizing measurement errors due to differences in, for example, prospecting technology among regions. For each prefecture, data were available on the number of deposits and the size of their reserves (low = 1, medium = 2, high = 3). For each prefecture we created a separate index for coal and oil simply by multiplying the total number of reserve sites by the corresponding reserve levels. Industrial development is likely to be affected by not only the availability of minerals in the home prefecture, but also that in neighbouring ones, so the enumeration of reserve sites for a given prefecture also included those in prefectures sharing a common border. In order to use a single mineral index, the coal and oil indices were combined into a single index with a value ranging from 0 to 25, with a higher value implying greater abundance.[19]

Our index of mineral abundance is indeed positively correlated with the regional variation in SOE dominance (at the 1% level of significance and with a coefficient of 0.27).[20] Furthermore, mineral abundance is also positively correlated with the weakness of property rights—regardless of how property rights are measured (columns (1)–(6) of Table 2). In columns (7) and (8) of Table 2, we employ the reduced-form regressions to test the exogeneity of mineral abundance, and find that mineral abundance has no direct effect on enterprise growth as measured by total assets and its growth rate. The results of using other measures of enterprise growth are similar, hence we do not report them separately.

Empirical results

Columns (1) and (2) of Table 3 report the baseline results based on ordinary least squares (OLS) estimations, whereas columns (3) and (4) report the instrumented evidence using mineral abundance to instrument property rights; except now we exclude the 10 mining enterprises from our sample and control for prefectural GDP per capita, and a dummy variable indicating whether the primary source of competition comes from the SOEs. Property rights are measured separately by both the property rights index and the five individual variables that measure the difficulties in obtaining bank loans, land and other

resources, over-regulation, and the demand for taxes and fees. In particular, given that growth takes time, in our growth regressions (column (2)) we exclude those newly established enterprises (age < 5 years).[21] In all regressions we control for the above covariates, and cluster the standard errors at the prefectural level. To save space, we report the coefficients of all the covariates in Appendix Table A1 (columns (1) and (2)), and those using total fixed assets, employment, sales volume and their annual growth rates as alternative measures of enterprise growth in Appendix Table A2. Both the OLS and two-stage least squares (2SLS) results consistently show that property rights and enterprise growth are not significantly related regardless of how they are measured. Moreover, given that the property rights environment is likely to vary at the broader (e.g. prefectural) level, we examine its effect on enterprise growth but fail to identify any (see columns (5) and (6) of Table 3).[22]

The lack of a significant statistical relationship between property rights and enterprise growth may also be due to there being only a small amount of variation in the measurement of the property rights variable. For example, it might take a drastic deterioration in the perceived security of property rights (say from 5 to 10) for enterprise investment to be negatively affected; a slight deterioration (say only from 5 to 6) is unlikely to bring about any significant change. Another notable disadvantage of using the subjective scores to measure property rights is that it is unclear whether the difference between a 5 and a 6 on the scale, for example, is the same as that between a 7 and an 8. To address all these concerns, we convert the values of property rights into a dummy variable. For instance, we recode the scores above the mean as 1 to represent weak property rights, and those below the mean as 0 to represent strong property rights. Doing so greatly accentuates the differences between weak and strong property rights.[23] Despite this reconstruction, the effect of property rights on enterprise growth is still not significant (see Panel A of Appendix Table A3).

Moreover, to check robustness we employ property rights at the enterprise level—that is, enterprise owners' own perceptions instead of the local average. In addition, we also control for the prefectural dummies to rule out the possible effect of unobserved local characteristics on enterprise growth. As reported in Panel B of Appendix Table A3, weak property rights continue to have no impact on enterprise growth.[24]

While we cannot rule out every single conceivable factor that may bias our estimate of property rights, our evidence appears to be sufficiently robust in substantiating the claim that a weak property rights environment has not significantly hampered private enterprise growth in China. The fact that private businesses achieved rapid growth despite weak property rights institutions challenges the conventional economic wisdom that secure property rights is a precondition for investment and growth (e.g. North 1981; Knack and Keefer 1995; Johnson *et al.* 2002; Acemoglu and Johnson 2005; Besley and Ghatak 2010). This leads us to question how private enterprises manage to overcome the wide array of obstacles that clearly stand in their way to realize sustained, rapid growth.

II. The 'Political Connections' Hypothesis

Although in transitional economies the institutional environment in which private enterprises operate is typically weak in terms of property rights protection, the returns on entrepreneurial activities are often higher (McMillan and Woodruff 2002).[25] For this reason, entrepreneurs search for other means of protecting their property rights. Given that the state is the primary enforcing agent of property rights, the most straightforward way to overcome the problem of weak property rights would be to

TABLE 2
IMPACT OF MINERAL ABUNDANCE ON PROPERTY RIGHTS AND ENTERPRISE GROWTH

	Dependent variable is:							
	Property rights index (1)	Difficulty in obtaining bank loans (2)	Difficulty in obtaining land (3)	Difficulty in obtaining other resources (4)	Over-regulation (5)	Taxes and fees (6)	ln(total assets) (7)	Total assets growth (8)
Mineral abundance	0.199	0.205	0.176	0.203	0.259	0.217	−0.009	−0.001
	(0.051)***	(0.049)***	(0.060)**	(0.060)***	(0.060)***	(0.082)**	(0.018)	(0.003)
R^2	0.79	0.81	0.69	0.73	0.81	0.64	0.48	0.32
No. of observations	26	25	24	25	25	25	483	286

Notes
All variables are measured at the prefectural level in columns (1)–(6). Columns (7) and (8) are enterprise-level estimates. All regressions control for enterprise owner's educational level, age, whether previously a private firm manager, initial enterprise size, enterprise age, whether privatized from an SOE, expected profitability, the variable 'SOEs are one's major competitors', sector dummies, and prefectural GDP per capita in 1994. Robust standard errors appear in parentheses in columns (1)–(6), and robust standard errors clustered at the prefectural level appear in parentheses in columns (7) and (8).
*, **, *** indicate significant at 10%, 5%, 1%, respectively.

TABLE 3
PROPERTY RIGHTS AND ENTERPRISE GROWTH

	Dependent variable is:					
Property rights are measured (separately) by:	ln (total assets) OLS (1)	Total assets growth OLS (2)	ln(total assets) 2SLS (3)	Total assets growth 2SLS (4)	ln (total assets) (prefectural level) 2SLS (5)	Total assets growth (prefectural level) 2SLS (6)
Property rights index	0.108 (0.073)	0.016 (0.012)	−0.086 (0.172)	−0.012 (0.029)	0.228 (0.161)	−0.035 (0.034)
R^2	0.47	0.31	0.47	0.31	0.83	0.67
No. of observations	492	291	483	286	26	26
Difficulty in obtaining bank loans	0.102 (0.062)	0.017 (0.012)	−0.063 (0.133)	−0.009 (0.025)	0.214 (0.145)	−0.018 (0.037)
R^2	0.47	0.31	0.47	0.31	0.68	0.74
No. of observations	491	290	482	285	25	25
Difficulty in obtaining land	0.024 (0.075)	0.004 (0.014)	−0.046 (0.148)	−0.002 (0.024)	0.351 (0.243)	0.016 (0.020)
R^2	0.47	0.31	0.48	0.31	0.72	0.67
No. of observations	490	289	481	284	24	24
Difficulty in obtaining other resources	0.041 (0.069)	0.015 (0.008)*	−0.056 (0.113)	−0.008 (0.021)	0.216 (0.123)	−0.018 (0.039)
R^2	0.47	0.31	0.48	0.31	0.81	0.70
No. of observations	491	290	482	285	25	25
Over-regulation	0.053 (0.065)	0.008 (0.010)	−0.044 (0.137)	−0.002 (0.024)	0.248 (0.128)*	0.007 (0.012)
R^2	0.48	0.31	0.48	0.31	0.86	0.67
No. of observations	491	290	482	285	25	25
Taxes and fees	0.004 (0.051)	0.010 (0.008)	−0.033 (0.107)	−0.002 (0.020)	0.297 (0.177)	0.008 (0.015)
R^2	0.47	0.32	0.49	0.31	0.81	0.67
No. of observations	491	290	482	285	25	25

Notes
All variables of property rights are measured at the local level in 1994, i.e. the mean value of property rights for all but one (n - 1) of the enterprises located in the same prefecture. All regressions control for enterprise owner's educational level, age, whether previously a private firm manager, initial enterprise size, enterprise age, whether privatized from an SOE, expected profitability, and sector dummies. In columns (3)–(6), the variables of property rights are instrumented by mineral abundance, and the variable 'SOEs are one's major competitors' and prefectural GDP per capita in 1994 are controlled for. In columns (5) and (6), all variables are organized at the prefectural level. Robust standard errors clustered at the prefectural level are shown in parentheses in columns (1)–(4), and robust standard errors are shown in parentheses in columns (5) and (6).
*, **, *** indicate significant at 10%, 5%, 1%, respectively.

cultivate political connections with those government and/or Party officials who are able to influence enterprise performance through either the allocation of scarce resources or the levying of fees on enterprises, or both. Moreover, to the extent that many critical enterprise inputs remain allocated according to the 'plan' in transitional economies, political connections take on additional significance in a context such as China's.

Building personal ties with officials, however, demands considerable resources—especially time and money. In the Chinese context, in order to obtain favours or be spared from the 'grabbing hand', it is not atypical for enterprise owners to provide public officials with a variety of free entertainment—eating, drinking, giving gifts, and in some instances even free travelling (Cai *et al*. 2011). In terms of time, our survey reveals that enterprise owners with political friends spent 10% of their time on average mingling with government officials on a daily basis (the maximum was as high as 65%), whereas those without a political friend spent an average of only 6%.[26] This inevitably increases the costs of doing business, and may even reduce productivity and accordingly profits.[27]

This may explain why many private enterprise owners have been keen on attaining membership of the Chinese Communist Party, the People's Congress or the Chinese People's Political Consultative Conference in recent years, on the expectation that the political status thus attained is conducive to obtaining business favours (Li *et al*. 2006).[28] Consistent with what the others have found, our survey data similarly suggest the prevalence of political connections in China. Over 80% of the private entrepreneurs surveyed, for instance, reported that they have at least one 'friend' who is a government and/or Party official.

Do political connections really enable private enterprises to overcome weaknesses in property rights, thereby facilitating enterprise growth? While a number of studies have found that political connections do have a direct positive effect on firm performance (e.g. Li *et al*. 2008; Wu *et al*. 2012; Guo *et al*. 2014; Cull *et al*. 2015), none thus far has examined whether political connections have a mitigating effect on weak property rights. Our survey results reveal the perceived importance of political connections. For example, nearly 70% of private enterprise owners saw political connections as instrumental to obtaining much-needed scarce resources and to reducing regulatory burdens. While not as overwhelming, more than 50% felt that having political connections effectively kept the 'grabbing hand' at bay. Overall, more than 70% believed that in order to operate a (private) business in China, political connections are imperative (see Appendix Table A4).[29]

These narratives suggest that in an institutional environment in which the inherent property rights regime is flawed, political connections serve as an effective substitute to facilitate business or enterprise development. Thus we expect the weaker the property rights, the greater the reliance of private enterprises on political connections for sustained growth.[30]

III. Evidence on the Facilitating Role of Political Connections

Measure of political connections

Scholars have previously defined the cultivation of political connections in a rather specific manner, often along the lines of direct participation in politics as a public official (Khwaja and Mian 2005; Li *et al*. 2006), recruiting public officials as shareholders (Faccio 2006), or

funding a political party or politicians (Ferguson and Voth 2008; Cooper *et al.* 2010). While operationally useful, these definitions fail to capture the broader reality of political connections in the Chinese context. For instance, it is uncommon for a Chinese entrepreneur to participate actively in politics—e.g. by becoming a member of the People's Congress—as such opportunities are reserved for only a select few. Political campaigns are pervasive, but in China they are internecine power struggles that do not require financial support. Enlisting professional politicians as board members of private enterprises is prohibited in China. In this study, the cultivation of political connections is defined as any deliberate effort initiated by an entrepreneur to build *guanxi* or personal ties that did not exist prior to the formation of the enterprise.

Political connections are represented by the number of friends an enterprise owner claimed to have in the government and/or Party. Regardless of the particular means adopted to establish connections with the government bureaucracy, this number should correlate with the actual number of official friends. Each respondent was asked to enumerate his friends in the government bureaucracy and the Party. The 511 interviewees claimed to have 484 such friends. The number that each claimed to have varied considerably, ranging from 0 (19% of respondents) to more than 100.

Measurement error is a serious concern, as the respondents likely interpreted the meaning of a 'friend' differently, and may also have under-reported the actual number due to sensitivity of the issue. To check for systematic error, the reported number of friends was compared with a set of conventional measures of political connections employed in some previous studies in the Chinese context (e.g. Li *et al.* 2006; Guo *et al.* 2014). Those conventional measures included four dummy variables indicating whether a private enterprise owner was a member of (a) the Chinese Communist Party, (b) the People's Congress or (c) the Chinese People's Political Consultative Conference, or (d) whether he or she had been a government official prior to going into private business. In addition, the four dummy variables were aggregated into a single index with a score that ranged from 0 to 4 in order to allow for greater variations in the strength of political connections. As is reported in Appendix Table A5, the number of friends that a private enterprise owner claimed to have was significantly and positively correlated with all the other measures of political connections (at the 1% level of significance and with coefficients 0.13–0.35).[31] To reduce the measurement error, we also reorganize the number of friends into an index graded on a five-point scale (i.e. 1–5 as 1, 6–10 as 2, 11–20 as 3, 21–50 as 4, and 51–186 as 5). The regression results of doing so are strikingly similar to those using the original measure (i.e. number of friends), reinforcing our confidence in the measure of political connections.[32]

To ensure that we are not confounding the deliberately cultivated political connections after a private firm has come into existence with those already developed beforehand (or having accumulated from an owner's family's political capital), we control for three additional variables in the regressions—namely whether an enterprise owner was ever a government/Party official or a senior manager in an SOE, and whether any family member was/is a government/Party official.

To confirm our intuition, we first provide, in Figure 2, a descriptive analysis on the relationship between property rights and political connections. We indeed find a positive correlation between the degree of weakness in property rights and the number of friends in the government and/or Party (at the 1% level of significance and with a coefficient of 0.24). For example, the majority of those who reported having faced a weak property rights environment (a score of 6–10) claimed to have more than 20 friends. Similarly, Figure 3 clearly shows a positive correlation between political connections and enterprise

growth (at the 1% level of significance and with a coefficient of 0.25): those who reported having more friends in the government and/or Party tended to have larger enterprises as measured by the value of total assets in 2004.

Effect of weak property rights on political connections

We examine whether a significant relationship exists between property rights and political connections in a manner as specified in the following equation:

$$(2) \qquad Friends_i = \beta_2 \, Property_i + \mathbf{X}_i' \Gamma + \varepsilon_i,$$

where $Friends_i$ is the dependent variable employed to measure the strength of an owner's political connections, and $Property_i$ refers to the property rights environment. $\mathbf{X}_i'$ represents a vector of control variables that are the same as those employed in equation (1); the only difference is that in equation (2), $\mathbf{X}_i'$ also includes the enterprise owner's own 'political capital' accumulated prior to the start of the business (as measured by whether an enterprise owner was ever a government/Party official or a senior manager in an SOE, and whether any family member was/is a government/Party official).

In columns (1) and (2) of Table 4, we examine the effect of property rights on the number of friends that a private enterprise owner claimed to have in the government and/or Party. To reduce skewness, we use natural logarithms, that is, ln (1 + friends). We first report the OLS results in column (1), and then check their robustness using a Tobit model (column (2)), given that the dependent variable is left-censored with nearly 20% of the values being zero. In column (3) we employ the graded index of 0–5 to

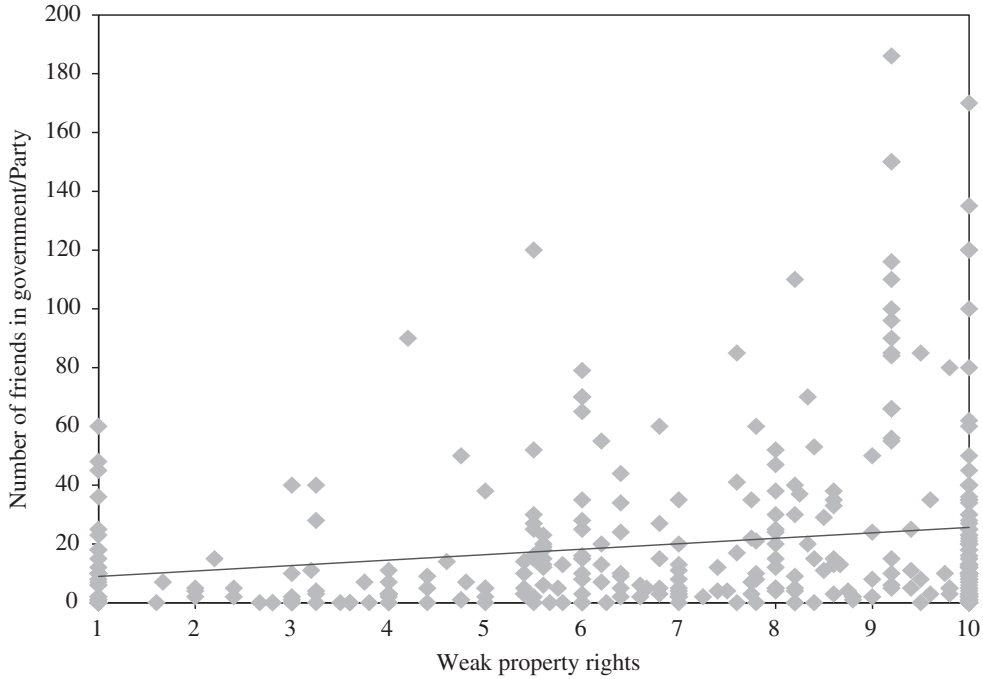

FIGURE 2. Correlation between property rights index and political connections.

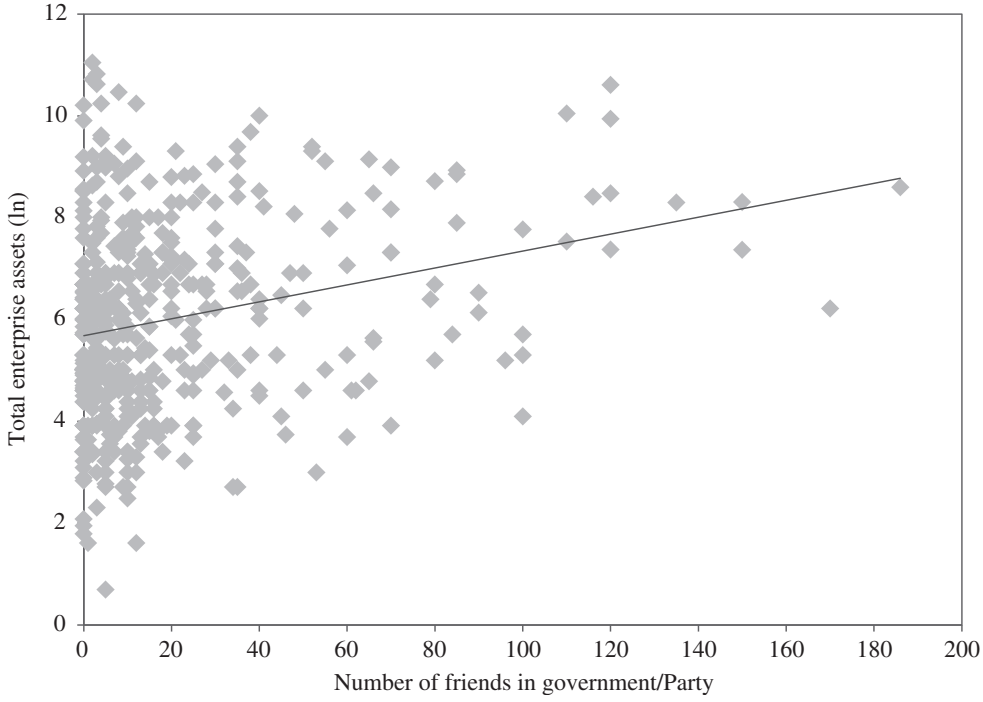

FIGURE 3. Correlation between political connections and enterprise growth.

reduce the measurement error in our dependent variable using the ordered Logit model as the estimator. The results clearly show a positive correlation between weak property rights and the number of friends in the government and/or Party. Take the effect of property rights index, for instance: a coefficient of 0.2 (column (1)) implies that a one-standard-deviation (1.1) increase in the insecurity of property rights will increase the number of friends in the government and/or Party by a substantial 22 percentage points ($0.2 \times 100 \times 1.1$).

The observed relationship between property rights and political connections could be in the reverse direction, however. For instance, it is possible that security of property rights is a consequence of an owner's political connections rather than the other way round. Also, the results in columns (1)–(3) of Table 4 are not free from omitted variable bias and measurement error problems. To address these concerns, we instrument property rights with mineral abundance. Reported in columns (4)–(6) of Table 4, property rights do have a significant and positive relationship with the political connections of private enterprise owners, regardless of how property rights are measured. It is worth emphasizing that the coefficients in the IV estimations are substantially larger and more significant than those in the baseline estimations. This suggests that the effect of property rights on political connections may be underestimated when endogeneity is not properly considered. Last but not least, we obtain similar results from the prefecture-level estimations (column (7)).

Table 4 also shows the varying effects that the different dimensions of weak property rights have on political connections. As suggested by their larger coefficients and greater levels of significance, the difficulties associated with obtaining land and cutting the 'red tape' are likely to be the main driving force behind the enterprise

TABLE 4
PROPERTY RIGHTS AND POLITICAL CONNECTIONS

	Dependent variable is:						
Property rights are measured (separately) by:	ln(1 + friends) OLS (1)	ln(1 + friends) Tobit (2)	Friends (graded index) Ordered logit (3)	ln(1 + friends) 2SLS (4)	ln(1 + friends) IV-Tobit (5)	Friends (graded index) 2SLS (6)	ln(1 + friends) (prefectural level) 2SLS (7)
Property rights index	0.200 (0.080)**	0.218 (0.095)**	0.225 (0.116)*	0.325 (0.130)**	0.367 (0.151)**	0.339 (0.157)**	0.263 (0.081)**
R^2	0.14	—	—	0.13	—	0.14	0.94
No. of observations	469	469	469	461	461	461	26
Difficulty in obtaining bank loans	0.101 (0.071)	0.109 (0.087)	0.101 (0.099)	0.242 (0.103)**	0.274 (0.120)**	0.253 (0.122)*	0.273 (0.114)**
R^2	0.12	—	—	0.11	—	0.12	0.89
No. of observations	468	468	468	460	460	460	25
Difficulty in obtaining land	0.228 (0.066)***	0.252 (0.075)***	0.286 (0.092)***	0.313 (0.105)***	0.354 (0.123)***	0.317 (0.125)**	0.291 (0.118)**
R^2	0.15	—	—	0.15	—	0.15	0.89
No. of observations	467	467	467	459	459	459	24
Difficulty in obtaining other resources	0.127 (0.069)*	0.147 (0.083)*	0.142 (0.098)	0.215 (0.087)**	0.242 (0.100)**	0.224 (0.103)**	0.274 (0.103)**
R^2	0.13	—	—	0.13	—	0.13	0.88
No. of observations	468	468	468	460	460	460	25

TABLE 4
CONTINUED

	Dependent variable is:						
Property rights are measured (separately) by:	ln(1 + friends) OLS (1)	ln(1 + friends) Tobit (2)	Friends (graded index) Ordered logit (3)	ln(1 + friends) 2SLS (4)	ln(1 + friends) IV-Tobit (5)	Friends (graded index) 2SLS (6)	ln(1 + friends) (prefectural level) 2SLS (7)
Over-regulation	0.144 (0.073)*	0.159 (0.085)*	0.170 (0.109)	0.276 (0.105)**	0.313 (0.121)***	0.280 (0.124)**	0.221 (0.096)**
R^2	0.13	—	—	0.12	—	0.13	0.90
No. of observations	468	468	468	460	460	460	25
Taxes and fees	0.125 (0.069)*	0.133 (0.082)	0.132 (0.103)	0.211 (0.102)**	0.240 (0.119)**	0.214 (0.119)*	0.245 (0.110)*
R^2	0.14	—	—	0.13	—	0.13	0.89
No. of observations	468	468	468	460	460	460	25

Notes
All regressions control for enterprise owner's educational level, age, whether previously a private firm manager, initial enterprise size, enterprise age, whether privatized from an SOE, whether previously a government/Party official, family's political capital, expected profitability, the variable 'SOEs are one's major competitors', sector dummies, and prefectural GDP per capita in 1994. All variables of property rights are instrumented by mineral abundance in columns (4)–(7). In column (7) all variables are organized at the prefectural level. Robust standard errors clustered at the prefecture level are shown in parentheses in columns (1)–(6), and robust standard errors are shown in parentheses in column (7).
*, **, *** indicate significant at 10%, 5%, 1%, respectively.

owners' attempt to cultivate political connections. Private enterprise owners could resort to raising money from their lineage members, private agencies or other channels of informal finance (Peng 2004; Allen *et al*. 2005), and, similarly, to reduce if not entirely evade the hefty taxes and fees by manipulating their account books.[33] But when it comes to setting up a business, which often involves cumbersome regulatory procedures, or obtaining land for business operation, they have no alternative but to deal with the officials directly.

Regarding the effect of the other control variables (column (3) of Appendix Table A1), only the variable 'SOEs are one's major competitors' has a significantly positive effect on political connections; the latter is not affected by whether an enterprise owner was previously a government/Party official, a senior manager in an SOE, or his family's political capital. All of these provide additional, corroborative evidence to the hypothesis that private entrepreneurs are not simply inheriting the political connections already established before they started their own business; rather, in order to overcome the problem of weak property rights, they go out of their way to develop political connections of their own.

Moreover, to check robustness, we employ the dummy measures of property rights in Panel A of Appendix Table A6, and employ property rights at the enterprise level in Panel B of that table. Despite these reconstructions, weak property rights continue to have a significant positive impact on political connections.

Effect of political connections on enterprise growth

We have seen that weak property rights do have a significant relationship with enterprise owners' expressed need to cultivate political connections. But have such connections really mitigated the negative effect that weak property rights have on enterprise growth? Before we test this, we first examine whether political connections have a direct positive effect on enterprise growth based on the specification

$$(3) \qquad Growth_i = \phi_1 \, Friends_i + \mathbf{X}_i' \Gamma + \varepsilon_i,$$

where $Growth_i$ represents the dependent variable, enterprise growth, measured in terms of current total assets and their growth rates. $Friends_i$ denotes political connections, and $\mathbf{X}_i'$ represents the characteristics of an enterprise and its owner, which are the same as those in equation (2), and the prefecture dummies.[34]

Since cultivating political connections draws on considerable resources, doing so would likely dampen private enterprise growth. To find out if that is the case, we include two additional variables to control for the costs of political connections. The first pertains to 'the percentage of time an enterprise owner spent mingling with government officials on a daily basis' (abbreviated as 'time spent on officials')—a variable that directly captures the time cost that a private entrepreneur incurs in developing/maintaining his political connections. The second is a proxy for the monetary cost measured by the actual amount of money (in 10,000 yuan) spent on a variety of entertainment activities, including feasting, gifting and sponsoring trips (abbreviated as 'entertainment costs').[35]

We report the OLS estimates in Table 5. In Panel A we employ ln (1 + friends) as a pertinent measure of political connections. For robustness, we use the graded index of the number of friends in Panel B. The effect of political connections on enterprise growth is significant and positive regardless of how political connections or enterprise growth is

measured. For example, a 1% increase in political connections is associated with an approximately 0.18% increase in total assets (column (1), Panel A).[36]

To further test the idea that political connections facilitate enterprise growth by allowing better access to key resources and by minimizing the interference of the 'grabbing hand', we employ a number of specific measures and test them separately. We employ the share of bank loans in an enterprise's total fixed assets to proxy for its access to this scarce, rationed resource—credit in China remains largely controlled by the state even today. And to proxy for favourable treatments provided by government/Party officials, we use the average profits predicted by enterprise owners based on actual profits obtained in the past four years (circa 2000–3) as proxy.[37] Specifically, profits are assessed on a seven-point scale, with 7 indicating very profitable, and 1 not profitable or specifically running a deficit. Reported in column (3) of Table 5, we find that political connections do have a positive and significant effect on increasing the percentage of bank loans in a private enterprise's total assets. By the same token, political connections also have a significantly positive effect on the level of enterprise profits (column (4)).[38]

We now examine whether political connections mitigate the effect of weak property rights on enterprise growth, by employing the specification in the following equation:

$$(4) \qquad Growth_i = \beta_3 \, Property_i + \phi_2 \, Friends_i + \delta \, Property_i \times Friends_i + \mathbf{X}_i' \Gamma + \varepsilon_i.$$

Our key interest lies in δ, the coefficient of the interaction term $Property_i \times Friends_i$, which is intended to capture the differential impact of weak property rights on enterprise growth conditional on the strength of political connections. Our hypothesis would be substantiated if the effect of weak property rights becomes significantly smaller in the

TABLE 5
POLITICAL CONNECTIONS AND ENTERPRISE GROWTH

Political connections are measured (separately) by:	Dependent variable is: ln(total assets) (1)	Total assets growth (2)	ln(1 + bank loans) (3)	Profits (4)
Panel A				
ln(1 + friends)	0.183	0.029	0.213	0.243
	(0.064)***	(0.013)**	(0.056)***	(0.068)***
R^2	0.62	0.52	0.28	0.23
No. of observations	451	260	441	447
Panel B				
Friends (graded index)	0.147	0.022	0.171	0.210
	(0.051)***	(0.011)*	(0.051)***	(0.060)***
R^2	0.62	0.52	0.28	0.23
No. of observations	451	260	441	447

Notes
All results are OLS. All regressions control for enterprise owner's educational level, age, whether previously a private firm manager, initial enterprise size, enterprise age, whether privatized from an SOE, whether previously a government/Party official, family's political capital, expected profitability, the variable 'SOEs are one's major competitors', time spent on officials, entertainment costs, sector dummies, and prefecture dummies. Robust standard errors clustered at the prefecture level are in parentheses.
*, **, *** indicate significant at 10%, 5%, 1%, respectively.

event that a private enterprise owner has strong political connections as measured by ln (1 + friends). To facilitate the interpretation of the coefficient of the interaction term, we use the dummy variable measure of property rights; that is, we recode the scores above the mean to 1 to represent weak property rights, and those below the mean to 0 to represent a relatively favourable property rights environment. $\mathbf{X}_i'$ represents the same set of control variables as in equation (3).

The OLS estimates are reported in columns (1) and (2) of Table 6. As before, property rights are measured by both the overall property rights index and the five variables estimated separately. The results show that where a private enterprise owner has no friends in the government/Party, the effect of property rights—in particular over-regulation and the difficulty in obtaining land—is significantly negative, suggesting that weak property rights would likely impede enterprise growth in the absence of political connections. Indeed, the total assets of those private enterprises whose owners have expressed difficulties in obtaining land are on average 53% lower in value than those whose owners have not been confronted with just such a problem. But this difference decreases to 30% ((0.532 - 0.231) × 100) for those with friends in the government/Party. The same goes with over-regulation: the difference in average total assets is reduced from 45% to 23% for those who have established political connections.

In columns (3) and (4) of Table 6, we report the instrumented results, and find them to be strikingly similar to those of the OLS. In columns (5) and (6), we examine the mitigating effect of political connections at the prefectural level. Although we have a total of only 27 prefectures, the 2SLS results similarly show that political connections have a significantly mitigating effect on weak property rights, particularly with respect to obtaining land. These consistent results reinforce our hypothesis that political connections help to mitigate the effect of weak property rights on enterprise growth.[39]

IV. Conclusion

Can political connections neutralize the potential hampering effect of weak property rights on enterprise growth? To address this important question, we analysed a set of survey data covering private enterprises in eight Chinese provinces, and indeed found that their growth remained robust despite a lack of well-defined and rigorously enforced property rights. Our empirical evidence suggests that private enterprises were able to experience growth in a weak property rights environment because the owners of private enterprises respond to official discrimination in access to scarce inputs and the 'grabbing hand' by fostering political connections with government officials. These owners have effectively *substituted* political connections for weak or insecure property rights, thereby deflecting the (potentially greater) harm that would have been inflicted on them by the 'grabbing hand'.

Simply because we found that political connections work in an institutional environment where property rights are weak does not make clearly defined and well-enforced property rights any *less* essential for economic performance. In fact, if they were inconsequential, private entrepreneurs would not have responded to weak property rights in the first place by cultivating political connections. Thus what we hope to have demonstrated is that in a broadly similar institutional setting of weak property rights (namely an overall discriminating atmosphere against private firms in a single-country

TABLE 6
MITIGATING EFFECT OF POLITICAL CONNECTIONS ON ENTERPRISE GROWTH

	Dependent variable is:					
Property rights are measured (separately) by:	ln(total assets) OLS (1)	Total assets growth OLS (2)	ln(total assets) 2SLS (3)	Total assets growth 2SLS (4)	ln(total assets) (prefectural level) 2SLS (5)	Total assets growth (prefectural level) 2SLS (6)
Panel A						
Property rights index	−0.304 (0.204)	−0.036 (0.048)	−0.311 (0.198)	−0.053 (0.047)	−3.032 (2.203)	−1.143 (1.140)
ln(1 + friends)	0.009 (0.094)	−0.003 (0.016)	0.010 (0.092)	−0.001 (0.016)	−0.500 (0.545)	−0.427 (0.288)
ln(1 + friends) × Property rights index	0.282 (0.101)***	0.045 (0.019)**	0.283 (0.101)***	0.046 (0.019)**	1.375 (0.815)	0.620 (0.425)
Panel B						
Difficulty in obtaining bank loans	−0.338 (0.200)	−0.061 (0.051)	−0.347 (0.202)*	0.076 (0.050)	−3.071 (1.643)	−1.728 (1.134)
ln(1 + friends)	0.038 (0.092)	−0.004 (0.017)	0.041 (0.092)	−0.002 (0.016)	−0.577 (0.803)	−0.134 (0.565)
ln(1 + friends) × Difficulty in obtaining bank loans	0.248 (0.100)**	0.048 (0.021)**	0.248 (0.101)**	0.049 (0.020)**	1.235 (0.570)*	0.683 (0.474)
Panel C						
Difficulty in obtaining land	−0.532 (0.183)***	−0.095 (0.041)**	−0.522 (0.185)***	−0.107 (0.040)**	−3.928 (1.500)**	−2.626 (0.915)**
ln(1 + friends)	0.066 (0.090)	0.006 (0.016)	0.068 (0.089)	0.008 (0.016)	−0.543 (0.621)	0.029 (0.316)
ln(1 + friends) × Difficulty in obtaining land	0.231 (0.100)**	0.041 (0.020)*	0.230 (0.102)**	0.042 (0.020)**	1.581 (0.550)**	0.977 (0.360)**
Panel D						
Difficulty in obtaining other resources	−0.329 (0.213)	−0.031 (0.045)	−0.362 (0.200)*	−0.056 (0.042)	0.243 (1.973)	0.586 (1.999)
ln(1 + friends)	0.105 (0.091)	0.014 (0.016)	0.107 (0.090)	0.015 (0.016)	−0.470 (0.482)	0.006 (0.448)

TABLE 6
CONTINUED

Property rights are measured (separately) by:	Dependent variable is: ln(total assets) OLS (1)	Total assets growth OLS (2)	ln(total assets) 2SLS (3)	Total assets growth 2SLS (4)	ln(total assets) (prefectural level) 2SLS (5)	Total assets growth (prefectural level) 2SLS (6)
ln(1 + friends) × Difficulty in obtaining other resources	0.164 (0.107)	0.023 (0.021)	0.171 (0.107)	0.027 (0.020)	0.252 (0.724)	−0.077 (0.711)
Panel E						
Over-regulation	−0.448 (0.178)**	−0.058 (0.039)	−0.448 (0.172)**	−0.071 (0.037)*	0.491 (2.161)	−0.237 (1.802)
ln(1 + friends)	0.072 (0.093)	0.009 (0.016)	0.074 (0.091)	0.011 (0.016)	−0.179 (0.685)	0.125 (0.451)
ln(1 + friends) × Over-regulation	0.225 (0.102)**	0.034 (0.019)*	0.224 (0.102)**	0.035 (0.019)*	0.184 (0.779)	0.146 (0.656)
Panel F						
Taxes and fees	−0.216 (0.245)	−0.024 (0.045)	−0.207 (0.231)	−0.020 (0.046)	−3.332 (2.984)	−2.488 (1.030)*
ln(1 + friends)	0.159 (0.075)**	0.019 (0.012)	0.159 (0.072)**	0.021 (0.012)	−0.108 (0.837)	0.121 (0.271)
ln(1 + friends) × Taxes and fees	0.060 (0.111)	0.016 (0.019)	0.062 (0.108)	0.016 (0.020)	1.365 (1.174)	0.834 (0.383)*

Notes
Property rights are measured here as dummy variables, with 1 representing weak property rights, and 0 representing strong property rights. All regressions control for the enterprise owner's educational level, age, whether previously a private firm manager, initial enterprise size, enterprise age, whether privatized from an SOE, whether previously a government/Party official, family's political capital, expected profitability, the variable 'SOEs are one's major competitors', time spent on officials, entertainment costs, sector dummies, and prefectural GDP per capita in 1994. All variables of property rights are instrumented by mineral abundance in columns (3)–(6). In columns (5) and (6), all variables are organized at the prefectural level. Robust standard errors clustered at the prefecture level appear in parentheses in columns (1)–(4), and robust standard errors appear in parentheses in columns (5) and (6).
*, **, *** indicate significant at 10%, 5%, 1%, respectively.

setting), some private enterprise owners have chosen to boost their chances of survival—and succeeded—by establishing political connections. Indeed, many more private firms would be operating in China had the institutional environment been more friendly, and the surviving private firms would likely have operated with higher profitability had they not incurred the extra costs necessitated by the establishment of political connections. As fascinating as these counterfactuals may be, they go way beyond the scope of the present paper.

APPENDIX:

TABLE A1
RESULTS OF CONTROL VARIABLES

	Dependent variable is:						
	ln(total assets) (1)	Total assets growth (2)	ln(1 + friends) (3)	ln(total assets) (4)	Total assets growth (5)	ln(1 + bank loans) (6)	Profits (7)
Property rights index	0.108 (0.073)	0.016 (0.012)	0.200 (0.080)**				
ln(1 + friends)				0.183 (0.064)***	0.029 (0.013)**	0.213 (0.056)***	0.243 (0.068)***
Enterprise owner's education	0.324 (0.081)***	0.055 (0.013)***	0.011 (0.057)	0.325 (0.074)***	0.056 (0.013)***	−0.013 (0.095)	0.015 (0.094)
Enterprise owner's age	0.025 (0.005)***	0.002 (0.001)	0.015 (0.013)	0.027 (0.007)***	0.001 (0.001)	0.011 (0.012)	−0.010 (0.013)
Previously a private firm manager	0.033 (0.232)	0.001 (0.051)	0.150 (0.155)	0.122 (0.191)	0.004 (0.050)	−0.296 (0.199)	0.621 (0.238)**
Initial value of total assets (log)	0.611 (0.060)***	−0.066 (0.011)***	0.046 (0.037)	0.506 (0.076)***	−0.072 (0.012)***	0.147 (0.054)**	−0.031 (0.107)
Enterprise age (log)	1.010 (0.125)***	−0.209 (0.048)***	0.118 (0.120)	0.690 (0.114)***	−0.224 (0.069)***	0.205 (0.147)	0.260 (0.351)
Privatized from an SOE	−0.187 (0.161)	−0.032 (0.025)	0.006 (0.127)	0.096 (0.174)	0.016 (0.042)	−0.086 (0.170)	−0.365 (0.430)
Expected profitability (log)	2.204 (0.717)***	0.351 (0.159)**	0.910 (0.964)	1.689 (0.736)**	0.327 (0.224)	−0.201 (1.109)	8.143 (1.677)***
Previously a government/ Party official			0.252 (0.196)	0.198 (0.118)	0.025 (0.030)	−0.088 (0.174)	0.179 (0.237)
Previously an SOE manager			0.131 (0.152)	−0.065 (0.128)	0.000 (0.031)	−0.220 (0.132)	0.056 (0.235)

TABLE A1
CONTINUED

	Dependent variable is:						
	ln(total assets) (1)	Total assets growth (2)	ln(1 + friends) (3)	ln(total assets) (4)	Total assets growth (5)	ln(1 + bank loans) (6)	Profits (7)
Family's political capital			0.208 (0.123)	−0.421 (0.105)***	−0.067 (0.026)**	0.362 (0.151)**	0.041 (0.252)
SOEs are one's major competitors			0.462 (0.127)***	0.044 (0.160)	−0.002 (0.034)	0.303 (0.120)**	−0.026 (0.211)
Time spent on officials				−0.008 (0.009)	−0.000 (0.001)	−0.006 (0.007)	−0.006 (0.016)
Entertainment cost				0.002 (0.000)***	0.000 (0.000)***	0.001 (0.000)	0.001 (0.000)***
Prefectural GDP per capita			−0.162 (0.141)				
Constant	−6.859 (2.029)***	−0.208 (0.336)	−3.436 (2.245)	−3.731 (2.216)	0.099 (0.599)	−0.436 (3.039)	−8.861 (3.853)**
Sector dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Prefecture dummies				Yes	Yes	Yes	Yes
R^2	0.47	0.31	0.14	0.62	0.52	0.28	0.23
No. of observations	492	291	469	451	260	441	447

Notes
All results are OLS. Robust standard errors clustered at the prefecture level are in parentheses.
*, **, *** indicate significant at 10%, 5%, 1%, respectively.

TABLE A2
PROPERTY RIGHTS AND ENTERPRISE GROWTH: ALTERNATIVE MEASURES OF ENTERPRISE GROWTH

	Dependent variable is:					
Property rights are measured (separately) by:	ln(total fixed assets) (1)	Total fixed assets growth (2)	ln(total employment) (3)	Total employment growth (4)	ln(total sales volume) (5)	Total sales volume growth (6)
Property rights index	−0.098 (0.166)	−0.009 (0.026)	−0.082 (0.088)	0.001 (0.013)	−0.093 (0.167)	−0.022 (0.022)
Difficulty in obtaining bank loans	−0.070 (0.125)	−0.007 (0.022)	−0.063 (0.070)	0.000 (0.010)	−0.069 (0.131)	−0.018 (0.021)
Difficulty in obtaining land	−0.054 (0.143)	0.001 (0.023)	−0.063 (0.071)	0.002 (0.011)	−0.075 (0.142)	−0.018 (0.017)
Difficulty in obtaining other resources	−0.063 (0.107)	−0.006 (0.019)	−0.057 (0.058)	0.000 (0.009)	−0.061 (0.109)	−0.016 (0.016)
Over-regulation	−0.052 (0.132)	0.000 (0.022)	−0.054 (0.068)	0.003 (0.011)	−0.070 (0.136)	−0.018 (0.017)
Taxes and fees	−0.040 (0.103)	0.000 (0.018)	−0.042 (0.055)	0.002 (0.009)	−0.054 (0.107)	−0.015 (0.016)

Notes
All results are OLS. All variables of property rights are measured at the local level in 1994, i.e. the mean value of property rights for all but one (n - 1) of the enterprises located in the same prefecture, and are instrumented by mineral abundance. All regressions control for enterprise owner's educational level, age, whether previously a private firm manager, initial enterprise size, enterprise age, whether privatized from an SOE, expected profitability, and sector dummies. Robust standard errors clustered at the prefecture level are in parentheses.

TABLE A3
PROPERTY RIGHTS AND ENTERPRISE GROWTH: ALTERNATIVE MEASURES OF PROPERTY RIGHTS

	Dependent variable is:			
	ln(total assets) OLS (1)	Total assets growth OLS (2)	ln(total assets) 2SLS (3)	Total assets growth 2SLS (4)
Panel A. Property rights (dummy, local level) are measured separately by:				
Property rights index	0.314 (0.206)	0.055 (0.038)	−0.199 (0.410)	−0.029 (0.074)
Difficulty in obtaining bank loans	0.212 (0.207)	0.034 (0.041)	−0.203 (0.432)	−0.029 (0.077)
Difficulty in obtaining land	−0.074 (0.206)	−0.009 (0.037)	−0.106 (0.343)	−0.004 (0.061)
Difficulty in obtaining other resources	0.085 (0.182)	0.025 (0.034)	−0.166 (0.330)	−0.022 (0.056)
Over-regulation	0.045 (0.195)	0.016 (0.032)	−0.091 (0.286)	−0.004 (0.048)
Taxes and fees	−0.139 (0.188)	0.012 (0.029)	−0.138 (0.416)	−0.006 (0.069)
Panel B. Property rights (enterprise level) are measured separately by:				
Property rights index	0.026 (0.022)	0.005 (0.003)*	−0.069 (0.186)	−0.007 (0.025)
Difficulty in obtaining bank loans	−0.043 (0.047)	−0.008 (0.009)	−0.094 (0.185)	−0.016 (0.037)
Difficulty in obtaining land	0.012 (0.020)	0.007 (0.004)	−0.012 (0.171)	−0.002 (0.024)
Difficulty in obtaining other resources	0.042 (0.025)	0.006 (0.003)*	−0.068 (0.143)	−0.010 (0.028)
Over-regulation	0.043 (0.029)	0.005 (0.005)	−0.017 (0.136)	0.001 (0.026)
Taxes and fees	0.041 (0.021)*	0.005 (0.004)	−0.001 (0.116)	0.002 (0.015)

Notes
All regressions control for enterprise owner's educational level, age, whether previously a private firm manager, initial enterprise size, enterprise age, whether privatized from an SOE, expected profitability, and sector dummies. In columns (1) and (2) of Panel B, prefectural dummies are fully controlled for. In columns (3) and (4), the variables of property rights are instrumented by mineral abundance, and the variable 'SOEs are one's major competitors' and prefectural GDP per capita in 1994 are controlled for. Robust standard errors clustered at the prefecture level are in parentheses.
*, **, *** indicate significant at 10%, 5%, 1%, respectively.

TABLE A4
PRIVATE ENTERPRISE OWNERS' ASSESSMENT OF THE IMPORTANCE OF POLITICAL CONNECTIONS FOR ENTERPRISE DEVELOPMENT

Questions pertinent to the importance of political connections:	% of 'yes' answers
Whether political connections can facilitate access to resources	68.88
Whether political connections can reduce regulatory burdens	66.54
Whether political connections can reduce the government's 'grabbing hand'	54.51
Whether political connections are crucial for enterprise survival and development	70.36

TABLE A5
CORRELATION BETWEEN FRIENDS AND OTHER CONVENTIONAL MEASURES OF POLITICAL CONNECTIONS

Conventional measures of political connections:	Membership of the Chinese Communist Party	Membership of the People's Congress	Membership of the Chinese People's Political Consultative Conference	Previously a government official before starting private business	Grades of the strength of political connections (0–4)
Friends	0.130***	0.168***	0.355***	0.131***	0.318***
	(0.004)	(0.0002)	(0.000)	(0.004)	(0.000)

Notes
Strength of political connections was graded on a scale of 0 to 4—with 4 indicating very strong connections—by aggregating four dummy variables representing membership of the Chinese Communist Party, membership of the People's Congress, membership of the Chinese People's Political Consultative Conference, and whether previously a government official before starting private business. *p*-values in parentheses.
*** indicates significant at 1%.

TABLE A6
PROPERTY RIGHTS AND POLITICAL CONNECTIONS: ALTERNATIVE MEASURES OF PROPERTY RIGHTS

	Dependent variable is ln(1 + friends)	
	OLS	2SLS
	(1)	(2)
Panel A. Property rights (dummy, local level) are measured separately by:		
Property rights index	0.483 (0.175)**	0.792 (0.342)**
Difficulty in obtaining bank loans	0.314 (0.193)	0.812 (0.384)**
Difficulty in obtaining land	0.346 (0.195)*	0.713 (0.256)**
Difficulty in obtaining other resources	0.420 (0.189)**	0.637 (0.254)**
Over-regulation	0.535 (0.173)***	0.578 (0.217)**
Taxes and fees	0.423 (0.219)*	0.882 (0.480)*
Panel B. Property rights (enterprise level) are measured separately by:		
Property rights index	0.057 (0.033)*	0.443 (0.168)**
Difficulty in obtaining bank loans	0.036 (0.032)	0.240 (0.133)*
Difficulty in obtaining land	0.055 (0.031)*	0.343 (0.144)**
Difficulty in obtaining other resources	0.067 (0.034)*	0.264 (0.108)**
Over-regulation	0.058 (0.028)*	0.370 (0.158)**
Taxes and fees	0.052 (0.028)*	0.304 (0.124)**

Notes
All regressions control for enterprise owner's educational level, age, whether previously a private firm manager, initial enterprise size, enterprise age, whether privatized from an SOE, whether previously a government/Party official, family's political capital, expected profitability, the variable 'SOEs are one's major competitors', and sector dummies. In column (1) of Panel A, we control for prefectural GDP per capita in 1994, whereas in column (1) of Panel B, we control for the prefectural dummies instead. In column (2) (of both panels) the variables of property rights are instrumented by mineral abundance, plus we control for prefectural GDP per capita in 1994. Robust standard errors clustered at the prefecture level are in parentheses.
*, **, *** indicate significant at 10%, 5%, 1%, respectively.

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We alone are responsible for any remaining errors.

NOTES

1. Calculated from the *Statistical Yearbook of China* (National Bureau of Statistics of China 2009, p. 487).
2. A notable example is bank loans—a sector that remains heavily regulated if not completely controlled by the government (Che 2002; Brandt and Li 2003; Bai *et al*. 2006). Policy in that sector still favours state-owned enterprises.
3. The variation in the costs of exchange across countries provides *prima facie* evidence that firms are patently aware of the costs of doing business within the specified institutional environment in which their businesses are embedded. For instance, Djankov *et al*. (2002) find that the regulation of business entry varies from 2 days, 2 procedures and a fee of $280 in Canada, to 154 days, 12 procedures and $11,612 in Austria. See also Benham and Benham (2000) and de Soto (1989) for more comparative evidence on the costs of exchange.
4. The difficulties that private enterprises have experienced with bank lending have been a long-standing problem, according to Justin Y. Lin, then senior vice president of the World Bank (Lin 2009).

5. In Zhanjiang prefecture, Guangdong province, a private mining enterprise went bankrupt in 2003, allegedly because of the excessive fees and 'penalties' extorted from it by the Municipal Land and Resources Bureau (*Nanfang Daily* online edition, 10 January 2005). As another example, the owner of a private firm that produces wrapping paper claimed that the taxes and fees levied on it were so hefty that they had put a severe dent (of more than 50%) in his profits (*People's Daily* online edition, 14 November 2011).
6. This was allegedly the case in Shijiazhuang prefecture, the capital of Hebei province, where a private enterprise spent nearly three years collecting a total of 166 departmental approvals in order to develop a real estate project, but missed the opportunity to do so by the time the project was given the green light (*Xinhua News*, 21 February 2009).
7. 'Constraint on the executive' refers to the procedural rules constraining state action, which is a conventional measure of a country's quality of property rights institutions used in various cross-country studies of institutional environment (e.g. Acemoglu and Johnson 2005). In addition, we also use two alternative measures of a country's quality of property rights institutions—Political Risk Services' assessment of protection against government expropriation in a country, and the Heritage Foundation's assessment of private property protection. These alternative measures also indicate a weaker property rights environment in China relative to the global average.
8. Calculated from the *Statistical Yearbook of China* and the *Yearbook of Industry and Commerce Administration of China*, 1989–2010, respectively.
9. For instance, total assets of these enterprises vary enormously, from 20,000 to 623.68 million yuan (1 yuan approximately equals 0.61 USD), with the mean being 23.31 million yuan.
10. As the institutional environment in which an enterprise is embedded may be a consequence of enterprise growth, we use enterprise owners' perceptions of the past property rights environment to reduce the reverse causality problem. To check robustness, we also measured enterprise owners' perception of the current property rights environment (circa 2004). The results are strikingly similar and hence not separately reported.
11. Despite China's ongoing reforms, the government even today still closely regulates many key strategic sectors such as oil and coal production, rail and air transport, and telecommunications.
12. The correlation coefficient between the property rights environment of an enterprise and that faced by its peers in the same prefecture is 0.28 at the 1% level of significance.
13. Property rights vary across regions for several reasons. An important one is that at the outset of China's economic reforms (circa 1978), the two provinces in the south—Guangdong and Fujian—were given permission to experiment with market reforms in the designated Special Economic Zones (C. Xu 2011; Vogel 2011). Where economic growth was given greater emphasis, the career incentives of officials in spurring economic growth (the so-called 'jurisdictional yardstick competition' or simply 'tournament') would likely be stronger. A related reason pertains to the dominance of SOEs. Specifically, property rights are likely weaker for private firms in an environment where, due to historical reasons, the SOEs account for a larger share of the regional economy. For instance, Jiangsu, Zhejiang and Guangdong were among the provinces with the lowest share of employment in the state sector at the outset of the reforms (circa 1980).
14. For example, Fan *et al.* (2010) constructed two provincial indices, namely, 'lesser government intervention' and 'lesser tax burden'. Measured at the same (provincial) level, we find a strong correlation between our measures of property rights and their two indices.
15. Annual growth rate is a more relevant proxy because it is also a measure of investment growth, which arguably is strongly correlated with property rights (Laeven and Woodruff 2007).
16. Enterprise expected profitability is proxied by the mean level of enterprise profits in 2000–3 using all but one of the enterprises within the same sector in the same prefecture. The profit level of each enterprise was an ordinal variable from 1 to 7, with a higher score indicating higher profits.
17. SOE dominance is measured by the proportion of industrial output accounted for by SOEs in a prefecture in 2003. The pertinent data are obtained from the *Statistical Yearbook of China's Regional Economy* (2004). Weak property rights are measured by the property rights index in 2004.
18. China was predominantly an agricultural economy before 1949 (Sun 1983; Lin 1994). It was not until the mid-1950s, with the Chinese Communist Party putting in place a 'socialist industrialization' policy, that a heavy industry begin to develop in earnest.
19. The equation for calculating the index of mineral abundance is $M_i = \sum_{j_2=1}^{2} \sum_{j_1=1}^{n} \alpha \cdot N$, where M_i is the index of mineral abundance at the prefecture level, α is the reserve level, N is the number of reserve sites corresponding to each reserve level, j_1 indexes the reserve level–site combinations in contiguous prefectures, and j_2 indexes the mineral types.
20. We also regress the proportion of SOEs in total industrial output on mineral abundance using the national sample, which consists of 284 prefectures, and obtain strikingly similar results. (The pertinent regression results are not shown separately, but can be made available on request.) This lends further credence to our argument regarding the role played by minerals abundance in the regional distribution of enterprise ownership.
21. The results from using the full sample are strikingly similar and hence not reported.
22. Of course, given the small number of observations (27 prefectures), the result should be interpreted with caution.

23. For robustness, we also restrict the sample to those enterprises whose owners had reported the extreme scores of 1 (in the case of extremely strong property rights) and 10 (for extremely weak property rights), and compare the difference in growth between these two particular groups of enterprises. We find no differences between these two groups, and omit the results.
24. To save space, we report only the results using total assets and its growth rate as the measures of enterprise growth. The results using other measures of enterprise growth are similar.
25. This is certainly the case in transitional China. For instance, the average returns on capital for private enterprises amounted to 28% during the initial period of the reform, which is greater than the earnings in a mature market economy (of 9–15% for small businesses in the USA in 1994) (McMillan and Woodruff 2002).
26. In China, it is not unusual for private enterprise owners to be hassled by officials even though they have no intention whatsoever of cultivating connections with them.
27. The transaction costs of doing business notwithstanding, the crux is whether such costly endeavours will eventually deliver the benefits desired by the private entrepreneurs. Fortunately, although some government officials may have a greater penchant for accepting bribes, they are likely prevented from doing so excessively by the mechanism employed to intimately connect job promotion to GDP growth, namely the 'jurisdictional yardstick competition' (Maskin *et al*. 2000; Li and Zhou 2005; C. Xu 2011). Thus perhaps it is this concern for promotion that renders political connections a potentially more viable means of mitigating the adverse effect of policy discrimination.
28. According to the Chinese constitution, the National People's Congress is China's legislature. It is nominally the highest organ of state power in China, and it enacts laws and policies and elects top central government officials. Local People's Congresses are superficially empowered to elect officials that correspond in status to their own administrative levels, and to draft and approve local laws and policies. The People's Political Consultative Conference is officially an advisory, consultative body assisting the Communist Party and governments in the implementation of policy, invigilating the performance of government departments and helping in the enforcement of China's constitution and laws and regulations.
29. Of course, we do not assume or expect that political connections would be able to resolve all of the problems caused by weak property rights, but rather assume that they provide a way for private enterprise owners to navigate the harsh business environment.
30. We are thus not comparing the economic performance of firms conducting business in a weak property rights environment with those doing so in a more friendly institutional setting. Rather, we are interested in how some firms, given the weak property rights environment that they face, strive to overcome such barriers in order to improve profitability—in short, we are comparing firms that operate within (more or less) the same institutional setting.
31. Ideally, to check the robustness of our 'friends' measure, we should correlate it with other—alternative and more precise—measures such as whether a firm is state-owned and whether the CEO is appointed by the government (Cull *et al*. 2015). Since our survey does not contain these questions, we are unable to correlate them with our 'friends' measure.
32. One may also be concerned with the issue of selection bias, which would be the case if sample firms in regions of weak property rights are over-represented by those with political connections. While 81.6% of the firms in the weak property rights region indicated that they did have 'friends' in the government/Party, a comparable 79% of the firms in regions characterized by strong property rights said the same. This suggests that there is unlikely to be any selection bias in our sample.
33. According to a survey of private firms in central and western China in 2012, over 90% of the 1407 firms surveyed reported that they had successfully evaded tax (National School of Development, Peking University and Alibaba Group, 2012).
34. In equation (3), political connections ($Friends_i$) can also be endogenous; they may easily be affected by enterprise growth, which is clearly a cause for concern. And again, any observed relationship between political connections and enterprise growth may be accounted for by some unobserved, omitted factors. So the relationship in equation (3) cannot be taken as *prima facie* causal.
35. As our survey does not separately enumerate the expenditure on entertaining the officials, our measure of entertainment costs includes also the amount expended on activities conducted with one's business partners. In other words, the effect of entertainment cost is likely exaggerated in our estimation and should thus be interpreted with caution (perhaps as representing the upper bound).
36. The results obtained from using total fixed assets, employment, sales volume, and their growth rates as alternative measures of enterprise growth are strikingly similar and hence not separately reported.
37. While our survey is reticent on the amount of taxes and fees levied on each private enterprise, other studies do find that political connections have reduced the tax burden of private firms (Wu *et al*. 2012).
38. Another interesting finding is that family's political capital has a significant but negative effect on enterprise growth (columns (4) and (5) of Appendix Table A1). A plausible explanation for this unexpected finding is that, in contrast to those who deliberately develop connections to foster growth, those who have inherited political resources from the previous generation(s) are perhaps less competent or willing to develop their own families' businesses. Our conjecture finds support in the evidence that while family's political capital has a significantly positive effect on obtaining bank loans, it has no effect on profits (columns (6) and (7) of Appendix Table A1).

39. The results obtained from using total fixed assets, employment, sales volume, and their growth rates as alternative measures of enterprise growth are strikingly similar and hence not separately reported.

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