China as a Regulatory State

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Abstract

Market economy models differ in the degree of the power of government vis-à-vis market in the economy, ranging from private orderings, to private litigations through courts, and regulatory state (Glaeser and Shleifer, 2002, 2003; Djankov et al., 2003). This paper, by using data from a survey of 3,073 private enterprises in China, constructs an index to quantify the power of government vis-à-vis market, which varies across China's regions. It is found that enterprises located in regions with greater powers of government vis-à-vis market enjoy better performance, suggesting that regulatory state is an appropriate model of a market economy for China.

1 Introduction

Many developing economies have started to introduce private ownership and market competition after failures of experimenting with state ownership in much of the twentieth century. In the transition from state ownership to a market economy, however, there are different ideas and practices. The Washington Consensus, on one extreme, proposes to "stabilize, privatize, and liberalize", i.e., maintaining macroeconomic stability, pushing for domestic liberalization, privatization and openness to international trade, and drastically reducing the role of the state in the economic sphere.[1] Meanwhile, China has followed a different route: the role of government in the economy has remained significant after three decades of economic reforms (Walder, 1995; Rodrik, 2006).

The different approaches to transiting toward a market economy could reflect some fundamental differences in the understanding of what a market economy should look like. Indeed, there are three distinct models of a market economy, i.e., *private orderings*, *private litigation through courts*, and *regulatory state*, which involve an increasing power of government vis-à-vis market in the economy. Glaeser and Shleifer (2002, 2003), and Djankov, Glaeser, La Porta, Lopez-de-Silanes, and Shleifer (2003) offer a general framework for understanding the choice among the different models of a market economy. It is argued that, for a market economy to function properly, governments should provide protection to investors against expropriation by thieves, competitors, or tort-feasors, which would cause disorder costs (Hobbes, 1651). At the same time, governments should refrain from becoming expropriators themselves, which could lead to dictatorship costs. The control of disorder costs may lead to greater dictatorship while the containment of government abuses may bring larger disorder (for details see Figure 1, which is copied from Figure 1 of Djankov, Glaeser, La Porta, Lopez-de-Silanes, and Shleifer, 2003). The challenge is to find an appropriate model to balance these two costs simultaneously.

Clearly, the Washington Consensus is leaned toward regarding *private orderings* and *private litigation through courts* as the most ideal models of a market economy so that it advocates for minimizing the role of government in the economy. However, these target models of a market economy require a host of preconditions for them to function properly. Specifically, for *private orderings* to be an efficient choice, it requires protection of pri-

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[1] This has been the guiding principle for economic reforms in most of the former socialist economies, Latin America, Africa, and South and East Asia (Williamson, 1989; Blanchard, Dornbusch, Krugman, Layard and Summers, 1992; Blanchard, Boycko, Dabrowski, Dornbusch, Layard and Shleifer, 1993; Rodrik, 2006).

vate property rights of one market participant against another. Meanwhile, *private litigation* hinges upon independent judges who are immune to influences from the rich and the politically-connected. In the former socialist economies, however, the property rights protection for private enterprises has yet to be formally established. Judges, who were not needed at all in the central-planning system, are newly appointed by the state and their independence is dubious (Clarke, Murrell, and Whiting, 2008). Indeed almost all other developing economies share the same lack or weakness of the preconditions that are required for the models of a market economy (i.e., *private orderings* and *private litigation through courts*) proposed by the Washington Consensus. This might be the reason why developing economies following the Washington Consensus did not display impressive economic performance (Rodrik, 2006). And it may well be the case that *regulatory state* (i.e., significant power of government vis-à-vis market in the economy) could be an optimal model for these economies.

The success of economic reforms in countries like China, India and Vietnam has often been interpreted as the victory of an incremental and cautious reform procedure. However, from the perspective of the choice of a right model of a market economy, it could well be the result of having chosen a suitable target model of a market economy (i.e., *regulatory state*) that these countries are moving toward. Albeit a convincing argument, there are few empirical studies on the specific models of a market economy that these economies have chosen (e.g., Frye and Shleifer, 1997; Hoff and Stiglitz, 2004). In general, empirical evaluations of the various models of a market economy are challenging because of the difficulty in quantifying the power of government vis-à-vis market in the economy. In this paper, we fill in the void by quantifying the power of government vis-à-vis market, and establish that *regulatory state* is an appropriate model of a market economy for China.

The data used in this study comes from a survey conducted in 1999 containing a sample of 3,073 privately-owned enterprises in China. In the survey, there is a question regarding how an entrepreneur would resolve business disputes with others. The available answers are: (i) doing nothing; (ii) negotiating between themselves; (iii) seeking help from private networks; (iv) court ruling; and (v) seeking government help. We group these answers into three categories corresponding to the three models of a market economy proposed by Glaeser and Shleifer (2002, 2003), and Djankov, Glaeser, La Porta, Lopez-de-Silanes, and Shleifer (2003): *private orderings* for answers (i), (ii), and (iii); *private litigation through courts* for answer (iv); and *regulatory state* for answer (v).[2]

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[2]In Section 2, we will discuss China's political structure and regulation system, and

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We first assign an ordinal value to each enterprise corresponding to the specific category of the response made by the entrepreneur, i.e. value 1 for *private orderings*, value 2 for *private litigation through courts*, and value 3 for *regulatory state*. Then we take the average of such values of enterprises located in a region (weighted by the number of employees) to quantify the power of government vis-à-vis market in that region,[3] with a higher value indicating a greater power of government vis-à-vis market.

We find that private enterprises located in regions with greater powers of government vis-à-vis market turn out to have better enterprise performance. These findings remain robust when the regression models are modified to address typical technical concerns in empirical studies, such as omitted variables and reverse causality issues, alternative measures of the power of government vis-à-vis market, and different sub-samples.[4] Our results suggest that regulatory state is an appropriate model of a market economy for China.

One may interpret our results as that those enterprises located in regions with greater powers of government vis-à-vis market conduct more rent seeking activities and thus achieve better performance. We investigate this possibility by looking at various channels (i.e., input procurement, availability of production locations, supply of electricity and water, recruitment of skilled labor, sales of products, sales of services, and access to bank loans) in which enterprises may obtain favors through rent seeking activities. It is found that enterprises located in regions with greater powers of government vis-à-vis market do not obtain any favors along these channels, thereby ruling out the rent seeking explanation of our results.

One may still be curious to know why China's regional government officials have incentives to enforce private contracts and resolve business disputes. Here we can draw insights from a large literature on China's economic reform. It is argued that China's central government has adopted fiscal decentralization policy by delegating substantial discretion over regional economies to regional governments while maintaining its strict political control over regional governments, especially in the appointment and promotion of regional government officials. Under this institutional arrangement, the

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explain why we take reply (v) as an indicator of *regulatory state*.

[3]Region here refers to 22 provinces, 4 province-level municipalities, and 5 minority autonomous regions in China. And the government here refers to the regional governments rather than the central government.

[4]To deal with omitted variable concern, we control for a host of variables related to entrepreneurial characteristics, enterprise characteristics, regional characteristics, and industry dummies. To further address the potential endogeneity problems, we use the distance between the capital city of each region and the national capital city of China - Beijing - as an instrumental variable for the power of government vis-à-vis market in the economy and carry out the two-stage-least-squares estimation.

regional government officials have incentives to cultivate satisfactory business environments and promote economic development so as to enhance their private benefits of being in power and the chances of being further promoted (e.g., Blanchard and Shleifer, 2001; Roland, Qian, and Xu, 2006; Clarke, Murrell, and Whiting, 2008).

Finally, we use our date set to test the general predictions of the theoretical framework proposed by Glaeser and Shleifer (2002, 2003) and Djankov, Glaeser, La Porta, Lopez-de-Silanes, and Shleifer (2003): an increase of disorder costs (i.e., expropriation by thieves, competitors, or tort-feasors) calls for a greater power of government vis-à-vis market whereas an increase of dictatorship costs (i.e., expropriation by governments) requires a lower power of government vis-à-vis market. Indeed, we find that enterprises facing more influential competitors (which implies higher disorder costs) perceive a greater need for the power of government vis-à-vis market whereas the opposite is found when enterprises face more expropriation by the governments (which implies higher dictatorship costs).

The rest of the paper is organized as follows. Section 2 offers a description of the features of China's political structure and regulation system. Section 3 discusses the data and variables. Empirical results and their interpretations are presented in Section 4. The paper concludes with Section 5.

2 China: From State Ownership to Regulatory State

At the end of 1978, China initiated its economic reform and started the transformation from a state-ownership-dominated central planning system towards a market economy system. For the Chinese reformers, private litigation through courts might not be a feasible target model, for it depends crucially on the adequacy of legislatures and courts. However, the formal legal institutions (i.e., courts), newly established as they were not needed at all under the central-planning system, are far from being independent and impartial (Clarke, Murrell, and Whiting, 2008; Cohen, 2008).

More importantly, laws and national ordinances enacted by the central government tend to be sketchy and incomplete. On the one hand, China is a large country with substantial variations in endowments, socioeconomic development and culture across regions. Thus it is difficult for the central government to enact unified laws and national ordinances applicable to all regions. On the other hand, it is challenging to develop comprehensive laws and national ordinances that could cope with fast-changing socioeconomic

environment as experienced during China's economic transition. For example, it took 12 years for the National People's Congress to pass the Law on Township and Village Enterprises (Clarke, Murrell, and Whiting, 2008). In addition, there are many unfilled gaps in the laws and national ordinances in the sense that some of the relevant issues are not stipulated in the laws and national ordinances (Eggleston, Posner, and Zeckhauser, 2000).

As laws and national ordinances are sketchy and incomplete, they are not applicable to cases without clarifying the meaning of laws and national ordinances. Under this situation, the power to interpret the existing laws and national ordinances, to adapt them to the changing circumstances, and to extend their application to new cases constitutes the de facto lawmaking power, which in turn is the cornerstone of contract enforcement (Pistor and Xu, 2002).

In the face of complicated and fast-changing environment, courts appear too slow to adapt to changes because they are designed to be reactive contract enforcers in the sense that they would not initiate legal proceedings but only respond to the initiation of another party. In contrast, government officials can exercise de facto lawmaking power by adapting rules to changing situations on a continuous basis and initiating enforcement procedures. They can proactively enforce contracts by interpreting laws and national ordinances, monitoring behavior, launching investigation and enjoining or sanctioning actions on their own initiative (Du and Xu, 2009).

In view of the size of the Chinese territory and population and the formidable task of economic administration, China's central government has developed a decentralized regulation system where regional government officials are motivated to assist the central government in conducting regulations. The central government has successfully utilized regional competition and the merit-based bureaucratic promotion system to motivate regional government officials to help carry out central government regulations (Du and Xu, 2008). In addition, regional government officials are granted discretionary power to adopt local decrees and rules on their own initiatives to promote local market economy development (Wu, 2007).

Indeed regional government officials played a key role in China's economic development and transition toward a market economy. They advocated entrepreneurship via policies and enhanced social awareness of a market economy through media and education; they promoted non-state ownership and provided reasonable protection for private property rights well before private property was legally acknowledged; they controlled the pace of marketisation and economic liberalization with the purpose of conducting economic reform in an orderly manner; and they carried out industry entry regulations, and issued industrial policies to make structural adjustment of industries (Wu,

2007; Fu and Peerenboom, 2008).

The involvement of regional government officials in the economy proves quite effective on average and is the most widely accepted system received by the public in China. This is particularly the case when the business dispute involves politically sensitive issues or hits the boundary of the established concepts of legality (Wu, 2007).[5] And this is also especially effective in regions lagging behind in marketization as local courts in those regions have less experience in handling private business disputes due to slower market economy development. Hence, in deciding cases, regional courts may have to refer certain issues to regional government officials and to defer to their interpretations. The regional government regulations, directives and guidelines have become China's "living constitution" (Fu and Peerenboom, 2008). Over the years, the Chinese public has become to rely on regional governments rather than regional courts for dispute settlement.

3   Data and Variables

The dataset used in this paper comes from the *Private Enterprise Survey* in China, which was conducted in 1999 jointly by the United Front Work Department of the Central Committee of the Communist Party of China, the All China Industry and Commerce Federation, and the China Society of Private Economy at the Chinese Academy of Social Sciences.[6]

Multi-stage stratified random sampling method is used in the Survey to achieve a balanced representation across all regions and industries in China. The total number of private enterprises to be surveyed was first determined. Afterwards, six cities/counties were selected from each of the thirty-one province-level regions (*i.e.,* the 22 provinces, 4 province-level municipalities and 5 minority autonomous regions), which included the capital city of each region, one district-level city, one county-level city, and three counties. Then the number of private enterprises to be surveyed in each region was calculated as the product of the region's share of private enterprises in the national total with the total number of private enterprises in the survey. The same method was used to determine the number of sample

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[5]However, the court system in China is found to have competently handled a large number of routine business dispute cases in which judicial independence is not an issue (Pei, 2001; Fu, 2003).

[6]This dataset has been used by other scholars, e.g., Bai, Lu, and Tao (2006) in studying the access to bank loans by private enterprises, Li, Meng, and Zhang (2006) in studying entrepreneurs and their political participation, and Du, Lu, and Tao (2008) in examining the impacts of property rights protection on enterprise diversification.

enterprises in every city/county or industry. Finally, private enterprises were randomly chosen from each sub-sample.

The initial sample size is 3,073 enterprises. After deleting observations with no industry code, no output and no employment figure, we obtain the final sample of 2,616 private enterprises. Table 1 shows the distribution of the initial sample and final sample across regions in China as well as the percentage of enterprises with complete information. Jiangsu, Shandong and Guangdong have the largest numbers of observations while Tibet, Qinghai and Ningxia have the smallest. The average percentage of enterprises with complete information across regions is 83.72% with standard deviation 0.086, which means the final sample is representative.

The dependent variable for our study is *Enterprise Performance*, measured by the logarithm of output per worker.[7] This is consistent with the convention in the literature investigating the impacts of the quality of institutions on economic performance and growth.[8]

The key explanatory variable in our study is the power of government vis-à-vis market in each region. There is one question in the Survey regarding how private entrepreneurs would deal with business disputes. The available answers are: (i) doing nothing; (ii) negotiating between themselves; (iii) seeking help from private networks; (iv) court ruling; and (v) seeking government help. We group them into three categories corresponding closely to the three alternative models of a market economy, as proposed by Glaeser and Shleifer (2002, 2003) and Djankov, Glaeser, La Porta, Lopez-de-Silanes, and Shleifer (2003): *private orderings* for answers (i), (ii), and (iii); *private litigation through courts* for answer (iv), and *regulatory state* for answer (v).

Here we take a broad definition of *regulatory state*, which includes not only enactment of laws and national ordinances, but also interpretation and

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[7]We can also use returns on capital or total factor productivity to measure enterprise performance. However, due to a lot of missing information on capital, we mainly use labor productivity for measuring enterprise performance in this study. In one of our robustness checks, we include the logarithm of capital-labor ratio as a control for enterprise performance in a reduced sample. That robustness check is equivalent to the use of total factor productivity as the measure of enterprise performance.

[8]For example, Hall and Jones (1999) use the logarithm of output per worker to study the effects of social infrastructures, i.e., institutions and government policies, on the cross-country differences in economic performance. Later studies such as Bockstette, Chanda and Putterman (2002) and Masters and McMillan (2002) follow suit. Acemoglu, Johnson and Robinson (2001, 2002) use logarithm of GDP per capita, which is similar in nature to the variable used here but at a more aggregate level, to study the effects of institutional quality on economic growth. Subsequent studies including Alcala and Ciccone (2004), Glaeser, La Porta, Lopez-de-Silanes and Shleifer (2004), Acemoglu and Johnson (2005) adopt the same country-level performance variable. Panda and Udry (2005) provide a good summary of the uses of variables in this literature.

enforcement of laws and national ordinances (e.g., Glaeser, Johnson, and Shleifer, 2001), which, in our view, is particularly relevant to the case of China. China has a centralized political system, in which the central government appoints the regional government officials and enacts laws and national ordinances for them to guide their administrations. Due to the substantial variations in endowments, socioeconomic development and culture across regions as well as fast-changing socioeconomic environments, however, it is difficult for the central government to enact unified and comprehensive laws and national ordinances applicable to all regions and to various circumstances. As a result, laws and national ordinances enacted by the central government tend to be sketchy and incomplete, and need to be interpreted and enforced by the regional governments so as to make them more adapted to local circumstances. Seeking government help in resolving business disputes involves the interpretation and enforcement of laws and national ordinances by the regional governments. Hence, we take "seeking government help in business disputes" as an indicator of *regulatory state*.

We then assign an ordinal value to each enterprise corresponding to the specific category of the response made by the entrepreneur, i.e. value 1 for *private orderings*, value 2 for *private litigation through courts*, and value 3 for *regulatory state*. A variable called *Power of Government vis-à-vis Market* is thus constructed for each region based on the average value of the power of government vis-à-vis market perceived by the enterprises located in that region (weighted by the number of employees),[9] with a higher value indicating a greater power of government vis-à-vis market.[10] There are variations in the power of government vis-à-vis market across China's regions, with a mean of 1.31 and a standard deviation of 0.27.

To alleviate the concern of omitted variables, we include a host of variables that may affect enterprise performance. The background and capability of entrepreneurs can be important determinants of private enterprise performance. Therefore, we include some conventional managerial human capital variables like *Age* (the age of the entrepreneur by the end of 1999), *Educa-*

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[9]Weighted averages (by either the number of employees or output) are used to take into account the possibility that larger enterprises could be more likely to use "seeking government help" or "court ruling" for resolving business disputes as their larger business proceeds could more likely cover the institutional fixed costs in dealing with courts and government entities. Nonetheless the qualitative nature of our main results remains when no weights are used.

[10]Note that enterprise-level perception about the power of government vis-à-vis markets could be influenced by some features of enterprises and entrepreneurs, and thus regressions using such a variable may suffer from some endogeneity issues. Nonetheless, as a robustness check we will carry out instrumental variable estimation when enterprise-level perception about the power of government vis-à-vis market is used as an explanatory variable.

tion (years of formal schooling), and *Managerial Experiences* (the number of years an entrepreneur had held a managerial position before he or she started his or her own business), and some political participation variables such as *CPC Membership* (a dummy variable taking value one if the entrepreneur is a member of the Chinese People's Congress and zero otherwise) and *CP-PCC Membership* (a dummy variable taking value one if the entrepreneur is a member of the Chinese People's Political Consultative Conference and zero otherwise), *Government Cadre* (a dummy variable taking value one if the entrepreneur used to be a government official and zero otherwise), and *SOE Cadre* (a dummy variable taking value one if the entrepreneur used to be a manager in state-owned enterprises). We also control for enterprise characteristics, such as *Enterprise Size* (the logarithm of the number of employees in each enterprise) and *Enterprise Age* (the logarithm of the number of years an enterprise had been established by the end of 1999), that have been suggested to be important for enterprise performance, and include industry dummies. Finally, regional characteristics such as *Logarithm of GDP per capita* and *Logarithm of Population*, are also included.

To further address the potential endogeneity issue, we adopt the instrumental variable approach. Specifically, we use the distance between the capital city of each region and the national capital city of China - Beijing - as an instrumental variable for the power of government vis-à-vis market (details will be discussed in Section 3.2).

Summary statistics of all key variables are given in Table 2.

4   Empirical Analysis

4.1   Main Results

To investigate the impacts of the power of government vis-à-vis market on enterprise performance, we estimate the following equation:

$$y_{eir} = \alpha + \beta G_r + X'_{eir}\gamma + \varepsilon_{eir} \tag{1}$$

where y_{eir} is the performance of enterprise e in region r and industry i, G_r represents the power of government vis-à-vis market in region r, X'_{eir} is a vector of control variables (i.e., entrepreneurial and enterprise characteristics, regional characteristics, and industry dummies), and ε_{eir} is a random error term.

In general the standard errors for micro-level data need to be adjusted for possible clustering to deal with the heteroskadasticity problem (e.g., Liang and Zeger, 1986). However, in practice, when the number of clusters is

small (i.e., less than 42), the clustered standard errors could be misleading (e.g., Wooldridge, 2003, 2006; Angrist and Pischke, 2008). As the number of clusters in our study is 31, we follow Angrist and Lang (2004) to use the White-robust standard errors, i.e., HC_1 (White, 1980; MacKinnon and White, 1985).

Table 3 shows the ordinary-least-squares estimation results for equation (1) regarding the impacts of the power of government vis-à-vis market on enterprise performance. Column 1 reports our main regression results that *Power of Government vis-à-vis Market* produces a positive and statistically significant effect on enterprise performance.

Our results are robust when control variables related to industry dummies, regional characteristics, entrepreneurial characteristics and enterprise characteristics are included stepwise (Columns 2-5 of Table 3). The coefficients of control variables also make sense. It is found that an entrepreneur with a higher level of education and more years of managerial experience in state-owned enterprises enjoys better enterprise performance. It is also found that smaller enterprises exhibit higher impetus to growth.

The basic message conveyed by Table 3 is clear: A greater power of government vis-à-vis market in the economy enhances enterprise performance. The result suggests that *regulatory state* is an appropriate model of a market economy for China. This is not surprising as China lacks secure protection of private properties and independence of judges, which are essential for the functioning of *private orderings* and *private litigation through courts.*

4.2 Instrumental Variable Estimation

The estimation results in Table 3 could be biased due to the endogeneity issues. For example, we may not exhaust all the possible variables that correlate with both the power of government vis-à-vis market and enterprise performance. Meanwhile, enterprises with better performance could receive more attention and "protection" from local governments and therefore they seek government help in dispute settlements more often.

To address these potential endogeneity issues, we adopt the instrumental variable estimation strategy. Specifically, the instrumental variable used is the distance between the capital city of each region and the national capital city of China, Beijing, where the central government is located.

Over thousands of years the Chinese political system has been characterized by the centralization of political power during most of the periods. The central government keeps the power to appoint regional government officials. It also issues various laws and national ordinances for them to guide the regional administrations. Because China is a large country with sub-

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stantial variations in endowments, socioeconomic development and culture across regions as well as experiencing fast changes in socioeconomic environment during its transition, unified and comprehensive laws and national ordinances may be ill-suited for the local conditions of some regions. Thus it is essential for regional government officials to interpret and enforce laws and national ordinances so as to make them more adapted to local circumstances. Meanwhile, it is more costly for the central government to frequently inspect local situations and monitor local bureaucrats in regions farther away from Beijing. Consequently, the higher degree of information asymmetry makes the central government more reliant on local officials in regional governance. Thus regional government officials in regions farther away from Beijing have greater de facto powers in running the regional economy. In particular, regional bureaucrats in regions farther away from Beijing are subject to less central control and have a greater degree of freedom in interpreting and enforcing laws and national ordinances. Indeed there is an old Chinese saying that "*The Mountains Are High and the Emperor is Far Away.*" It is thus expected that in regions farther away from Beijing, the power of regional government vis-à-vis market in the economy is greater.

Figure 2 shows the positive correlation between the power of regional government vis-à-vis market in the economy and the distance between regional capital city and Beijing. Table 4 presents the two-stage-least-squares estimation results. The first-stage regression results reported in Column 1 show that the distance between regional capital city and Beijing has a positive and statistically significant coefficient, which confirms our argument that in regions farther away from Beijing the power of government vis-à-vis market is greater. The relevance condition for our instrumental variable is further confirmed by the Anderson canonical LR statistic. And the Cragg-Donald F-statistic rules out the concern for weak instrument.[11]

Column 2 of Table 4 presents the second-stage regression results. The results reinforce our earlier findings and show that the power of government vis-à-vis market has a positive and statistically significant causal effect on enterprise performance. Our main results – the statistically significant positive impacts of the power of government vis-à-vis market on enterprise performance – remain robust when industry dummies, regional characteristics, entrepreneurial characteristics and enterprise characteristics are included as controls (in Columns 3-4 of Table 4).

In addition to satisfying the relevance condition, our instrumental variable also needs to meet the orthogonality condition, i.e., it does not affect

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[11]The Cragg-Donald F-statistic values for our regressions are significantly above the value of 10, which is considered as the critical value by Staiger and Stock (1997).

enterprise performance through channels other than the power of government vis-à-vis market. This, however, should not be a concern in our case, as there is no obvious correlation between the distance away from Beijing and regional characteristics that conceivably affect enterprise performance. The national capital, Beijing, is located in the northern-central area of the country with many regions lying to the north, south, west or east of the capital. For example, Shanghai has similar distance from Beijing as do Wuhan (the capital city of Hubei province) and Harbin (the capital city of Heilongjiang province). And Xining (the capital city of Qinghai province) and Changsha (the capital city of Hunan province) have similar distances from Beijing (for more information and comparison about the distance of regional capital from Beijing for each region, please see Figure 2). However, these regions have striking differences in regional characteristics, such as GDP per capita, population, education, resource endowments, climate conditions, and openness to international trade and investment. Therefore, distance from Beijing does not suggest any particular patterns of regional characteristics, which implies that our instrumental variable meets the orthogonality condition.

4.3 Robustness Checks

First, we investigate whether our main results are robust to alternative ordinal values assigned to the three categories of a market economy, *i.e.*, *private orderings*, *private litigations through courts*, and *regulatory state* in constructing the index of the power of government vis-à-vis market. In Section 2, we assigned values 1-3 to these three categories of a market economy with the purpose of showing an increasing power of government vis-à-vis market. One may argue that the ordinal values assigned look somewhat arbitrary. To make sure that the absolute value assigned to each category does not matter but the relative ranking is important, we experiment with different values attached to each category. In the first experiment, we give the value of 1 to *private orderings*, 2 to *private litigations through courts* and 10 to *regulatory state*. In the second experiment, we let *private orderings* be 1, *private litigation* be 9 and *regulatory state* be 10. In the third experiment, we assign values of 1, 5 and 10 to *private orderings*, *private litigations* and *regulatory state*, respectively.

Columns 2-4 of Table 5 summarize the estimation results when the above three alternative constructions for the power of government vis-à-vis market are used, while Column 1 simply replicates Column 4 of Table 4 as the benchmark for comparison. All the control variables are included in the regressions but not reported to save space. It is clear that our main results reported in Tables 3-4 remain robust when we vary the values assigned to

different categories of a market economy, which confirms that the exact value assigned to each category does not matter, but the relative ranking of the three categories is important.

Second, we use two alternative measures of the power of government vis-à-vis market: one is the index constructed by Fan, Wang, and Zhu (2003) on the power of government in the economy, with a higher value indicating a *lower* power of government in the economy, and the other is the ratio of government consumption over regional GDP, with a higher value indicating a greater power of government in the economy. Column 1 of Table 6 shows that the Fan-Wang-Zhu index is negatively correlated with the distance between regional capital city and Beijing (in Panel B of Column 1), and it has a negative and statistically significant causal effect on enterprise performance (in Panel A of Column 1). Column 2 of Table 6 shows that the ratio of government consumption over regional GDP is positively correlated with the distance between regional capital city and Beijing (in Panel B of Column 2), and it has a positive and statistically significant causal effect on enterprise performance (in Panel A of Column 2). These results are consistent with our earlier findings.

Third, we test the robustness of our results using two subsamples of our dataset. In the Survey, there is a question regarding the identity of the party with whom an enterprise is having business disputes. It could be: with customers, or suppliers, or government agencies. As disputes with government agencies could be qualitatively different from those with commercial partners, we restrict our sample to those observations with only commercial disputes. Column 3 of Table 6 shows that our central results remain robust to the use of this subsample. Moreover, as Qinghai and Ningxia have very few observations yet very high indices of the power of government vis-à-vis market (see Table 1 and Figure 2 for details), we thus exclude these two regions from our sample, and test if our results are possibly affected by these outliers. As shown in Column 4 of Table 6, our main results are robust to this subsample.

Fourth, it has been argued that enterprise performance could be affected by the capital-labor ratio. Unfortunately, there is quite a lot of missing information on the amount of capital employed by enterprises in our dataset. Nonetheless, we conduct a robustness test based on a reduced sample by including the logarithm of the capital-labor ratio as a control variable for enterprise performance. As shown in Column 5 of Table 6, our main results still hold in this subsample.[12]

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[12]The decrease in the magnitude and significance of the estimated coefficient could be due to the dramatic decrease of sample size.

Lastly, we use enterprise-level perception of the power of government vis-à-vis market as the key explanatory variable. Instrumental variable estimations shown in Column 6 of Table 6 reveal that our main results remain, i.e., the power of government vis-à-vis market continues to produce positive and statistically significant impacts on enterprise performance.

Overall, our robustness analysis as summarized in Tables 5-6 confirms our earlier finding that the power of government vis-a-vis market has a positive and significant causal effect on enterprise performance in China.

4.4 Does Rent Seeking Drive Our Results?

One may interpret our results as that those enterprises located in regions with greater powers of government vis-à-vis market conduct more rent seeking activities and achieve better enterprise performance through securing favors and protection from bureaucrats. Of course, asking for government's help in resolving business disputes could possibly reflect rent seeking activity. However, the issue is whether rent seeking is the dominant force that drives the positive relationship between the power of government vis-à-vis market and enterprise performance.

Presumably if rent seeking is the driving force, an enterprise located in a region with a greater power of government vis-à-vis market would most likely obtain favors from the government in the forms of lower production costs and/or easier sales of its product or service. In the Survey, there are questions regarding whether an enterprise has difficulties in the following six aspects of the enterprise operation: input procurement, availability of production locations, supply of electricity and water, recruitment of skilled labor, sales of product, and sales of service. The answers to these questions range from 1 to 3, with a higher value indicating less difficulties in the specific operation. In addition, we use the percentage of outstanding bank loans in an enterprise's total assets to measure the access to external finance. We conduct two-stage-least-squares regressions of these seven aspects of the enterprise operation on *Power of Government vis-à-vis Market* with the instrumental variable being the distance between the regional capital city and the national capital city of China, Beijing. As shown in Columns 1-7 of Table 7, all of the seven estimated coefficients are negative. These results suggest that enterprises located in regions with greater powers of government vis-à-vis market do not obtain favors in the forms of lower production costs and/or easier sales of its product or service.[13] In our opinion, these seven aspects we

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[13]Alternatively, we carry out another empirical test, in which these seven channel variables are included as additional control variables in the regression of *Enterprise Perfor-*

consider encompass all the important concerns of private enterprises in China. According to Asian Development Bank (2003), the most serious constraints encountered by private enterprises include the difficulty in getting access to external finance such as bank loans and the difficulty in recruiting skilled managers and technical staff. If rent seeking were the dominant force, at least some of the aspects we have examined should have turned out positive and significant estimated coefficients. Hence, we can largely rule out rent seeking as the primary force that drives our results.[14]

One may be curious to know why China's regional government officials have incentives to enforce private contracts and resolve business disputes for the sake of, as a net effect, improving business environment rather than rent seeking. Here we can draw insights from the recent studies on market-preserving federalism or regional decentralization in China's economic reforms (Blanchard and Shleifer, 2001; Roland, Qian, and Xu, 2006; Clarke, Murrell, and Whiting, 2008). It is argued that the Chinese government system is characterized by substantial devolution of administrative power from the central government to regional administrations, in which fiscal federalism or fiscal decentralization is one prominent feature. Nonetheless, at the same time the central government keeps the political power to appoint, promote or sack regional government officials. Officials in regions with better economic performance are more likely to be promoted. This regional decentralization under the control of the central government is most likely to generate regional competition for economic growth through various ways, one of which could be the interpretation and enforcement of laws and national ordinances by regional bureaucrats. This could explain to a large extent why rent seeking may not be the dominant force in shaping the nature of *regulatory state* in China.

4.5   A Comparative Statics Analysis

Our above empirical analysis is based on the theoretical framework proposed by Glaeser and Shleifer (2002, 2003) and Djankov, Glaeser, La Porta, Lopez-de-Silanes, and Shleifer (2003). To lend support for our empirical analysis, we test the general predictions of the theoretical framework regarding when there

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mance on *Power of Government vis-à-vis Market*. The regression results, not reported here but available upon request, show that there are no changes in the magnitude and significance of our key explanatory variable, *Power of Government vis-à-vis Market*, thereby ruling out the concern of rent seeking as the primary driving force for our main findings.

[14]Presumably, a regional government more involved in resolving business disputes is more likely to cultivate an institutional environment with better contract enforcement, which subsequently leads to higher productivities of enterprises located in that region.

is a need for a greater power of government vis-à-vis market in choosing the appropriate model of a market economy. As argued by Glaeser and Shleifer (2002, 2003) and Djankov, Glaeser, La Porta, Lopez-de-Silanes, and Shleifer (2003), the appropriate model of a market economy should balance disorder costs (which are caused by the expropriation by thieves, competitors, or tort-feasors) and dictatorship costs (which are caused by the expropriation by governments). Thus, a greater power of government vis-à-vis market is expected when disorder costs are higher and/or dictatorship costs are lower. The Survey contains information that allows us to gauge the disorder costs and dictatorship costs perceived by entrepreneurs, based on which we can carry out a comparative statics analysis.

In the Survey, one question asks entrepreneurs whether there exist influential producers in their industries that enjoy favorable market positions to facilitate input procurement and output sales and therefore they are dominant players in the market. It is expected that when facing such dominant competitors, private enterprises encounter higher disorder costs[15] and perceive a greater need for government regulations to alleviate market disorders (Glaeser and Shleifer, 2002, 2003; Djankov, Glaeser, La Porta, Lopez-de-Silanes, and Shleifer, 2003). We construct a dummy variable called *Influential Competitors*, and carry out an Ordered Probit regression of *Power of Government vis-à-vis Market* on *Influential Competitors* along with a set of control variables. As shown in Column 1 of Table 8, *Influential Competitors* has a positive and statistically significant estimated coefficient, which implies that the increase of disorder costs leads to a rise in the power of government vis-à-vis market as predicted by Glaeser and Shleifer (2002, 2003) and Djankov, Glaeser, La Porta, Lopez-de-Silanes, and Shleifer (2003).

In the Survey, another question asks entrepreneurs about the amount of extralegal payments to the government made by the enterprises. As argued by Johnson, McMillan and Woodruff (2002) and Cull and Xu (2005), extralegal payments to the government measures the extent of government expropriation. It is thus expected that enterprises facing higher extralegal payments to the government encounter higher dictatorship costs and perceive a lesser need for the power of government vis-à-vis market such as less government regulation (Glaeser and Shleifer, 2002, 2003; Djankov, Glaeser, La Porta, Lopez-de-Silanes, and Shleifer, 2003). We then construct a variable called *Ratio of Extralegal Payments* (measured as the ratio of extralegal payments to the government by the enterprise over its profit) and use it as a proxy for dictatorship costs, with a higher value indicating greater dictatorship costs.

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[15]For example, private enterprises often encounter difficulties in collecting payments from large influential enterprises with whom they have businesses.

We carry out an Ordered Probit regression of *Power of Government vis-à-vis Market* on *Ratio of Extralegal Payments* along with a set of control variables. As shown in Column 2 of Table 8, *Ratio of Extralegal Payments* has a negative and statistically significant estimated coefficient, which implies that the increase of dictatorship costs leads to a fall of the power of government vis-à-vis market as predicted by Glaeser and Shleifer (2002, 2003) and Djankov, Glaeser, La Porta, Lopez-de-Silanes, and Shleifer (2003).

5   Conclusion

In the past decades, we have witnessed the transition of many developing economies in various parts of the world toward the market economy. The variations in their transition paths and economic performance have led to intensive debates regarding the advantages and disadvantages of various models of a market economy. Glaeser and Shleifer (2002, 2003) and Djankov, Glaeser, La Porta, Lopez-de-Silanes, and Shleifer (2003) have argued that there are three distinct models of a market economy, *i.e.*, *private orderings*, *private litigations through courts*, and *regulatory state*, with an increasing power of government vis-à-vis market in the economy. As one moves from *private orderings*, to *private litigations through courts*, and *regulatory state*, the cost of disorder resulting from private expropriation decreases while that of dictatorship coming from state expropriation increases. The equilibrium choice then lies in the trade-off between the cost of disorder and that of dictatorship.

In this paper, using data from a survey of 3,073 private enterprises in China conducted in 1999, we construct an index to quantify the power of government vis-à-vis market, and find that the power of government vis-à-vis market has a positive and statistically significant causal impact on enterprise performance. Our results are robust to a set of controls related to entrepreneurial, enterprise, regional and industrial characteristics, and to the use of instrumental variable estimation. These results suggest that *regulatory state* is an appropriate model of a market economy for China.

We also find that the power of government vis-à-vis market is greater when disorder costs are higher or dictatorship costs are lower, thereby suggesting that the choice among the three models of market economy depends crucially upon the quality of institutional environment. In the case of China, protection of private properties was not written into its constitution until 2004, and the independence of courts is dubious. Thus, *regulatory state* emerges as a second-best choice for China in its transition to market economy.

Our findings give an interpretation of China's successful reform drasti-

cally different from the earlier studies. The existing literature on economic transition almost invariably focuses on the comparison of the incremental reform approach in China versus the big bang approach in most other transition economies such as Russia (e.g., Roland, Qian, and Xu, 1999, 2006). That literature implicitly assumes that China and Russia share the same target model of a market economy, i.e., *private orderings* and *private litigation through courts*, but only differ in their paths toward the target. However, in our view, *regulatory state* is an appropriate target model of a market economy for China based on the existing institutional constraints, and it allows the state to maintain social order and avoid social disruption and disorganization in economic restructuring while providing a reasonable level of property rights protection. Officially, China has been pursuing the "socialist market economy model" in which regional governments employ extensive regulations and industrial policies to promote economic development. This is largely consistent with the *regulatory state* model. In contrast, Russia is widely perceived to have conducted radical transformations toward laissez-faire capitalism, reflected in some primary reform schemes such as the Gaidar program in the 1990s (Sean, 1994; Perotti, 2002; Aziz, 2006). This interpretation also sheds light on the so-called China puzzle, i.e., China achieved fast economic growth despite deeply flawed economic institutions including property rights protection and contract enforcement (e.g., Brandt and Rawski, 2008). According to our thesis, this is largely because China has adopted *regulatory state* as its model of a market economy, which requires few economic institutions to sustain the operation of markets.

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Figure 1: Institutional possibility frontier
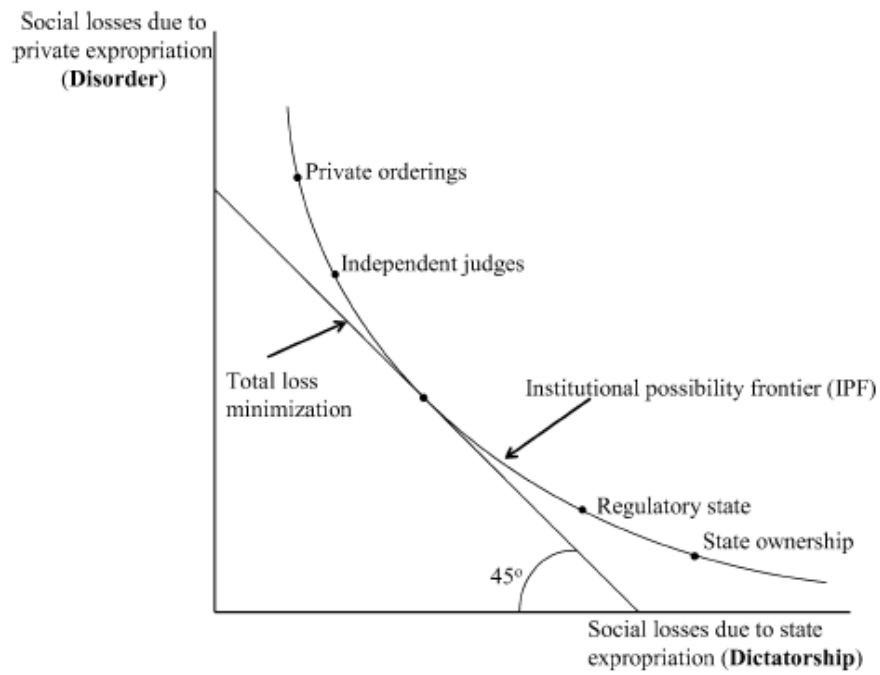
Fig. 1. Institutional possibilities.

The above figure is copied from Figure 1 of Djankov, Glaeser, La Porta, Lopez-de-Silanes, and Shleifer (2003).

Figure 2: Correlation between the power of regional government vis-à-vis market and the distance between regional capital city and Beijing
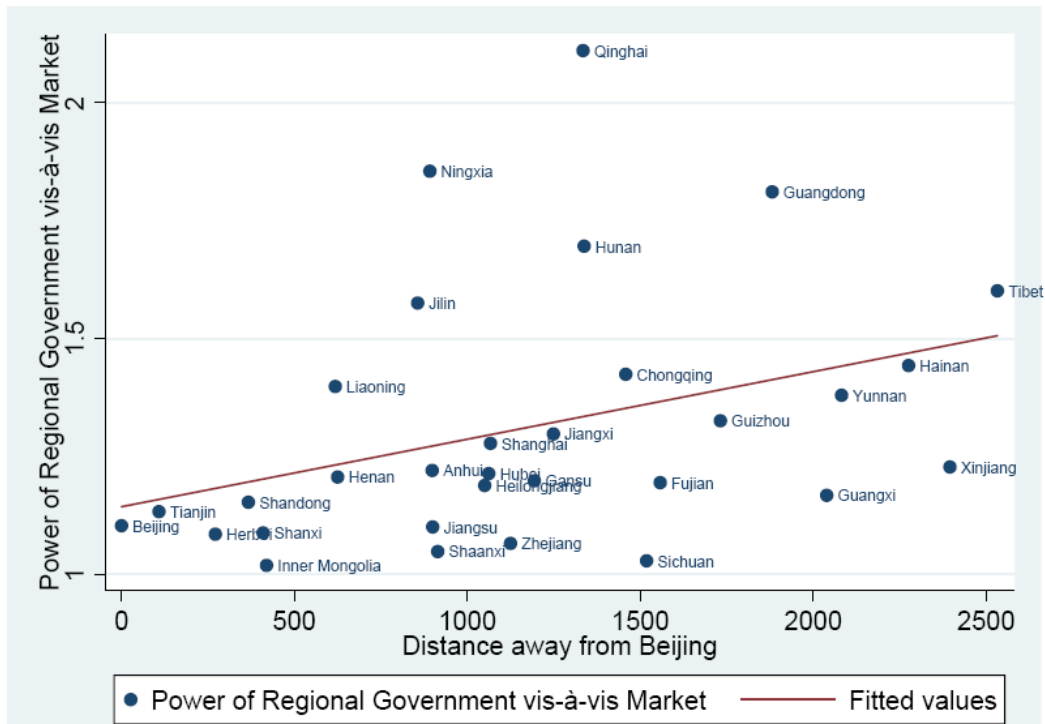
Table 1: Distribution of sample across China's regions

Region	Final Sample	Initial Sample	Percentage
Beijing	89	117	76.07%
Tianjin	86	100	86.00%
Herbei	135	198	68.18%
Shanxi	38	76	50.00%
Inner Mongolia	29	45	64.44%
Liaoning	124	148	83.78%
Jilin	70	80	87.50%
Heilongjiang	87	101	86.14%
Shanghai	121	180	67.22%
Jiangsu	242	279	86.74%
Zhejiang	114	165	69.09%
Anhui	54	78	69.23%
Fujian	33	63	52.38%
Jiangxi	42	61	68.85%
Shandong	185	250	74.00%
Henan	101	143	70.63%
Hubei	84	125	67.20%
Hunan	43	64	67.19%
Guangdong	137	193	70.98%
Guangxi	37	47	78.72%
Hainan	29	54	53.70%
Chongqing	89	97	91.75%
Sichuan	40	60	66.67%
Guizhou	62	66	93.94%
Yunnan	32	41	78.05%
Tibet	5	10	50.00%
Shaanxi	105	114	92.11%
Gansu	30	36	83.33%
Qinghai	8	11	72.73%
Ningxia	14	20	70.00%
Xinjiang	44	51	86.27%

Table 2: Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Enterprise Performance	2309	1.85	1.27	-4.61	6.59
Power of Government vis-à-vis Market	31	1.31	0.27	1.02	2.11
Fan-Zhu-Wang Index	30	6.06	2.93	0.00	10.00
Ratio of Government Consumption	30	0.14	0.03	0.09	0.19
Education	2307	12.64	2.84	0.00	19.00
Age	2300	43.50	8.26	22.00	75.00
Managerial Experience	2306	4.28	7.23	0.00	61.00
CPC Membership	2309	0.16	0.36	0.00	1.00
CPPCC Membership	2309	0.41	0.49	0.00	1.00
Government Cadre	2309	0.07	0.26	0.00	1.00
SOE Cadre	2309	0.37	0.48	0.00	1.00
Enterprise Size	2309	4.08	1.33	0.00	9.90
Enterprise Age	2287	2.23	0.67	0.00	3.83
Logarithm of Capital-Labor Ratio	1478	1.79	1.15	-2.96	7.25
Logarithm of GDP per capita	31	-0.43	0.53	-1.40	1.01
Logarithm of Population	31	7.99	0.92	5.55	9.15
Influential Competitors	2256	0.39	0.49	0.00	1.00
Ratio of Extralegal Payments	1136	0.06	0.10	0.00	1.00

Table 3: OLS estimates

	1	2	3	4	5
Dependent Variable		Enterprise	Performance		
Power of Government vis-à-vis Market	0.41***	0.32***	0.34***	0.26**	0.29**
	(0.12)	(0.12)	(0.12)	(0.12)	(0.11)
Regional Characteristics					
Logarithm of GDP per capita			0.35***	0.35***	0.35***
			(0.05)	(0.05)	(0.05)
Logarithm of Population			0.02	0.05	0.05
			(0.04)	(0.04)	(0.04)
Entrepreneurial Characteristics					
Education				0.06***	0.07***
				(0.01)	(0.01)
Age				-0.004	-0.004
				(0.003)	(0.003)
Managerial Experience				0.005	0.006
				(0.004)	(0.004)
CPC Membership				0.11	0.16**
				(0.07)	(0.07)
CPPCC Membership				0.05	0.07
				(0.05)	(0.05)
Government Cadre				-0.11	-0.09
				(0.11)	(0.11)
SOE Cadre				0.15***	0.15***
				(0.07)	(0.06)
Enterprise Characteristics					
Enterprise Size					-0.07***
					(0.02)
Enterprise Age					0.03
					(0.04)
Industry Dummy	No	Yes	Yes	Yes	Yes
Number of Observation	2,309	2,309	2,309	2,295	2,274
R-squared	0.0047	0.0604	0.0809	0.1105	0.1138
p-value for F-Test	0.0007	0.0000	0.0000	0.0000	0.0000

Robust standard error is reported in the parenthesis. *, **, *** represent significance at 10%, 5%, and 1% level, respectively.

Table 4 : 2SLS estimates

Dependent Variable	1 First Stage Power of Government vis-à-vis Market	2 Second Stage Enterprise Performance	3 First Stage Power of Government vis-à-vis Market	4 Second Stage Enterprise Performance
Power of Government vis-à-vis Market		1.21***		1.65***
		(0.26)		(0.25)
Distance	0.18***		0.19***	
	(0.01)		(0.01)	
Regional Characteristics				
Logarithm of GDP per capita			0.05***	0.37***
			(0.01)	(0.05)
Logarithm of Population			-0.01	0.08**
			(0.01)	(0.04)
Entrepreneurial Characteristics				
Education			0.00	0.07***
			(0.00)	(0.01)
Age			-0.00	-0.003
			(0.00)	(0.003)
Managerial Experience			0.00	0.007*
			(0.00)	(0.004)
CPC Membership			0.03**	0.14*
			(0.01)	(0.07)
CPPCC Membership			0.01	0.05
			(0.01)	(0.06)
Government Cadre			-0.01	-0.09
			(0.02)	(0.11)
SOE Cadre			0.01*	0.11*
			(0.01)	(0.06)
Enterprise Characteristics				
Enterprise Size			0.01*	-0.09***
			(0.003)	(0.03)
Enterprise Age			0.00	0.04
			(0.01)	(0.05)
Shea Partial R2	0.2447	-	0.2472	-
Anderson Canonical LR Statistic	[648.05]***	-	[645.74]***	-
Cragg-Donald F-statistic	747.49	-	737.89	-
Industry Dummy	No	No	Yes	Yes
Number of Observation	2,309	2,309	2,274	2,274

Robust standard error is reported in the parenthesis. *, **, *** represent significance at 10%, 5%, and 1% level, respectively.

Table 5: Experiments for the index of Power of Government vis-à-vis Market

	1	2	3	4
Dependent Variable	Enterprise Performance			
Power of Government vis-à-vis Market	1.65***	0.40***	0.34***	0.37***
	(0.25)	(0.06)	(0.05)	(0.06)
Shea Partial R2	0.2472	0.2487	0.2055	0.2511
Anderson Canonical LR Statistic	[645.74]***	[650.13]***	[523.25]***	[657.38]***
Cragg-Donald F-statistic	737.89	743.65	581.35	753.20
Regional characteristics	Yes	Yes	Yes	Yes
Entrepreneurial characteristics	Yes	Yes	Yes	Yes
Enterprise characteristics	Yes	Yes	Yes	Yes
Industry Dummy	Yes	Yes	Yes	Yes
Number of Observation	2,274	2,274	2,274	2,274

The estimation strategy used is 2SLS estimation. The First-stage results (including the same control variables as those in the second stage) and the estimated coefficients of the control variable are not reported to save space (available upon request). Robust standard error is reported in the parenthesis. *, **, *** represent significance at 10%, 5%, and 1% level, respectively.

	1	2	3	4	5	6
	Panel A: Second Stage of 2SLS					
Dependent Variable	Enterprise Performance					
Fan-Zhu-Wang Index	-0.53***					
	(0.11)					
Ratio of Government Consumption		149.54**				
		(65.64)				
Power of Government vis-à-vis Market			1.61***	1.69***	0.51**	5.35***
			(0.25)	(0.28)	(0.23)	(1.88)
Regional Characteristics						
Logarithm of GDP per capita	1.31***	1.31***	0.34***	0.41***	0.31***	0.59***
	(0.19)	(0.19)	(0.05)	(0.06)	(0.05)	(0.14)
Logarithm of Population	1.53***	1.53***	0.03	0.08*	0.09**	0.25**
	(0.32)	(0.32)	(0.04)	(0.04)	(0.04)	(0.11)
Entrepreneurial Characteristics						
Education	0.06***	0.02	0.07***	0.07***	0.02*	0.11***
	(0.01)	(0.03)	(0.01)	(0.01)	(0.01)	(0.03)
Age	-0.003	-0.001	-0.003	-0.002	-0.005	-0.04***
	(0.004)	(0.009)	(0.003)	(0.004)	(0.003)	(0.01)
Managerial Experience	0.003	-0.01	0.007*	0.006	0.001	0.01
	(0.005)	(0.01)	(0.004)	(0.004)	(0.004)	(0.01)
CPC Membership	0.17*	0.18	0.14*	0.12	0.06	0.32*
	(0.09)	(0.18)	(0.07)	(0.08)	(0.07)	(0.17)
CPPCC Membership	0.03	-0.11	0.05	0.06	-0.08	0.19
	(0.07)	(0.16)	(0.06)	(0.06)	(0.06)	(0.14)
Government Cadre	-0.15	0.43	-0.09	-0.06	-0.22*	-0.07
	(0.14)	(0.37)	(0.11)	(0.12)	(0.12)	(0.25)
SOE Cadre	-0.04	0.12	0.10*	0.09	0.01	0.20
	(0.08)	(0.15)	(0.06)	(0.07)	(0.06)	(0.14)
Enterprise Characteristics						
Enterprise Size	-0.11***	-0.20**	-0.09***	-0.09***	-0.04	-0.22***
	(0.03)	(0.09)	(0.03)	(0.03)	(0.03)	(0.08)
Enterprise Age	0.07	0.08	0.04	0.01	-0.08*	0.08
	(0.05)	(0.11)	(0.05)	(0.05)	(0.05)	(0.10)
Logarithm of Capital-Labor Ratio					0.63***	
					(0.03)	
	Panel B: First Stage of 2SLS					
Dependent Variable	Fan-Zhu-Wang Index	Ratio of Government Consumption	Power of Government vis-à-vis Market			
Distance	-0.60***	0.002**	0.20***	0.19***	0.21***	0.06***
	(0.08)	(0.001)	(0.01)	(0.01)	(0.03)	(0.02)

Shea Partial R2	0.0448	0.0036	0.2895	0.2583	0.2653	0.0044
Anderson Canonical LR Statistic	[104.09]***	[8.27]***	[770.18]***	[562.90]***	[449.87]***	[10.10]***
Cragg-Donald F-statistic	105.25	8.18	907.19	646.63	517.19	10.01
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observation	2,270	2,270	2,253	1,884	1,459	2,274

The first stage of 2SLS includes the same control variables as those in the second stage but does not report these results to save the space (available upon request). Robust standard error is reported in the parenthesis. *, **, *** represent significance at 10%, 5%, and 1% level, respectively.

Table 7: Investigation of rent seeking explanation

Dependent Variable	Input Procurement	Availability of Production Locations	Supply of Electricity and Water	Recruitment of Skilled Labor	Sales of Output	Sales of Service	Access to External Finance
Power of Government vis-à-vis Market	-0.09	-0.25*	-0.12	-0.36**	-0.28**	-0.26*	-0.11***
	(0.11)	(0.13)	(0.11)	(0.14)	(0.14)	(0.13)	(0.04)
Shea Partial R2	0.2553	0.2572	0.2545	0.2479	0.2455	0.2530	0.2939
Anderson Canonical LR Statistic	[550.37]***	[549.68]***	[566.94]***	[519.13]***	[528.52]***	[497.95]***	[385.58]***
Cragg-Donald F-statistic	630.83	630.77	649.79	591.73	601.70	569.38	450.36
Regional characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Entrepreneurial characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Enterprise characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observation	1,867	1,849	1,930	1,822	1, 876	1,707	1,108

The estimation strategy used is 2SLS estimation. The First-stage results (including the same control variables as those in the second stage) and the estimated coefficients of the control variable are not reported to save space (available upon request). Robust standard are reported in the parenthesis. *, **, *** represent significance at 10%, 5%, and 1% level, respectively.

Table 8: Comparative statistics analysis

Dependent Variable	1	2
	Power of Government vis-à-vis Market	
Influential Competitors	0.15**	
	(0.07)	
Ratio of Extralegal Payments		-1.00*
		(0.58)
Regional Characteristics		
Logarithm of GDP per capita	-0.08	-0.10
	(0.06)	(0.09)
Logarithm of Population	-0.13***	-0.13**
	(0.05)	(0.06)
Entrepreneurial Characteristics		
Education	-0.03**	-0.03*
	(0.01)	(0.02)
Age	0.02***	0.02***
	(0.004)	(0.01)
Managerial Experience	-0.004	-0.01
	(0.004)	(0.01)
CPC Membership	-0.06	-0.13
	(0.09)	(0.13)
CPPCC Membership	-0.06	-0.05
	(0.07)	(0.10)
Government Cadre	-0.07	-0.20
	(0.13)	(0.20)
SOE Cadre	-0.01	0.04
	(0.07)	(0.10)
Corporate Characteristics		
Enterprise Size	0.10***	0.13***
	(0.03)	(0.04)
Enterprise Age	-0.01	-0.09
	(0.05)	(0.09)
Industry Dummy	Yes	Yes
Number of Observation	2,221	1,125
Pseudo R2	0.0332	0.0429
p-value for chi2	0.0000	0.0000

The estimation strategy used is the ordered probit estimation. Robust standard error is reported in the parenthesis. *, **, *** represent significance at 10%, 5%, and 1% level, respectively.