

Institutions and Managerial Task Allocation: Evidence from Chinese
Entrepreneurs¹

Di Guo, University of Hong Kong

Kun Jiang, The University of Roehampton

Chenggang Xu², University of Hong Kong

April 2015

Abstract

This study presents theoretical and empirical analyses of time allocation of entrepreneurs as a response to weak property rights protection. Using a nationwide random sampling survey of more than 3,000 entrepreneurs in over 100 cities in China, we find that entrepreneurs, responding to the violation of property rights, spend large proportions of their working time on lobbying activities to protect their businesses at the cost of management time. Moreover, the sensitivity of lobbying time to property rights protection is reduced if the entrepreneur is politically connected or if the firm is larger or older.

Keywords: institution, property rights, entrepreneurship, time allocation, Chinese economy

¹We acknowledge comments from the *Conference Honoring Nobel Laureate Ronald Coase on becoming a UB Honorary Professor*, two referees, and in particular Sam Peltzman. We follow the Coasian tradition, which refers to his view that economics is a study of the economy as it actually operates in the real world and his approach to empirical work, which focuses on understanding a variety of unknown institutions and their influences. Financial support from RGC TRS Project (T31-717 112-R) is acknowledged. All errors are our own.

²Correspondence: School of Economics and Finance, The University of Hong Kong, Pokfulam Rd., Hong Kong; Tel: +852 28591012; E-mail: cgxu@hku.hk

“These ex-communist countries are advised to move to a market economy ... but without the appropriate institutions, no market economy of any significance is possible ... the interrelationships which govern the mix of market and hierarchy ... are extremely complex ... What we need is more empirical work.”

(Coase, 1991 [2005])

1. Introduction

Institutions, specifically property rights and contracting institutions, are regarded as conditions that enable markets to function (Smith, 1776; North, 1981). Although conceptual or theoretical arguments have been presented, systematic evidence became available only recently. Empirical studies show that stronger property rights protection and contract enforcement promote firm performance, enhance corporate governance and corporate innovation (La Porta et al., 2000; Klapper and Love, 2004), and encourage firm growth and reinvestment (Besley 1995; Johnson, McMillan, and Woodruff, 2002; Cull and Xu, 2005), thereby promoting economic growth (Acemoglu et al., 2001; Acemoglu and Johnson, 2005). Most studies analyze the effect of institutions on the performance outcomes or strategies of firms, but little is known on a more basic mechanism about the effects of institutions on the effort exertion of entrepreneurs.

This study attempts to fill this knowledge gap, that is, we analyze entrepreneurial responses in their time allocation to institutional constraints, particularly the insecurity of private property rights, based on a nationwide random sampling survey conducted in China. The dataset we use covers detailed information on the time allocation of entrepreneurs and distinguishes among their time devoted to work and leisure and time allocated to different activities at work. We analyze the relationships of institutional constraints with the time devoted to management and lobbying activities by decomposing time allocation of entrepreneurs at work.

In this paper, “lobby” means activities seeking to influence local governments for protecting the businesses of individual entrepreneurs, and it is not about influencing legislators or law-making. In China, entrepreneurs are not allowed to organize themselves

for political representation independently from the party-state, who makes decisions on laws and regulations. Therefore, the lobbying activities of entrepreneurs mainly target the arbitrary decisions of local governments, which are not subject to rules or laws, to protect their own businesses.

Time allocation is critically important for entrepreneurs of small- and medium-sized enterprises (SMEs). Becker (1965) and the follow-up literature focus on the tradeoffs that individuals make between work and leisure, that is, working versus non-working time allocation.³ However, the process involved in allocating time within the working time of entrepreneurs has received significantly less attention. This issue is particularly relevant to entrepreneurs of SMEs who normally have less developed management teams and social networks. Balancing the efforts exerted on different activities is important for entrepreneurs because it could determine the survival and growth of firms. Among the few studies on time allocation of entrepreneurs⁴, the effects of institutions on time allocation of entrepreneurs are largely ignored in economics literature.

Interaction between institutions and time allocation is important as institutions influence entrepreneurs' tradeoffs when they allocate their time and efforts among different tasks (Holmstrom and Milgrom, 1991; Dewatripont, Jewitt, Tirole, 1999 and 2000)⁵, particularly among productive and non-productive activities. A major premise of the multi-task theory is that all efforts of individuals at work are productive. However, this presumption could not stand when entrepreneurs face institutional impediments that distort the time allocation of talents (Acemoglu, 1995; Acemoglu et al., 2005) and affect their efforts in daily work. Entrepreneurs are induced to pursue rent-seeking rather than

³Becker (1965) introduces "household production function," which studies the substitution effect of the growth in productivity of working and its tradeoff with consumption time loss. However, Pollak, Robert, and Wachter (1975) argue that joint production results in the confounding of tastes and technology within shadow prices. Empirical studies indicate that self-employed people report higher job satisfaction than regular employees even when they work longer hours and earn lower wages than employees (Benz and Frey, 2004). At the same time, despite their lower pay and rate of promotion, women are more satisfied with their jobs than men (Clark, 1997). Social norms and peer pressure may also affect an individual's time allocation to paid work, voluntary work, and leisure (Freeman, 1997; Fehr and Falk, 2002; Akerlof and Kranton, 2005).

⁴McCarthy, Krueger, and Schoenecker (1990) and Fischer and Reuber (1997) examine the changing time-allocation patterns of entrepreneurs as firms move from one stage of development to another. Cooper, Ramachandran, and Schoorman (1997) find that craftsmen-entrepreneurs devote less time to administrative activities than entrepreneurs with managerial experience. Verheul, Carree, and Thurik (2009) find that female entrepreneurs invest less time in the business than male entrepreneurs.

⁵ Lucas and Moll (2011) study the effects of multi-tasking on growth. In their model, agents divide their time between production and learning activities, which determines real economic growth.

creating new knowledge or products because they have to spend time lobbying to gain government-controlled sources (Tullock, 1967; Baumol, 1990). However, studies on the interaction between institutions and multi-task issues are restricted to theory. To our knowledge, no systematic empirical study has investigated the relationships between institutions and the time allocation to management and lobbying efforts.

China provides an interesting case for studying tradeoffs (costs and benefits) faced by entrepreneurs when they allocate time to different tasks to address institutional impediments. The private sector ⁶ in China began from scratch in the 1990s because it was completely illegal not long ago. Thanks to rapid growth and privatization, the private sector now comprises approximately 40 million registered private businesses and 34.07 million individually owned businesses. These businesses accounted for more than half of China's GDP by the end of 2010. Private property rights are fully legalized in principle since the constitutional amendments in 2004. Allowing and recognizing private property rights are important improvements than before, explaining a large part of China's growth.

However, not surprisingly, property rights protection remains weak and the violation of property rights is a prevalent problem, which is among the major problems that China faces. One of the major forms of property rights violation is the arbitrary levies imposed to private firms by local governments. Most of these arbitrary levies are not formal taxes. Instead, they are imposed by local governments arbitrarily, without justifications by laws, and in complete absence of citizens' consent. From time to time, even the Chinese central government condemns these levies as "irrational," "extra-legal," or even "illegal."⁷ According to a classic principle on property rights and taxation, charging levies without citizens' consent, for example, the approval of the citizens' representatives, or without legal support is a violation of property rights. "[T]he supreme power [i.e. the government] cannot take from any man any part of his property [e.g. collecting taxes] without his own consent. For the preservation of property being the end

⁶A narrowly defined private sector refers to registered private businesses and individually owned businesses. A broadly defined private sector refers to all non-state-owned enterprises, including the narrowly defined private businesses, collectively-owned enterprises, and foreign enterprises. In this study, we focus on the narrowly defined private sector.

⁷The Chinese economy relies heavily on sub-national governments, including fiscal and financial aspects (Xu, 2011). However, the central government takes away most of the tax revenues from local governments, such that local governments have to find other sources of revenues. Thus, extra-legal levies have become important revenue sources for local governments and have grown fast in the past two decades.

of government...” (Locke, 1680 [1823], p. 165). This principle is not only followed by generations of leading scholars, such as Smith (1776), North (1981), and others, but it is also the basis for constitutions of all democracies. When this rule is breached and when governments violate property rights, entrepreneurs have to exert extra efforts to deal with these institutional obstacles at the cost of their time and efforts to management activities. The nature of these problems faced by Chinese entrepreneurs is similar to those discussed by Adam Smith when he stated that property rights institutions affect entrepreneurship (Smith, 1776).⁸

This study investigates the effects of institutional impediments on the allocation of time (efforts) of entrepreneurs in modern China. We model entrepreneur’s time–effort allocation problem subjected to a property rights-protection constraint. Analytically, this model extends Becker’s model (1965) by adding an institutional constraint. In our model, the time of an entrepreneur is allocated between leisure and work, which is further allocated between management and lobbying time for protecting property rights and dealing with related matters. We theoretically show that entrepreneurs devote more time to lobbying activities when property rights protection is weaker. Moreover, entrepreneurs’ political connections may improve lobbying efficiency, such that the sensitivity of lobbying efforts to property rights protection is moderated.

The above-mentioned theoretical hypotheses are tested empirically. We find that property rights institutions significantly affect the time allocation of entrepreneurs at work. In particular, entrepreneurs of firms, which are charged with higher levies, that is, suffering more severe property rights violation, tend to allot more time to lobbying activities, thus costing time used for management activities. Moreover, the sensitivity of lobbying time to property rights protection is reduced if the entrepreneur is politically connected or if the firm is larger or older.

To identify the causal relationship between property rights protection and the time entrepreneurs devote to lobbying activities, we conduct two-stage estimations with two

⁸ “Commerce and manufactures can seldom flourish long in any state which does not enjoy a regular administration of justice, in which the people do not feel themselves secure in the possession of their property, in which the faith of contracts is not supported by law, and in which the authority of the state is not supposed to be regularly employed in enforcing the payment of debts from all those who are able to pay.” (Smith, 1981 [1776], p. 910)

instrumental variables (IVs) to address potential omitted variable bias and endogeneity issues. The first IV refers to the weights of provincial government policies on non-state sectors. The second IV refers to the efforts of provincial-level governments in fighting corruption. We suggest that both IVs are good predictors for whether the local firms will be charged with higher levies or not whereas neither IV should be related to error terms of the estimations on the individual time allocation of entrepreneurs. Moreover, we apply the over-identification strategy by using two IVs that allow us statistically test the relevance and exogeneity of the IVs. The two-stage estimations confirm that our IVs are qualified and our empirical findings are robust.

The rest of this study is organized as follows. Section 2 describes the institutional background of private property rights protection and lobbying activities of entrepreneurs in China. Section 3 introduces the analytical framework. Section 4 provides information on data and variable definitions. Section 5 reports empirical findings. Section 6 concludes this study.

2. Property Rights Institution and Lobbying Activities of Entrepreneurs

During the pre-reform era in China, private ownership was completely illegal. The economic reform launched in 1978 did not have an agenda to allow for private ownership as this contradicts the socialist ideology.⁹ Throughout the reform and development process, lingering institutional and ideological biases against private sector remained. The development of the private sector and privatization has been gradually tolerated since the 1990s when the state sector became mired in deep trouble, whereas privately owned firms were still not granted de jure rights (Xu, 2011). The de facto private sector took off rapidly after 1997 when de facto privatization was permitted officially.¹⁰ Since then, the private sector has undergone significant development before the constitutional recognition of private ownership, which happened in 2004.

The share of the private sector in the total GDP increased from 2.5% in 1998 to nearly 50% in 2009. With its rapid growth rate, the private sector has become the largest engine of economic growth in China. The private sector comprises approximately 40

⁹Private enterprises were not formally permitted to exist until 1988 with the enactment of the Private Enterprise Administration Act, which was enacted 10 years after the start of the economic reform. However, even then, the constitution did not recognize private property rights.

¹⁰The Partnership Enterprise Law and Sole Proprietorship Enterprise Law were enacted in 1997 and 1999, respectively.

million registered private businesses and 34.07 million individually owned businesses. Moreover, more than 160 million jobs or 90% of the new jobs in the nation are created by the private sector (State Administration for Industry & Commerce, 2011).

Nonetheless, the institutions under which the private sector operates remain far from favorable. The protection of property rights remains poor because of the weak law enforcement (Clarke, Murrell, and Whiting, 2008). Anecdotes show that local governments may confiscate wealth of private firms within their jurisdictions. Gong Jialong, former chairman of the Tianfa Group, which was the largest Chinese private oil company, was detained for alleged economic crimes in 2006. After one year and seven months of trial, Gong was released and was found not guilty. However, his oil empire was swiftly broken up, and most of the businesses were sold to state-owned enterprises (SOEs) at a government auction during his absence.¹¹ In other high profile legal cases related to private businesses, entrepreneurs were not as fortunate as Gong, that is, they not only lost their assets but also were sentenced to long imprisonment or even death, for example, the cases of Lou Hengwei, Xu Ronghua, Zhu Menghe, Feng Yongming, and Yang Jinde.¹²

One of the most prevailing government expropriations is in the form of various non-tax levies, charges, and fines applied to firms. These levies are arbitrary and are not based on formal rules and laws. Government revenues consist of three major types: budgetary revenue (BR), extra-budgetary revenue (EBR), and non-budgetary revenue (NBR) (Wong, 1997; Brown, 1998). Among the three types, EBR and NBR are the main sources of local government revenue. In 2006, EBR and NBR amounted to RMB 640.79 billion (3.02% of total GDP) and comprised 93.2% of the total local government spending of that year (China National Statistical Yearbook, 2008). Most EBR and NBR are collected in the forms of non-tax levies.

Local governments have high discretionary power in imposing levies, fees, and other burdens as these levies are not regulated by laws or legislators. The self-collection and self-utilization policies for EBR and NBR encourage local governments to collect non-tax levies. Nationwide, approximately 7,600 types of non-tax levies were

¹¹“Former China oil tycoon plots return with Canadian gas venture” (*Reuters*, 18/03/2014)

¹²“Private enterprises are facing the risk of Justice” (*The Economic Observer*, 02/11/2011)

documented until July 2007, among which only 30 types had precise legal basis, 400 types were justified by certain regulations or policies, and 7,100 types were imposed by local governments without legal justifications.¹³ In taking Anhui province as an example, 24,441 government agencies of different levels in the province charged 438 items of non-tax levies that accounted for RMB 9.52 billion (34.7% of the local revenues) in 2004.¹⁴ These non-tax levies and charges arbitrarily imposed by various government departments are common ways of government expropriation, rent-seeking by corrupt officials, or both, and they lower the security of property rights (Lin et al., 2012).

Zong Qinghou, the chairman of the largest domestic beverage and food producer and the second richest man in China according to the *Forbes* rich list, stressed that his *Wahaha Group* pays more than 400 different government administrative charges each year.¹⁵ According to the “Nationwide Survey on Enterprise Burdens” conducted by China Center for Promotion of SME Development (a government agency under the Ministry of Industry and Information Technology), the burden of the levies can be as high as 80% of the net profit. Concretely, by average, 4.1% of the total revenue of the enterprises was paid as non-tax levies in 2012.¹⁶ As a comparison, the average tax was 7.8%, whereas the net profit of the firms was 5.1% of the total revenue.¹⁷ Another survey conducted by the National Development and Reform Commission of the State Council shows that the illegal fees charged by banks accounted 15% of the total costs of corporate bank loans in 2012.¹⁸

Facing high levy burdens at the discretion of the local governments, that is, the expropriation of property rights, entrepreneurs have to make substantial efforts to lobby local governments to protect their businesses. Mr. Feng Lun, chairman of Vantone Group, one of the largest private estate developers in China, reported that two-thirds of the 180 business trips he made in 2011 were lobbying related.¹⁹ In addition to becoming

¹³ See details in “Act on Administrative Fees: Why do we have to wait for so long?” (*Democracy and Rule of Law Weekly (minzhu yu fazhi zhouban)*, 14/11/2007)

¹⁴ See details in <http://www.dajunzk.com/zfshoufei.htm>

¹⁵ See details in “Wahaha boss urges tax cuts to lift growth” (South China Morning Post, 25 August, 2014)

¹⁶ <http://www.miit.gov.cn/n11293472/n11293832/n12843926/n13917012/n15646190.files/n15646096.doc>

¹⁷ The average ratio of the levies reported in the survey conducted in 2012 is significantly higher than that reported in the survey we used in this study, which was conducted in 2006. This finding is consistent with the anecdotes reported by mass media that the burdens from levies have been significantly increased in recent years.

¹⁸ See details in <http://finance.people.com.cn/n/2013/0925/c1004-23025543.html>

¹⁹ See details in: <http://finance.ifeng.com/business/renwu/20130128/7610444.shtml>

acquainted with and bribing government officials, successful entrepreneurs often are more creative than others in lobbying, in terms of whom to lobby, what to lobby, and how to lobby. Mr. Wang Jianlin, who was ranked as the richest entrepreneur in China in 2013 and 2014, asserted in his lecture at the Harvard Business School that “cultivating intimate relationships with the government in China is more difficult than conducting a post-doc research at Harvard.”²⁰

Finding ways to protect property rights is an essential task for entrepreneurs. Besides direct lobbying efforts, entrepreneurs may also cultivate political connections for protections.²¹ Indeed, more than one-third of the private firms in our sample are owned by veteran party members who are well connected to the government even before starting a private business. This study attempts to capture how entrepreneurs allocate their time to lobbying and management activities depending on the institutional issues they face and the political connections they have.

3. Analytical Framework

Our analytical framework is based on Becker (1965) and inspired by North (1981), Acemoglu (1995), and Acemoglu and Johnson (2005). We study the allocation of time or efforts of entrepreneurs to maximize utility when property rights are not secure. The time of the entrepreneur is allocated between leisure and work, which is further divided between management and lobbying time for protecting property rights and dealing with related matters. We formally denote the utility function as $U(y, \ell)$, where y is income, and ℓ is leisure. The utility function satisfies the usual conditions, that is, $(\partial/\partial y)U = U_1 > 0$; $(\partial/\partial \ell)U = U_2 > 0$; $U_{11} < 0$; $U_{22} < 0$; and $U_{12} = U_{21} > 0$. Total endowed time T will be allocated between working time, h , and leisure time, ℓ . That is, $\ell = T - h$. Total working time consists of management and lobbying time, that is $h = m + \rho$. As the largest owner of the firm, the income of the entrepreneur, y , consists of profit share of the firm and wealth. We denote the ownership share of the entrepreneur as α and wealth as W . We assume that the profit of the firm is a function of the entrepreneur’s working hours, that

²⁰ See details in: (text: http://money.163.com/12/0919/17/8BPITLLM00253G87_all.html; video: http://www.wanda.cn/2013/chairman_0724/28.html)

²¹ A stream of literature studies the different effects of entrepreneurs’ political connections on the performance and accessibility to bank loans of the firms (Peng and Luo, 2000; Francis et al., 2009; and Fan et al., 2007; Li et al., 2008). In particular, Guo et al. (2014) find the 2004 constitutional amendment to be a turning point, where politically connected entrepreneurs obtain significantly more bank loans than other entrepreneurs since then.

is, ξm , where ξ is the marginal productivity of m . Thus, the budget constraint of the entrepreneur is $y = \alpha \xi m + W$.

To capture the loss of the entrepreneur due to insecure property rights, we assume that φ , $\varphi \in [0, 1]$, of the disposable income of the entrepreneur from the firm, $x(h, \rho)$, will be taken away by the local government. This deduction may include local government imposed levies, other burdens, and partial confiscations etc. We suppose that an entrepreneur can mitigate the loss by lobbying the local government. A simple way to model this situation is $(1 - \rho) \varphi$ of the disposable income from the firm will be taken away by the local government, that is, an entrepreneur's lobbying activity ρ can reduce the loss. Thus, the institutional constraint is

$$x(h, \rho) = (1 - (1 - \rho) \varphi) \xi (h - \rho). \quad (1)$$

The institutional constraint (1) captures an entrepreneur's lobbying activities for reducing his levies, which is different from lobbying for changing taxation. First, levies, φ , is different from taxation because taxation is determined exogenously by the national government and lobbying from individual entrepreneurs will not affect it. Second, in our model, the local authority has no right to set up or change taxation systems. Ownership share α can be interpreted partly as a tax to some extent, which is a fixed rule being setup and enforced exogenously such that the entrepreneur is unable to influence the measure.

In this economy, the entrepreneur allocates total working time h and *LOBBY* time ρ to maximize utility, subject to institutional constraint condition (1). That is,

$$\begin{aligned} \max_{h, \rho} U(\alpha x(h, \rho) + W, T - h) \quad . \quad (2) \\ \text{s.t. } x(h, \rho) = (1 - (1 - \rho) \varphi) \xi (h - \rho) \end{aligned}$$

Tradeoffs between managing the firm and addressing institutional constraints affect the way entrepreneur allocates total working time versus leisure and the amount of lobbying time ρ that the entrepreneur will spend protecting property rights. From equation (1), we have the marginal productivity of working hour h ,

$$x_h = (1 - (1 - \rho) \varphi) \xi. \quad (3)$$

Marginal productivity of total working hours clearly decreases in φ , a measure of institutional cost. We also have the marginal productivity of *LOBBY* time ρ ,

$$x_\rho = (\varphi + h\varphi - 2\varphi\rho - 1) \xi. \quad (4)$$

Substituting constraint condition (1) into the objective function, the FOC of program (2) with respect to h and ρ is $\alpha U_1 x_h = U_2 = \alpha U_1 x_\rho$. Thus, at optimum,

$$U_2/U_1 = \alpha x_h = \alpha x_\rho \quad (5)$$

From (3), (4), and (5) we have

$$(1 - (1 - \rho) \varphi) = (\varphi + h\varphi - 2\varphi\rho - 1). \quad (6)$$

From Equation (6), we can obtain $\partial\rho/\partial\varphi > 0$, a comparative static result characterizing the equilibrium behavior of the entrepreneur. One of the major observable variables that measure violation of property rights is the arbitrary levy imposed by local governments on entrepreneurs. Empirically, we interpret φ as the levy. Thus, we have the following empirical predictions:

Hypothesis 1. Everything else being equal, the heavier levy, φ , imposed on the entrepreneur, the more *LOBBY* time, ρ , (or less management time, $h - \rho$) spent by the entrepreneur.

In addition to spending time in lobbying activities, political connections may also be important in providing protection to entrepreneurs by improving lobbying efficiency. In our highly stylized simple model, this is captured by political connections or lobbying efficiency, z , in the institution constraint as follows:

$$x(h, \rho) = (1 - (1 - z\rho) \varphi) \zeta(h - \rho), \quad (7)$$

where $z > 1$ for politically connected entrepreneurs, $z = 1$ otherwise. Thus, *LOBBY* time, ρ , increases in φ , but increases less for politically connected entrepreneurs than for others because they have higher productivity z in their *LOBBY* activities.

Hypothesis 2. Everything else being equal, the heavier the levy, φ , the more *LOBBY* time, ρ , (or less management time, $h - \rho$) an entrepreneur will spend. Moreover, for politically connected entrepreneurs their ρ will increase less (or their management time, $h - \rho$, will decrease less) than other entrepreneurs.

4. Data and Variables

Data used in this study are obtained from the Survey of China's Private Enterprises. This survey was conducted in 2006 via stratified random sampling survey approach. To ensure representativeness of the data, the population of private firms was stratified by location, (i.e., provinces, cities/counties), stage of economic development,

urban and rural locations, and industry. The sample size of the survey is 3,837. The firms surveyed are located in 109 cities, or equivalent to roughly one-third of Chinese cities.

Survey data were collected via face-to-face interviews. The survey provides a broad range of information on the governance of entrepreneurial firms and interactions among private business activities and institutions, such as local governments, local courts and regulations, and other factors. Entrepreneurs were asked to report the ways they allocate time; and other subjects e.g. finance, and governance of their firms, etc. The survey collected socio-demographic characteristics of the entrepreneur.

The sampling survey scheme is carefully designed for representativeness. However, data collection is organized by or with the assistance of the government.²² Thus, the sample may have potential bias that compared with the firms in the population, the sampled entrepreneurs may be closer to the government. Consequently, the actual problem in the population might be more severe than what we uncovered from the survey sample.

Time allocation of entrepreneurs is the major type of variables in this study. The survey asked entrepreneurs for detailed information on the amount of time they devoted to different activities per day including work and leisure. When entrepreneurs are asked to report their normal working hours, they are asked to specify the time they devote to management activities, networking activities,²³ and learning per day. That is, the total working time consists of three components. We sum up these three components and build up a variable for total working hours. “*Work_time*” is the total number of hours the entrepreneur devotes to management, networking, and learning activities per day, which distinguishes the time allocation of the entrepreneur between work and leisure. Our major interest is the ratio of time spent in lobbying activities over total working time, “*Lobby_Rt*”; and the ratio of time allotted to management activities over total working time, “*Mng_Rt*”. Table 1 shows that the sampled entrepreneurs work for 12.48 hours per day on average. By average, respondents spend 3.26 hours, i.e. more than 26% of their

²²The survey was designed by sociologists and organized by the United Front Work Department of the CPC Central Committee, the National Association of Industry and Commerce, the State Administration for Industry and Commerce, and the Private Economy Academy of China.

²³ As the survey was conducted by official agencies, the term “networking” is used. However, most ‘networking’ in China’s context is about building connections with the government for lobbying purposes.

working time, on lobbying activities; 7.5 hours, i.e. about 60% of their working time, on management, and 1.40 hours to study during their working hours. It is worth to note that, on average, the time allocated to lobbying and management activities accounts for over 86% of the total working hours of entrepreneurs. The figure suggests that the increase in lobbying efforts normally may come at the cost of the management efforts of the entrepreneurs. Therefore, in many cases, we should expect “Mng_rt” and “Lobby_rt” to be mirror images. Indeed, our model predicts that the violation of property rights drives entrepreneurs to exert more efforts toward lobby activities at the cost of managing the business. We therefore maintain the mirror images of the two variables in all estimations to highlight the considerable significance of the costs.

In terms of institutional impediments, we focus on the violation of property rights. As mentioned in previous sections, local governments impose various levies on entrepreneurs. In the survey, entrepreneurs were asked to report the total amount of all the levies paid to the government beyond tax in the previous year. We use this information to construct our measurement for property rights violation. We first calculate the ratio of fees over sales for each firm (*Forced_Fee*). Based on the ratio, we construct the variable “*High_fee*,” a dummy variable that is equal to one if the firm is in the highest 25th percentile of “*Forced_fee*,” and zero otherwise. Table 1 shows that on average, firms pay 0.6% of the total sales to local governments as additional fees. However, this ratio has a highly skewed distribution. Certain firms pay considerably more than others, such that the median is less than the average, the standard deviation is larger than the mean, and the maximum “*Forced_fee*” is 11.5%.

To prevent our estimations being driven by omitted variables, we control for entrepreneur and firm characteristics, as well as for region and industry effects. Regional effects are measured by a dummy variable that equals to one if the province is defined as an “economically developed province” by the Chinese National Statistical Bureau in 2006, and equals to zero if otherwise. Industry effect is captured by the industry dummy variables that identify the industries the firm. Detailed definitions of the variables are in Table A-1. Variables related to entrepreneurial characteristics include age (*CEO_age*), gender (*CEO_gender*), education (*CEO_Edu*), and disposable income (*CEO_income*) of the entrepreneur gained from the firm. Table 1 shows that on average, 68% share of the

assets of the firm are owned by entrepreneurs. The average income of the entrepreneur, including salaries and dividends gained in the previous year is about CNY 240,000 (with a large standard deviation of CNY 414,390). Moreover, the average age of the entrepreneur is 44 years, and 85.9% have high school or higher education.

Variables related to firm characteristics include size (*Firm_size*) and age (*Firm_age*) of the firm, and if the firm was privatized from a former SOE (*Privatization*). Table 1 shows that the average firm age is 7 years and the average firm size is 52 employees. Approximately, 20% of the firms in the sample are privatized.

We are also interested to see how political connections affect lobbying efficiency (*Hypothesis 2*), i.e. how the connections moderate the sensitivity of the lobbying efforts to property rights violation. We measure entrepreneurs' political connections by their party membership with a dummy variable "CPC" that it is equal to one if the entrepreneur is a CPC member at the time of the survey, and zero otherwise. Approximately 41% firms in our sample are owned by CPC members. Moreover, nearly 80% of these CPC member entrepreneurs are veteran party members, who joined the party and cultivated political connections with the government long before establishing a private business.

Table 2 presents the comparison on all the variables of our interests for the group of firms which are charged high fees and which are not imposed high fees, and the t-tests. By average, firms being charged "high fees" pay 2.3% of their total sales as levies while the ratio for the counterpart firms is 0.06%; and this difference is statistically significant. Moreover, these two groups are significantly different in other aspects. In particular, by average, entrepreneurs of firms which are imposed high fees allocate more time on working activities, and then spend higher proportion of their working time to lobbying activities and less proportion of working time to management activities than the others. Moreover, bigger firms and privatized former SOEs are less likely to be imposed for high fees than the others. Furthermore, entrepreneurs of the high-fee firms are more likely to be younger and less likely to be politically connected.

5. Empirical Findings

5.1 Property Rights Institution and Time Allocation

To investigate the impact of property rights protection on time allocation of entrepreneurs systematically, we estimate the following equation:

$$Time_ratio_i = \alpha + \beta High_fee_i + dX_i + \varepsilon_i, \quad (8)$$

where, $Time_ratio_i$ measures the proportion of time spent by entrepreneur i for various activities, including “ $Lobby_Rt$,” lobbying time over total working time ratio; “ Mng_Rt ,” management time over total working time ratio; and “ $Work$,” total working hours spent by the entrepreneur. “ $High_fee_i$ ” is a dummy variable that is equal to one if the levy in the previous year (i.e., 2005) over sales ratio for firm i is in the top 25th percentile and is equal to zero if otherwise. X_i is a vector of control variables for firm i , and includes characteristics of both the entrepreneur and the firm.

Table 3 presents our baseline regressions estimations. Column (1) reports the effects of charging “ $High_fee$ ” to entrepreneurs on their choice of total working hours. No statistically significant relationship is observed between “ $High_fee$ ” and total working hours. Hence, property rights protection may not affect the time allocation between work and leisure in general. However, Column (2) shows that “ $High_fee$ ” is positively and significantly correlated with “ $Lobby_Rt$.” On average, entrepreneurs who have to pay higher levies normally allocate about 1.9% (about 7% of the mean) more time to lobbying activities than those paying lower levies. Column (3) illustrates that “ Mng_Rt ” is negatively and significantly correlated with “ $High_fee$,” indicating that higher levies significantly reduce the time allocated to managing business. On average, entrepreneurs who have to pay higher levies normally allot about 2.2% (about 4% of the mean) less time to management activities. These results indicate that everything else being equal, entrepreneurs facing more severe violation of property rights spend significantly more time on lobbying activities at the cost of management time. This result is consistent with the prediction of Hypothesis 1 of our model.

To crosscheck the results of our estimations, we include the absolute number of lobbying and management time allotted by entrepreneurs as seen in Columns (4) and (5), respectively, of Table 3. “ $High_fee$ ” is significantly and negatively associated with the number of hours allotted to management time, implying that entrepreneurs who need to pay higher levies normally reduce time for management activities. Moreover, although no statistically significant, “ $High_fee$ ” and the number of hours paid to lobbying activities

are positively correlated.

Table 3 further reveals interesting findings on the relationship between time allocation and characteristics of firm and entrepreneur. First, in general, entrepreneurs receiving higher compensation spend less time on work but allot a larger part of their work time to lobbying activities than others. Second, we observe that entrepreneurs of larger-sized firms allot more time to work than those of smaller firms in general, and, spend a higher proportion of work time to lobbying activities and lower proportion of work time to management activities. A potential explanation for these findings is that entrepreneurs who have more wealth choose to allot more time to leisure than work. Given the weak property rights protection, the marginal benefits of lobbying efforts for those who have larger wealth and larger firms may be higher than for entrepreneurs with lesser wealth and smaller firms.

Moreover, as minor points of this paper, we observe that older entrepreneurs tend to allot more time to work and allocate a higher ratio of their work time to management activities than younger entrepreneurs. This may reflect the change in the lifestyle of different generations in terms of work and leisure choice. Finally, although no statistically significant difference is reported between female and male entrepreneurs in terms of their allocation of time between work and leisure, we observe that female entrepreneurs allocated more time to management and less time to lobbying activities than male entrepreneurs.

To test the robustness of our definition of “High_fee”, we attempted different cutoffs around the 25th percentile (i.e., 20th, 23rd, 28th, 30th, 33rd, and 35th percentiles). The results of our estimations basically remained robust (results are provided by request).

5.2 Identification Strategies

In the previous subsection, we report that the violation of property rights is associated with an increase in lobbying time and decrease in management time. Yet, there are alternative competing interpretations to the observed correlation. Hence, we discuss identification strategies in this subsection, including concerns on issues such as reverse causality and omitted variables etc.

First, in principle, we are not too concerned with reverse causality issues because of the nature of the survey data. All financial information including imposed fees

reported in the survey is based on the information for the previous financial year, whereas time allocation information is based on the average in the recent few months. Hence, the gap in timing for the information of the two variables implies that the levies and fees imposed on the firms cannot be the results of time allocation.

However, identification concerns related to the omitted variables may remain. Although we have controlled a set of variables to control characteristics of entrepreneurs and firms, and region and industry effects, certain unobservable factors that potentially affect time allocation may still be omitted. For instance, the family background or social values of the entrepreneur may be coincidentally correlated to additional levies imposed on the entrepreneurial firm. Thus, it is plausible that the significant relationship we observed between the variable “*High_fee*” and time allocation might be driven by unobservable factors rather than property rights violation.

To address the potential identification concerns, we use the 2-stage least squares (2SLS) estimation to identify the effects of violation of property rights. In particular, we use two IVs to identify whether the firm is more likely to be charged with high fees. By using two IVs, we can test the relevancies between the IVs and our major explanatory variable, and the exogeneity of the IVs from the error terms of our estimations affecting the dependent variables.

Our first IV is the weights of provincial government policies on non-state sectors, measured by the frequency of the key word “Non-public sector development” appeared in articles written by Party Chiefs of provincial party committees in the past two years before the survey, denoted as is *CVRG*. The data is covered by the Database of Chinese Communist Party Construction Periodicals (Zhonggong Dangjian Qikan Shujuku), which is the largest database of digitized CPC periodicals. The database covers 215 major CPC periodicals starting from 1994. Most periodicals in the database are published by Party Committees at provincial and municipality levels.²⁴ The sub-national level Party periodicals are the major platform through which provincial and municipal Party Committees promote policies within their jurisdictions. This IV satisfies the two conditions of exogeneity and relevance. First, the frequency of the key words “Non-

²⁴ It also covers several dozens of national-level CPC periodicals published by the CPC central agencies, such as *Qiushi*, *Dangjian*, and *Hongqi*.

public sector development” used by the Party Chief implies the extent to which the provincial-level CPC Committee prioritizes and supports the development of private sector, which is usually the largest component in the officially so-called non-public sector. Thus, we expect that in provinces where provincial Party Chiefs place significant emphasis on the non-public sector, property rights are better protected in general and entrepreneurs are less likely be imposed high fees. However, the frequency of the phrase, “Non-public sector development,” used by the CPC chief of the province should not be related to error terms related to the time allocation of individual entrepreneurs.

The second IV is *Anti-Corruption*, which refers to the number of registered cases under the direct investigation of provincial procuratorates, divided by the provincial population (cases per 100,000 persons). We collect data for cases two years before the survey was conducted. Data are obtained from the Procuratorial Yearbook of China (2004 and 2005). The number of corruption cases under provincial procuratorate’s investigation is a good indicator of the seriousness of a province in fighting corruption in the past two years before the survey. Assuming the indicator *Anti-Corruption* proxies for the provincial governments’ efforts of anti-corruption (Cole et al., 2009), we expect that provinces fighting against corruption more seriously protect property rights and entrepreneurs are less likely to be charged high fees. Yet, provincial-level efforts on anti-corruption should not be related to error terms that affect time allocation of the individual entrepreneurs.

Table 4 reports the 2SLS regression results when “*High_fee*” is applied in the two IVs. Panel A of Table4 presents the results from first-stage estimations. It suggests that show that the two IVs are qualified instruments. First, both *CVRG* and *Anti-Corruption* are significantly and negatively correlated to the dummy variable “*High_fee*”, confirming the relevance of the two IVs we used. The results of the Sargan tests indicate that both IVs are exogenous from unobserved factors that may affect individual time allocation. The results of the second-stage estimation are presented in Panel B of Table 6. It shows that the instrumented “*High_fee*” is positively and significantly related to “*Lobby_Rt*,” and negatively and significantly related to “*Mng_Rt*.”

Supported by the evidence presented in Tables 3 and 4, we claim that Hypothesis 1 cannot be rejected. That is, violation of property rights reduces entrepreneurs’

management time. Moreover, the weaker the property rights protection is, the more likely the entrepreneur devotes more time to lobbying activities at the cost of management efforts.

5.3 Political Connections and Time Allocation

Hypothesis 2 of our model predicts that politically connected entrepreneurs are more efficient than others in using their lobbying time. Thus, they save more of their time for management. Approximately 40% of the firms in our sample are owned by CPC members. Moreover, nearly 80% of these CPC member entrepreneurs are veteran party members, meaning they joined the party and cultivated political connections with the government long before starting a private business. Therefore, CPC membership is a good proxy for political connection and exogenous to time allocation. This condition allows us to explore the effects of political connections on time allocation. For this purpose, we specify the regression models as Equation (9):

$$Time_ratio_i = \alpha + \beta High_fee_i + \theta CPC_i + \mu CPC_i * High_fee_i + dX_i + \varepsilon_i \quad ,$$

(9)

where CPC_i is the measurement of political connection, that is, CPC membership of entrepreneur i . Our major interest is the interaction term between “CPC” and “High_fee,” that is, “CPC*High_fee.”

Table 5 presents the estimation results, which indicate the absence of a statistically significant relationship between “CPC” and any time allocation variables. Yet, the interaction term “CPC*High_fee” is significantly and negatively correlated to “Lobby_Rt,” and significantly and positively correlated to “Mng_Rt.” These results suggest that everything else being equal, politically connected entrepreneurs spend relatively less time lobbying to deal with property rights violation than other entrepreneurs did. As a result, politically connected entrepreneurs save more time in management than others when others have to spend more time dealing with property rights violation. On average, politically connected entrepreneurs charged higher levies spend approximately 3% less of their lobbying time (about 11% of the mean) than others. At the same time, these entrepreneurs allocate 4.4% more of their management time

(about 7.4% of the mean) at work than others. The estimation results shown in Table 5 are consistent with the prediction of Hypothesis 2. Thus, this result confirms that political connections may increase firm level efficiency for lobbying activities and reduce the marginal inputs of lobbying efforts when property rights are violated.

5.4 Firm Characteristics, Property Rights, and Time Allocation

In the following subsection, we further analyze how the age and size of firms affect entrepreneurs' lobbying efficiency under weak property rights protection. First, entrepreneurs of older firms may have accumulated more connections with local governments than entrepreneurs of younger firms. These connections may also increase firm level lobbying efficiency for protecting each firm's property rights. Therefore, we expect that everything else being equal, entrepreneurs of older firms may spend less time in lobbying against property rights violation. Second, the size of the firm may matter. Under a regionally-decentralized authoritarian regime in China, competition between regional officials at the same level is an essential part of the cadre management system (Xu, 2011). Larger firms may have higher value for local governments, which may help entrepreneurs to bargain with local governments when high levies are imposed. Economic growth and social stability are the most important performance assessment criteria for local government officers in the economic reform era. When a region has higher economic growth and less social conflicts, the head of the region will enjoy greater power and have higher chances of being promoted (Xu, 2011). Larger firms that can contribute more to local GDP and provide more jobs to local communities are thus of higher value for local government officers. Therefore, the lobbying efficiency of large firm entrepreneurs may be higher than that of the others.

The specification of the regression models is in the following.

$$Time_{ratio_i} = \alpha + \beta High_fee_i + \omega Feature_i + \eta Feature_i * High_fee_i + dX'_i + \varepsilon_i, \quad (10)$$

where " $Feature_i$ " refers to the characteristics of firm i , including firm age and firm size; " $Feature_i * High_fee_i$ " is the interaction term between the characteristic of firm i and the levy imposed to firm i ; and X'_i is a vector of control variables.

Table 6 reports the estimation results. Columns (1) to (3) present the effects of firm age and interaction term between firm age and “*High_fee*.” Columns (4) to (6) report the effects of firm size and its interaction term. Column (2) of Table 6 shows that the relationship between “*High_fee*” and “*Lobby_Rt*” remains positive and significant. The interaction term “*High_fee*Firm_age*” is negatively and significantly correlated with “*Lobby_Rt*,” whereas no statistically significant relationship is observed between “*Firm_age*” and “*Lobby_Rt*.” These results imply that among all the entrepreneurs, who are charged high levies, those with older firms spend smaller proportion of working time in lobbying than others did. Column (3) shows a significant reduction in “*Mng_Rt*” associated with “*High_fee*”; whereas “*Firm_age*” and “*High_fee*Firm_age*” have no significant impact on management time. The results of Columns (1) to (3) suggest that firm age may affect the sensitivity of entrepreneurs’ lobbying efforts to property rights violation, because when firms grow older, entrepreneurs accumulate more connections with local governments, which complement their lobbying activities. However, firm age has no significant impact on the sensitivity of their management efforts to property rights violation.

Exploring the features of firm sizes, Column (5) of Table 6 shows that both “*High_fee*” and “*Firm_size*” are positively and significantly correlated with “*Lobby_Rt*.” The relationship between “*High_fee*Firm_size*” and “*Lobby_Rt*” is negative and significant. As to the impact on management time, Column (6) shows both “*High_fee*” and “*Firm_size*” are negatively and significantly correlated with “*Mng_Rt*,” whereas “*High_fee*Firm_size*” is positively and significantly associated with “*Mng_Rt*.” These results reconfirm our earlier estimations that weaker property rights protection induces entrepreneurs to exert more efforts towards lobby activities and reduce the proportion of time allocated to management activities. The larger the firm, the more lobbying efforts are required because the stakes of protecting property rights are higher. However, when the firm is larger, the value of the firm to the local government may be higher. Consistent with our predictions, when high levies are imposed on a firm, firm size may moderate the relationship between the property rights violation and time allocation at work. That is, under weaker property rights protection, the higher the value of a firm is to local governments, the more likely the entrepreneur of the firm has more bargaining power

with local governments. Hence, this condition increases lobbying efficiency, and the entrepreneur may reduce lobbying time and save more time to deal with daily management activities.

6. Conclusion

This study contributes to the literature by providing systematic micro-evidence on the effects of institutions on entrepreneurs' time or effort allocation, particularly on the effects of the violation of property rights on entrepreneurs' effort allocation. To our knowledge, the empirical evidence we provided on the interactions between institutions and entrepreneur allocation of working effort is the first of its type in the literature. This study analytically extends Becker's model (1965) by adding institutional constraints. This framework allows us to analyze a concrete mechanism, both theoretically and empirically, on why the violation of property rights reduces firm efficiencies (e.g., North, 1981; Acemoglu and Johnson, 2005).

Employing a nationwide random sampling survey of more than 3,000 entrepreneurs in over 100 cities, we find micro-evidence that when the government violates private property rights by imposing high arbitrary fees, entrepreneurs spend more time lobbying to the government for protection, substantially reducing their management time. Moreover, politically connected entrepreneurs are better protected than others, such that they spend less time to lobby and are able to focus more on management activities. Overall, we find that entrepreneurs have to exert extra efforts in dealing with institutional obstacles at the cost of their time and efforts to management activities. Although the findings of this study are based on contemporary Chinese data, our discovery is general. This study confirms Adam Smith's famous proposition that weak property rights hinder entrepreneurship (Smith, 1776).

References

- Acemoglu, D. 1995. "Reward structures and the allocation of talent." *European Economic Review*. 39(1): 17-33.
- Acemoglu, Daron, Simon Johnson and James A. Robinson. 2001. "The Colonial Origins of Comparative Development: An Empirical Investigation." *American Economic Review*. 91(5): 1369-1401.
- Acemoglu, Daron, Simon Johnson and James A. Robinson 2005. "Institutions as a Fundamental Cause of Development." in *Handbook of Economic Growth*, edited by Philippe Aghion and Steven Durlauf. Amsterdam: North-Holland.
- Acemoglu, Daron and Simon Johnson. 2005. "Unbundling Institutions." *Journal of Political Economy*. 113(5): 949- 995.
- Akerlof, George A. and Rachel E. Kranton. 2005. "Identity and the Economics of Organizations." *The Journal of Economic Perspectives*. 19(1): 9-32.
- Baumol, William J. 1990. "Entrepreneurship: Productive, Unproductive, and Destructive." *Journal of Political Economy*. 98(5): 893-921.
- Becker, Gary S. 1965. "A Theory of the Allocation of Time." *The Economic Journal*. 75 (299): 493-517.
- Benz, Matthias and Bruno Frey. 2004. "Being Independent Raises Happiness at Work." *Swedish Economic Policy Review*. 11: 95-134.
- Besley, Timothy. 1995. "Property Rights and Investment Incentives: Theory and Evidence from Ghana." *Journal of Political Economy*. 103(5): 903-37.
- Brown, G. 1998. "Budgets, Cadres and Local State Capacity in Rural Jiangsu" in *Village Inc. Chinese Rural Society in the 1990s*, edited by Flemming Christiansen and Junzuo Zhang. London: Curzon Press.
- Clark, Andrew. 1997. "Job Satisfaction and Gender: Why are Women so Happy at Work?" *Labour Economics*. 4(4): 341-372.
- Clarke, Donald C., Peter Murrell and Susan H. Whiting. 2008. "*China's Great Economic Transformation*." Cambridge University Press.
- Coase, Ronald. 1991. "Lecture to the memory of Alfred Nobel."
- Cooper, A., Ramachandran, M. and D. Schoorman. 1997. "Time Allocation Patterns of Craftsman and Administrative Entrepreneurs: Implications for Financial Performance." *Entrepreneurship Theory and Practice*. 22(2): 123-136.
- Cole, Matthew A., Robert JR Elliott, and Jing Zhang. 2009 "Corruption, governance and FDI location in China: A province-level analysis." *The Journal of Development Studies* 45(9): 1494-1512.

- Cull, Robert and Lixin Colin Xu. 2005. "Institutions, Ownership, and Finance: the Determinants of Profit Reinvestment among Chinese Firms." *Journal of Financial Economics*. 77(1): 117-146.
- Dewatripont, Mathias, Ian Jewitt and Jean Tirole. 2000. "The Economics of Career Concerns, Part II: Application to Missions and Accountability of Government Agencies." *Review of Economic Studies*. 66(1): 199-217.
- Dewatripont, Mathias, Ian Jewitt and Jean Tirole. 2000. "Multitask Agency Problems: Focus and Task Clustering." *European Economic Review*. 44: 4-6.
- Fehr, Ernst and Armin Falk. 2002. "Psychological Foundations of Incentives." *European Economic Review*. 46(4): 687-724.
- Fischer, E. and R. Reuber. 1997. "The Good, the Bad, and the Unfamiliar: The Challenges of Reputation Formation Facing New Firms." *Entrepreneurship Theory and Practice*. 31(1): 53-75.
- Francis, Bill B., Iftekhar Hasan and Xian Sun, 2009, "Political Connections and the Process of Going Public: Evidence from China", *Journal of International Money and Finance*, Vol. 28, No.4, pp. 696-719.
- Freeman, Richard B. 1997. "Working for Nothing: The Supply of Volunteer Labor." *Journal of Labor Economics*. 15 (1): 140-166.
- Guo, Di, Kun Jiang, Byongyang Kim and Chenggang, Xu. 2014. "Political Economy of Private Firms in China." *Journal of Comparative Economics*. 42(2): 286-303.
- Holmstrom, Bengt and Paul Milgrom. 1991. "Multitask Principal-Agent Analyses: Incentive Contracts, Asset Ownership, and Job Design." *Journal of Law, Economics, and Organization*. 7: 24-52.
- Johnson, Simon, John McMillan and Christopher Woodruff. 2002. "Property Rights and Finance." *American Economic Review*. 92(5): 1335-1356.
- Klapper, Leora F., and Inessa Love. 2004. "Corporate Governance, Investor Protection, and Performance in Emerging Markets." *Journal of Corporate Finance*. 10(5): 703-728.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny. 2000. "Investor protection and corporate governance." *Journal of financial economics*. 58(1): 3-27.
- Li, Hongbin, Lingsheng Meng, Qian Wang and Li-an Zhou. 2008. "Political Connections, Financing and Firm Performance: Evidence from Chinese Private Firms." *Journal of Development Economics*. 87(2): 283-299.
- Lin, Chen, Ping Lin and Hong Zou. 2012. "Does Property Rights Protection Affect Corporate Risk Management Strategy? Intra- and Cross-Country Evidence." *Journal of Corporate Finance*. 18(2): 311-330.

- Lucas, Robert E. Jr. and Benjamin Moll. 2011. "Knowledge Growth and the Allocation of Time." *NBER Working Papers* 17495.
- McCarthy, A.M., Krueger, D.A. and T.S. Schoenecker 1990. "Changes in the Time Allocation Patterns of Entrepreneurs." *Entrepreneurship Theory and Practice*. 15(2): 7-18.
- North, Douglass D. 1981. "*Structure and Change in Economic History*." W. W. Norton & Company.
- Peng, Mike W. and Yadong Luo, 2000, "Managerial Ties and Firm Performance in a Transition Economy: The Nature of a Micro-Macro Link", *The Academy of Management Journal*, 43 (3): 486-501.
- Pollak, Robert A. and Michael L. Wachter. 1975. "Allocation of Time." *The Journal of Political Economy*. 83(2): 255-278.
- Smith, Adam. 1981[1776]. "*An Inquiry into the Nature and Causes of the Wealth of Nations*." Indianapolis, IN: Liberty Fund.
- Tullock, Gordon. 1967. "The Welfare Costs of Tariffs, Monopolies, and Theft." *Western Economic Journal*. 5(3): 224-232.
- Verheul, Ingrid, Martin Carree and Roy Thurik. 2009. "Allocation and Productivity of Time in New Ventures of Female and Male Entrepreneurs." *Small Business Economics*. 33(3): 273-291.
- Wong, Christine. 1997. "*Financing Local Government in the People's Republic of China*." Oxford University Press.
- Xu, Chenggang. 2011. "The Fundamental Institutions of China's Reforms and Development." *The Journal of Economic Literature*. 49(4): 1076-1151.
- Xu, Chenggang. 2014. "Political and Economic Institutions of China and Their Influences." Mimeo, University of Hong Kong.

Table 1 Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Work_time	3413	12.484	2.614	6.000	18.000
Lobby_hour	3570	3.258	1.825	0	10.000
Mng_hour	3696	7.507	2.552	2.000	14.000
Lobby_Rt	3412	0.264	0.135	0	0.667
Mng_Rt	3412	0.596	0.152	0.200	0.909
Study_Rt	3412	0.140	0.076	0	0.750
Forced_fee/sales	1982	0.006	0.017	0	0.115
High_fee	1982	0.250	0.433	0	1.000
CPC	3446	0.405	0.491	0	1.000
CEO_share	3242	67.996	26.943	0	100.000
CEO_income(10000 RMB)	3404	23.976	41.439	1.000	300.000
CEO_age	3808	44.381	8.150	26.000	65.000
CEO_edu	3815	0.859	0.348	0	1.000
Privatization	3600	0.203	0.402	0	1.000
Firm_age	3690	7.052	4.443	1.000	20.000
Firm_size(log of # of employees)	3572	3.854	1.550	0.693	7.824
Anti-Corruption	3837	0.282	0.069	0.151	0.492
CVRG	3772	59.453	30.921	2	132

Table2 Comparison between firms with and without high fee charged

Variable	Firms without high fee charged					Firms with high fee charged					Difference between the two groups	
	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Difference	t-statistics
Lobby_hour	1432	3.261	1.865	0	10	500	3.352	1.806	0	10	-0.091	-0.949
Mng_hour	1452	7.614	2.532	2	14	509	7.254	2.602	2	14	0.360	2.740***
Work_time	1396	12.612	2.570	6	18	481	12.343	2.640	6	18	0.269	1.968**
Lobby_Rt	1395	0.261	0.135	0	0.667	481	0.274	0.134	0	0.667	-0.014	-1.952*
Mng_Rt	1395	0.600	0.150	0.2	0.909	481	0.585	0.152	0.2	0.909	0.014	1.801*
Study_Rt	1395	0.139	0.076	0	0.750	481	0.140	0.075	0	0.429	0.000	-0.065
Forced_fee/sales	1467	0.001	0.001	0	0.004	515	0.023	0.028	0.004	0.115	-0.023	-30.783***
CPC	1368	0.426	0.495	0	1	460	0.378	0.485	0	1	0.048	1.805*
CEO_share	1374	67.159	26.546	0	100	470	70.923	25.956	6	100	-3.765	-2.669***
CEO_income (10000 RMB)	1384	25.681	44.791	1	300	499	26.359	45.039	1	300	-0.677	-0.289
CEO_age	1461	45.125	7.844	26	65	513	43.934	8.188	26	65	1.191	2.924***
CEO_edu	1462	0.855	0.352	0	1	514	0.868	0.339	0	1	-0.013	-0.711
Privatization	1405	0.232	0.422	0	1	476	0.145	0.352	0	1	0.087	4.046***
Firm_age	1432	7.214	4.310	1	20	498	6.964	4.543	1	20	0.251	1.102
Firm_size(log of # of employees)	1441	4.108	1.569	0.693	7.824	505	3.496	1.326	0.693	7.313	0.612	7.844***

Table 3 Property Rights Violation and Time Allocation

	(1)	(2)	(3)	(5)	(6)
	Work_time	Lobby_Rt	Mng_Rt	Lobby_hour	Mng_hour
High_fee	-0.173 (0.169)	0.019** (0.009)	-0.022** (0.010)	0.186 (0.121)	-0.497*** (0.164)
CEO_share	0.004 (0.003)	-8.48E-5 (1.42E-4)	3.06E-4** (1.56E-4)	4.60E-4 (0.002)	0.005** (0.003)
CEO_income	-0.004** (0.002)	3.08E-4*** (8.36E-5)	-4.19E-4*** (9.16E-5)	0.003** (0.001)	-0.008*** (0.002)
CEO_age	0.016* (0.010)	-0.001** (4.99E-4)	0.001** (0.001)	-0.008 (0.007)	0.027*** (0.009)
CEO_gender	-0.276 (0.217)	-0.030*** (0.011)	0.030** (0.012)	-0.448*** (0.156)	0.212 (0.212)
Firm_age	0.026 (0.017)	3.37E-4 (0.001)	3.94E-4 (0.001)	0.012 (0.013)	0.018 (0.017)
CEO_edu	0.298 (0.207)	0.006 (0.011)	-0.015 (0.012)	0.038 (0.149)	0.052 (0.201)
Privatization	0.194 (0.183)	-0.007 (0.010)	3.33E-4 (0.011)	0.059 (0.133)	0.011 (0.180)
Firm_size	0.136** (0.056)	0.007** (0.003)	-0.009*** (0.003)	0.131*** (0.041)	-0.019 (0.055)
Constant	10.84*** (0.610)	0.303*** (0.032)	0.545*** (0.035)	3.305*** (0.441)	5.853*** (0.600)
Industry effect	Y	Y	Y	Y	Y
Regional effect	Y	Y	Y	Y	Y
N	1439	1439	1439	1473	1488
pseudo R-sq	0.009	-0.057	-0.083	0.011	0.012
P-value	0.001	0.000	0.000	0.000	0.000

*Standard errors in parentheses = ** p<0.105; ** p<0.05; *** p<0.01*

Table 4 Two-stage Estimations on Property Rights Violation and Time Allocation

	(1)	(2)	(3)	(4)	(5)
Panel A: 1st stage	High_fee	High_fee	High_fee	High_fee	High_fee
Anti-Corruption	-2.161*	-2.161*	-2.161*	-2.198*	-2.269**
	(1.158)	(1.158)	(1.158)	(1.137)	(1.122)
CVRG	-0.007**	-0.007**	-0.007**	-0.006**	-0.006**
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
All control Vars	Y	Y	Y	Y	Y
P	0.000	0.000	0.000	0.000	0.000
Anderson canon. corr. LM statistics	0.063	0.063	0.063	0.065	0.049
Sargan Statistics	0.014	0.190	0.276	0.108	0.428
N	1430	1430	1430	1464	1479
Panel B: 2nd stage	Work_time	Lobby_Rt	Mng_Rt	Lobby_hou r	Mng_hou r
High_fee	0.650	0.303*	-0.348*	4.173*	-4.186
	(2.607)	(0.182)	(0.204)	(2.559)	(2.867)
CEO_share	0.004	-2.58E-4	0.001**	-0.002	0.008**
	(0.003)	(2.19E-4)	(2.45E-4)	(0.003)	(0.004)
CEO_income	-0.004*	1.71E-4	-2.63E-4	0.001	-0.005**
	(0.002)	(1.45E-4)	(1.63E-4)	(0.002)	(0.002)
CEO_age	0.017*	-0.001	0.001	-0.003	0.021*
	(0.010)	(0.001)	(0.001)	(0.010)	(0.011)
CEO_gender	-0.215	-0.020	0.018	-0.312	0.083
	(0.227)	(0.020)	(0.018)	(0.220)	(0.258)
Firm_age	0.022	1.74E-5	0.001	0.004	0.024
	(0.017)	(0.001)	(0.001)	(0.017)	(0.020)
CEO_edu	0.310	0.004	-0.012	0.029	0.043
	(0.205)	(0.014)	(0.016)	(0.196)	(0.228)
Privatization	0.212	0.008	-0.016	0.247	-0.181
	(0.222)	(0.016)	(0.017)	(0.216)	(0.261)
Firm_size	0.173	0.020**	-0.024**	0.306**	-0.179
	(0.135)	(0.010)	(0.011)	(0.128)	(0.145)
Constant	10.44***	0.175*	0.691***	1.598	7.487***
	(1.284)	(0.090)	(0.101)	(1.219)	(1.386)
Industry effect	Y	Y	Y	Y	Y
Regional effect	Y	Y	Y	Y	Y
N	1430	1430	1430	1464	1479
Prob > F	0.0017	0.0204	0.003	0.0692	0.001

Standard errors in parentheses = ** $p < 0.105$; *** $p < 0.05$; **** $p < 0.01$

Table 5 Property Rights Violation, Political Connection and Time Allocation

	(1)	(2)	(3)	(4)	(5)
	Work_time	Lobby_Rt	Mng_Rt	Lobby_hour	Mng_hour
High_fee	-0.285 (0.221)	0.031*** (0.012)	-0.040*** (0.013)	0.322** (0.157)	-0.848*** (0.214)
CPC	-0.169 (0.177)	0.001 (0.009)	-0.001 (0.010)	-0.020 (0.127)	-0.137 (0.173)
High_fee*CPC	0.220 (0.357)	-0.030* (0.018)	0.044** (0.020)	-0.358 (0.255)	0.828** (0.345)
CEO_share	0.004 (0.003)	-5.94E-5 (1.47E-4)	2.67E-4* (1.60E-4)	0.001 (0.002)	0.005* (0.003)
CEO_income	-0.004** (0.002)	2.92E-4*** (8.52E-5)	-4.14E-4*** (9.32E-5)	0.002** (0.001)	-0.007*** (0.002)
CEO_age	0.017* (0.010)	-0.001* (0.001)	0.001** (0.001)	-0.007 (0.007)	0.027*** (0.010)
CEO_gender	-0.228 (0.226)	-0.031*** (0.012)	0.033*** (0.013)	-0.432*** (0.162)	0.290 (0.219)
Firm_age	0.025 (0.018)	0.001 (0.001)	-3.62E-4 (0.001)	0.022* (0.013)	0.008 (0.018)
CEO_edu	0.350 (0.219)	0.014 (0.011)	-0.025** (0.012)	0.145 (0.156)	-0.052 (0.211)
Privatization	0.251 (0.193)	-0.005 (0.010)	-0.001 (0.011)	0.096 (0.139)	0.046 (0.189)
Firm_size	0.133** (0.058)	0.006* (0.003)	-0.007** (0.003)	0.113*** (0.042)	-0.002 (0.056)
Constant	10.950*** (0.633)	0.298*** (0.033)	0.550*** (0.036)	3.265*** (0.454)	5.992*** (0.617)
Industry effect	Y	Y	Y	Y	Y
Regional effect	Y	Y	Y	Y	Y
N	1354	1354	1354	1386	1400
pseudo R-sq	0.009	-0.063	-0.093	0.012	0.013
P-value	0.000	0.000	0.000	0.000	0.000

*Standard errors in parentheses = ** $p < 0.105$; * $p < 0.05$; *** $p < 0.01$*

Table 6 Property Rights Violation, Firm Characteristics and Time Allocation

	(1)	(2)	(3)	(4)	(5)	(6)
	Work_time	Lobby_Rt	Mng_Rt	Work_time	Lobby_Rt	Mng_Rt
High_fee	-0.799** (0.317)	0.049*** (0.017)	-0.043** (0.018)	-0.961** (0.478)	0.063** (0.025)	-0.067** (0.028)
High_fee*Firm_age	0.089** (0.038)	-0.004** (0.002)	0.003 (0.002)			
High_fee* Firm_size				0.217* (0.123)	-0.012* (0.006)	0.013* (0.007)
CEO_share	0.004 (0.003)	-8.74E-5 (1.41E-4)	3.08E-4** (1.55E-4)	0.004 (0.003)	-7.24E-5 (1.42E-4)	2.92E-4* (1.55E-4)
CEO_income	-0.004** (0.002)	3.02E-4*** (8.35E-5)	-4.15E-4*** (9.16E-5)	-0.004** (0.002)	3.10E-4*** (8.35E-5)	-4.21E-4*** (9.14E-5)
CEO_age	0.016* (0.010)	-0.001** (4.98E-4)	0.001** (0.001)	0.017* (0.010)	-0.001** (4.98E-4)	0.001** (0.001)
CEO_gender	-0.262 (0.216)	-0.030*** (0.011)	0.030** (0.012)	-0.278 (0.217)	-0.030*** (0.011)	0.029** (0.012)
Firm_age	0.005 (0.020)	0.001 (0.001)	-4.36E-4 (0.001)	0.025 (0.017)	3.81E-4 (0.001)	3.46E-4 (0.001)
CEO_edu	0.319 (0.207)	0.005 (0.011)	-0.014 (0.012)	0.314 (0.207)	0.005 (0.011)	-0.014 (0.012)
Privatization	0.197 (0.182)	-0.007 (0.010)	0.001 (0.011)	0.197 (0.183)	-0.007 (0.010)	0.001 (0.011)
Firm_size	0.137** (0.056)	0.007** (0.003)	-0.009*** (0.003)	0.095 (0.061)	0.009*** (0.003)	-0.012*** (0.003)
Constant	10.960*** (0.611)	0.297*** (0.032)	0.550*** (0.035)	10.970*** (0.614)	0.295*** (0.032)	0.553*** (0.035)
Industry effect	Y	Y	Y	Y	Y	Y
Regional effect	Y	Y	Y	Y	Y	Y
N	1439	1439	1439	1439	1439	1439
pseudo R-sq	0.010	-0.060	-0.085	0.009	-0.060	-0.086
P-value	0.000	0.000	0.000	0.000	0.000	0.000

Standard errors in parentheses = ** $p < 0.105$; * $p < 0.05$; *** $p < 0.01$

Table A-1 Variable definitions

Variables		Definitions
Time allocation of the entrepreneur	Work_time	The average working hours per day in the recent months reported by the entrepreneur including learning time, lobbying time and management time
	Lobby_hour	The average time paid by the entrepreneur to deal with networking activities in the recent months reported by the entrepreneur
	Mng_hour	The average time paid by the entrepreneur to deal with management and other administrative activities of the firm in the recent months reported by the entrepreneur
	Study_hour	The average time paid by the entrepreneur to learning in the recent months reported by the entrepreneur
	Lobby_Rt	Lobby_hour/Work_time
	Mng_Rt	Mng_hour/Work_time
Property rights violation	Forced_fee	Total additional levies imposed to the firm in the previous financial year
	High_fee	A dummy variable that equals to one if the ratio of the Forced_fee over total sales of the previous year is among the top 25 percentile and zero if otherwise
Political Connections of the entrepreneur	CPC	A dummy variable that equals to one if the entrepreneur was a China's Communist Party member at the time of the survey and zero if otherwise
Entrepreneur characteristics	CEO_share	The ownership held by the entrepreneur over total equity of the firm in the previous financial year
	CEO_age	The age of the entrepreneur in year at the time of the survey
	CEO_edu	A dummy variable that equals to one if the entrepreneur has high school education or above at the time of the survey and zero if otherwise
	CEO_gender	A dummy variable if the entrepreneur is a female and zero if otherwise
	CEO_income	The total income the entrepreneur gained from the firm in the previous financial year
Firm characteristics	Firm_age	The age of the firm in year at the time of the survey
	Firm_size	The total number of employees of the firm in logarithm form
	Privatization	A dummy variable if the private firm was privatized from a former state-owned enterprise and zero if otherwise
Instrumental variables	Anti-Corruption	The number of registered cases under the direct investigation of people's procuratorates divided by provincial population (cases per 10,000 persons) in the past two years before the survey
	CVRG	the frequency of the appearance of the key word "Non-public sector development" in articles covered by the Database of Chinese Communist Party Construction Periodicals written by the Party Chief of a specified province in the past two years before the survey.