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**Taxes and Economic Rents:
The Role of Political Connection in Chinese
Listed Private Firms**

**Kenny Z. Lin
Professor
Lingnan University
Hong Kong**

**Zhenyang Shi
PhD Student
The Chinese University of Hong Kong
Hong Kong**

**Fang Zhang
Associate Professor
Hong Kong Baptist University
Hong Kong**

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Athens Institute for Education and Research
8 Valaoritou Street, Kolonaki, 10671 Athens, Greece
Tel: + 30 210 3634210 Fax: + 30 210 3634209 Email: info@atiner.gr URL:
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Taxes and Economic Rents: The Role of Political Connection in Chinese Listed Private Firms

Kenny Z. Lin

Zhenyang Shi

Fang Zhang

Abstract

The traditional wisdom suggests that, while tax authorities prefer more collection, companies use various tools to lower their tax bills. Nonetheless, by studying Chinese private firms, we find that firms with an incentive to develop political connections would like to pay more tax to respond to the government's call for additional revenue. Raising the standardized value of provincial fiscal deficit from the 25th percentile to the the 75th percentile in our data increases ETR, on average, by 1.85%, translating into an extra annual tax payment of USD 1.06 million (equivalent to 9.1% of the reported tax expense) for the average firm. The active respondents include those firms who operate in less developed regions and face intense competition from their SOE peers. We also find that active respondents, compared to their peers, get more preferential access to government-controlled resources and as a result, the tax overpayment leads to better future performance. Our study provides general evidence that tax payment as a specific channel through which the government seeks rents and firms pursue political connections in China.

Keywords: Taxes, Economic Rents, Political Connection.

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Introduction

The political cost literature in accounting finds evidence that firms incur financial and tax reporting costs if they are sensitive to government oversight (Watts and Zimmerman 1986) and have insufficient political power to deflect scrutiny (Mills et al. 2013). The traditional wisdom suggests that, while tax authorities prefer more collection, companies use various tools to lower their tax bills. Nonetheless, by studying Chinese listed private firms, we find that not all firms adopt tax-decreasing strategy when government desire higher tax revenue. Some firms are more responsive to government's call for additional revenue by contributing more taxes than their counterparts. In this study, we provide explanations for such 'irrational' behavior by investigating the following specific questions: 1) does the positive correlation we find between the government demand for revenue and the tax overpayment is due to the government's stricter taxation enforcement or firms' efforts to voluntarily seeking political ties? 2) if tax overpayment is the cost side, then, what's the benefits firms could obtain? and 3) how does economic performance materialize through this cost-benefit function?¹

Based on a sample of 7,161 firm-years from 2000 to 2015, we first document a positive relationship between firm's effective tax rate and local government's expenditure shortage. Prior research documents similar phenomenon using Chinese data. For example, Deng and Luo (2011) find that local government and firms work together to manipulate the timing of tax collection to beat the target of the local fiscal performance. Chen et al. (2015) find that newly appointed local leaders tend to collect more taxes to expand fiscal expenditures and boost local economies, and, in turn, state-owned enterprises (SOEs) reduce tax avoidance after the new leaders take office. However, these studies emphasize more on the government motivation and leave firm's incentives out of the picture.

We argue that, on the one hand, China has been implementing a tax budget control system since its foundation. Explicitly, the State Administration of Taxation (SAT) assign a tax revenue target that local taxation administrations based on the previous year's tax base with a ratio adjustment. Therefore, taxes are frequently contracted rather than assessed. Driven by economic interests and the pressure to seek growth, which is the most critical measure of political

¹The tax overpayments we document in this paper include but not limited to tax less aggressiveness. It also includes the condition that firms pay more than prescribed by the tax laws. This practice of "excessive taxation" (*Guotoushui* in Chinese) has drawn much media attention. For example, in June 2012, despite the slowdown of economy and sliding profitability of the business sector, the national enterprise income taxes increased significantly (see <http://finance.people.com.cn/GB/70846/18179343.html>).

performance in the promotion evaluation, local governors in China starve for revenue (Chen et al. 2015). On the other hand, China is characterized by a combination of a relationship-based economy, weak legal institutions, and a considerable government influence in all aspects of the business. Although the private sector has become increasingly important for China's GDP growth, private firms must compete for resources and market share with state-owned firms who enjoy the competitive advantage of government control. Having no political ties is costly for the private firms. Also, market institutions and property rights protection are weak and uneven across regions in China. An investment in the relationship, such as establishing strong relations with bureaucrats, is a frequently used strategy to receive better protection and gain access to economic rents (Shleifer and Vishny 1994). Financially supporting the local government by paying more tax is a legitimate and practical way to develop a political relationship in this rapidly expanding economy. Therefore, private firms with an incentive to develop political connections would like to pay more tax to respond to the government's call for additional revenue.

An alternative explanation is that, when a local government needs more revenue, it could simply be more aggressive in collecting taxes. Thus, the positive correlation we find between the government demand for revenue and the tax overpayment is due to the government's efforts but not the firms' efforts to voluntarily seeking political ties. We solve this issue in two ways. First, we control the government efforts by using a measure of the tax enforcement actions that captures both enforcement efforts made and enforcement outcomes achieved by the Chinese local tax authorities. After we control government efforts, we still find the positive relationship between the government demand for revenue and the tax overpayment. Second, we argue that, in equilibrium, all firms will choose, based on the cost-benefit analysis, a certain level of political connection to maximize firm value. If a firm is more reliance on the political network, a more active response to the government's demand for more revenue will be observed. Our results suggest that the active respondents include those firms who operate in the regions with weaker market development and facing intense competition from local SOE competitors. This finding supports our argument that tax overpayment is not only driven by the political incentive but also shaped by firms' demand for political connection.

If tax overpayment is the cost side, then, we study whether, in return, overpaid firms get preferential access to government-controlled resources. The local government in China controls the allocation of key resources such as land, raw material, utilities, licensing, and financing opportunities and creates barriers for private firms to gain access to these resources (Johnson et al. 2002). Connections with politicians not only ensure the private protection of property rights but also can give firms preferential access to public resources. Our anecdotal understanding of local Chinese politics is that local authorities

reward companies that provide additional tax revenues. We find that tax-overpaid firm, in general, enjoys more government subsidy, easier access to long-term loan, a higher chance to become a government supplier and be more successful in the patent application process.

Faccio (2006) suggests that firms adopt many ways to seek and maintain a relationship with government, and corporate value will be enhanced only when the marginal benefits of the connections outweigh their marginal costs. Therefore, we further test whether tax overpayment results in value damage or enhancement. We find that overpayment is positively correlated with firms' three-year-ahead changes in return on assets, sales, operating income and cash flows, and capital expenditure. These results reinforce our understanding that, when deciding to enter politics, firms will choose, based on cost-benefit analysis, a certain level of political connection to maximize firm value.

This study has both academic value and policy relevance. First, our results help to reconcile the conflict between political cost hypothesis and the tax overpayment phenomenon in China listed private firms. In the economic theories of the political process, corporate taxes are one component of political costs which facilitate government wealth transfer, and companies use various tools to lower their tax bills. However, if paying tax to the government could exchange benefit via subsidies, protective tariffs, government-created monopolies, then tax payment could be an effective strategy to enhance firm value. Second, our paper introduces a novel way to identify political connections. The most prior literature identifies political connection through the appointment of the politically connected management (Faccio 2006; Fan et al. 2007; Infante and Piazza 2014; Kim and Zhang 2016). However, in some cases, this measure may overlook some instances of politically powerful connections, and in other cases, it gives credit to political connections that are less powerful than they might appear (Faccio 2006). It is also hard to measure the cost in the dollar amount of seeking or maintaining political connections by just measuring the related expenditures for keeping the connected person inside the company. In the United States, researchers identify political connection through the corporate political activities based on lobbying expenditures and campaign contributions (Claessens et al. 2008; Alexander et al. 2009). Besides the specific feature of this type of connection measure that usually cannot be used in the countries outside of United States, the durability of such expenditure has been primarily questioned (Faccio 2006).

Finally, from a policy perspective, the results will help policymaker to understand firms' incentives better, curb rent-seeking behavior, and hence improve the efficiency of resource allocation. We note that this specific channel is unique to China, and different countries/economies that adopt different tax and bureaucrats system cannot apply our findings directly. However, our study will mark one step forward to a better understanding of the

role of politics in firm actions and the story itself can be generalized to other emerging economies with substantial government intervention in the corporate sector.

Institutional Setting and Hypotheses Development

China's Tax Budget Control System

China has been implementing a tax budget control system since its foundation. Every year, central taxation administration (the State Administration of Taxation, SAT, hereafter) develops the tax revenue budget for local taxation administrations by multiplying the previous year's tax base with a ratio and then making some adjustments. SAT can also determine the target according to the country's fiscal expenditure plan. The budget is passed on to provincial taxation administrations during the annual National Tax Conference and then is allocated from the higher-level administrations to lower-level administration (Deng and Luo 2011). Accordingly, all layers of taxation administrations make up a set of reward and punishment measures to encourage tax collection.

The National Audit Office of China audited the tax revenue collection between the beginning of 2002 and September 2003 of 35 local taxation administrations in 17 provincial areas in 2004. Among the sampled 788 companies, 364 companies were selected by local taxation administrations for their tax revenue manipulation. At the end of 2002, USD 10.64 billion of tax revenues were not collected and USD 1.58 billion at the end of September 2003. Moreover, some companies were made to pay more than prescribed by the tax laws when local taxation administrations expected that tax collection would be lower than the target. On the other hand, it is common practice for the Chinese local government to recognize and award top tax-paying firms in its jurisdiction. These firms are described as important contributors to the society by the media. Executives of these firms also have the chance to meet senior government officials in the award ceremony. For example, Hubei Daily, on December 13, 2012, reported that the local government organized a ceremony toward the top 10 tax contributors. The executive deputy governor and all the provincial party committee members attended the meeting. The positive publicity and favorable evaluations by the government motivate private firms who are seeking political connections to respond promptly to the government's demand for more revenues.

Political Incentive of Chinese Private Firms

China has achieved remarkable economic growth over the last two decades. To a large extent, this growth is achieved through the development of a private

sector, which accounted for about 65% of the country's GDP and 70% of its annual growth in 2006. At the end of 2008, about 45% (=713/1,593) of the listed firms in China are privately owned, and about 9% of the board members are politically connected (defined as having an ex-government official as the CEO of the firm) (Chen et al. 2011). Although the private sector has become increasingly important for China's GDP growth, private firms must compete for resources and market share with state-owned firms who enjoy the competitive advantage of government control. The local government controls the allocation of key resources such as land, raw material, utilities, licensing, and financing opportunities and creates barriers for private firms to gain access to these resources. Further, most private firms have to raise capital through personal financing. Local governments have leeway to aid such financing via government contracts, bank loans, business licenses and financial aids (Johnson et al. 2002). These financial benefits can account for a significant portion of a firm's total operating revenue. The successful seeking of economic rents depends heavily on the relationship with the government. Having no political ties is costly for the firm. The most significant cost is management time spent on dealings with government regulations, but this cost is unobservable. For example, private startups may take years to go through lengthy administrative procedures and complicated rules to obtain a business license or permit. Self-interested bureaucrats can use their administrative power to slow down the administrative procedures further if the firm does not have favorable political ties with the local government.

Hypotheses Development

Governments all over the world need to collect revenues to finance expenditures. Since China's 1994 public finance reform, the local governments have been held responsible for funding local fiscal expenditures, and the majority of urban infrastructure investments have been financed locally (Wu et al. 2012). During our sample period, the provincial government expenditures on average increased from 5.18 billion USD in 2000 to 74.62 billion USD in 2015, and the share of local government expenditures in provincial gross domestic product (GDP) on average increased from 14.43 percent in 2000 to 29.39 percent in 2015 (National Bureau of Statistics of China 2017). To fund fiscal expenditures and boost the local economy, local officials must seek ways to relax and expand budgets.

Unlike the U.S. where oversight over local governments occurs through citizens' voting rights, entrance or exit of residents, free media, and opposition parties, local officials in China are not accountable horizontally to the public. Instead, they are generally accountable only vertically to the higher-level government, which determines their appointment and promotion. Among the criteria for evaluating public officials, achievement is the most important one

(relative to political integrity, competence, and diligence, the assessments of which are very subjective). The achievement criterion is based in large part on the rate of growth in the local economy from the jurisdiction. Moreover, the growth of local government revenue is an essential component of the growth of local economy and is a key factor in the performance evaluation of local taxation officials (Deng and Luo 2011). In the absence of oversight from residents (voters), the incentives faced by local governments in China arises from officials' dependence on particular sources of finance (such as tax) and through their controls over the allocation of public resources and bank loans.

Another point worth considering is if the local government needs to boom tax revenue would not they look first to the firms that they directly control, for example, SOEs. Zhang et al. (2012) find evidence that SOEs avoid tax to a less extent than non-SOEs. As we discussed before, Chen et al. (2015) also document that SOEs reduce tax avoidance after the new leaders take office to help them expand fiscal expenditures and boost local economies. Their findings for SOEs would at least support our argument that increases corporate income tax collection is an effective way for the local governments to expend their budget. However, by definition, SOEs are supposed to be politically connected and their contribution (in the form of tax or dividend) to the local government, who is both tax collectors and controlling shareholders, is already be part of budgetary revenue.² Their political connections are imposed by the government rather than sought for by the firms and so are not subject to efforts by firms. Therefore, in this study, we investigate how government expenditure shortage influences corporate tax planning activities for listed private firms with the incentive to pursue political connection. As we discussed before, private firms must compete for resources and market share with SOEs who enjoy the competitive advantage of government support. An investment in the relationship, such as establishing strong relations with bureaucrats, is a frequently used strategy to receive better protection and gain access to economic rents (Shleifer and Vishny 1994). Therefore, private firms with an incentive to develop political connections would like to pay more tax to respond to the government's call for additional revenue. We state our hypothesis in the alternative as follows:

HYPOTHESIS 1. Firms' tax overpayment will be positively correlated with local governments' calls for additional revenue.

²Tang et al. (2017) investigate how local governments balance their tax collection and tax avoidance incentives and find evidence that the overall level of tax avoidance by local government-controlled firms in a region is positively associated with local fiscal deficits due to their unwillingness to share the tax with central government.

To the extent that we observe the positive relationship between government demands for additional revenue and private firms' tax overpayment, we further investigate whether it is due to the stricter taxation enforcement by the local tax authority or firms' efforts to voluntarily seeking political ties. If a local government needs more revenue, it could impose higher taxes on firms by implementing stricter tax enforcement, or they could negotiate with firms to solicit more tax payments in support of political agenda and reciprocally grant favors to the firms in the future. To disentangle these two channels, we first control tax enforcement level that captures both enforcement efforts made and enforcement outcomes achieved by the Chinese local tax authorities and observe if the relationship is diminished or weakened after the incorporation of the effect of tax enforcement. Furthermore, we consider that whether firms with high reliance on the political network would like to respond more actively to governments' call for additional revenue. In equilibrium, all firms will choose the optimal level of investment in political connection to maximize firm value based on the cost-benefit analysis. If a firm is more reliance on the political network for doing business, it will be more willing to pay extra tax to build or maintain a close relationship with the local government.

If tax overpayment is the cost side, then, we study whether, in return, these overpaid firms successfully get preferential access to government-controlled resources. The prevalence of politically connected firms is consistent with the theoretical and empirical work suggesting that these firms can contract more easily with governments and thus receive significant economic benefits, such as government subsidies, state loans, and tax breaks (Fisman 2001; Johnson and Mitton 2003; Leuz and Oberholzer-Gee 2006). Moreover, our anecdotal understanding of local Chinese politics is that local authorities reward companies that provide additional revenues. For example, Green Electric Appliances Inc. (Stock code: 000651), which is an international air conditioning enterprise, has been rated as A level in the tax credit system conducted by Guangdong local tax bureau starting from 2013. To award the company's long-term integrity and valuable contribution to the local tax revenue, local tax authority cooperated with the banks and insurances companies provide extra financing to this company.³ Thus, we expect that excessive tax contributors, in general, enjoy more favor exchange.

HYPOTHESIS 2. Firms with tax overpayments receive preferential access to government-controlled resources.

We consider following four types of favors that firms could obtain from the local government. The first one is the long-term loan. Prior studies (Chen et

³See <http://www.chinatax.gov.cn/n810219/n810724/c2540975/content.html>.

al. 2011; Fan et al. 2008) suggest that a primary financing source for Chinese firms is loans from state-owned banks, especially long-term loans. If tax overpayment results in a gain of political ties, we expect overpaid firms to experience a more significant increase in the long-term loan. Secondly, we study government subsidy. Prior study finds that local governments provide subsidies to help firms boost their earnings above the regulatory threshold of the rightsoffering and delisting (Chen and Yuan 2004; Chen et al. 2008).⁴ We expect that overpaid firms would receive more subsidy from the government. Thirdly, we study government contract. The overall buying power of governments is massive, and the high volume of supply is actively pursued by suppliers (Wen 2017). In the procurement process, the government has the discretionary power to decide the contractor and the information asymmetry between government and suppliers is severe. Therefore, government contract is a way that government awards the overpaid firms. Lastly, we study the patent. In China, the *State Intellectual Property Office* (SIPO), affiliated to the State Council, is in charge of the patent application and granting process.⁵ We expect that, due to the keen competition, political ties could help to secure a fast and successful result of firm's patent application.

Research Methodology

Data and Sample Selection

Our sample firms are selected from firms listed in Shanghai and Shenzhen stock exchanges in China. To ensure that political connections are sought for by the firm rather than imposed by the government (through the appointment of government officials to the management and board), we exclude both local and central government-owned firms. Thus, we limit our sample to A-share listed private firms. Our primary data source is the China Stock Market and Accounting Research Database (CSMAR), from which we retrieved the firm financial data and

⁴The subsidy is a significant component of net income. Our data shows that around 75% firms in our sample received various kinds of subsidy from government. On average, 12.44% of a firm's net income comes from subsidy. It is possible that, if local government is facing fiscal difficulty, it has insufficient funds to provide subsidy to the firms. However, we note that, if subsidy is a pool, the allocation could be affected by the incentive of local governor.

⁵ China experienced a sustained strong growth in patent filings in the past decade (He et al. 2017). In recent 5 years, the average annual increasing rate is 15%. For example, while SIPO dealt with 1,633,347 applications and granted 960,513 patents in 2001, the volume of patent applications ever received by the SIPO reaches about 2,798,500, and patents granted about 1,718,192 at the end of 2015. See: http://english.sipo.gov.cn/about/examinationAffairs/201606/t20160617_1275239.html.

the provincial fiscal expenditure data.⁶ We start with a sample of 20,439 nonfinancial non-delisting firm-year observations from 2000 to 2015. We follow Wang et al. (2008) to classify the firms whose ultimate owners are non-government units such as entrepreneurs, townships and villages, and foreign companies as non-SOE firms. We first exclude 10,981 SOE observations from the initial sample. We further delete 2,080 firm-years with negative income tax expense or negative pretax income from which we could not generate meaningful effective tax rate (ETR). Finally, we delete 217 firm-years with insufficient financial information to calculate controls variables used in the regression. Our final sample contains 7,161 firm-year observations consisting of 991 unique firms.

We also relied on the following data sources to collect additional information. We manually collected the special government projects (one of the measurements of local government's expenditure shortage) from the *Annual Provincial Government Work Report* and provincial *Yearbooks*. We obtained the patent application data from the *Chinese Patent Database*, which is developed by He et al. (2017) by matching patents from China's State Intellectual Property Office (SIPO) with various types of companies.⁷ We obtain the region's institutional characteristics from the *National Economic Research Institute (NERI) Index of Marketization of China's Provinces 2016 Report*. To measure tax enforcement effort, we use the data from the *China Tax Audits Yearbook*, published annually by the State Administration of Taxation (SAT) and contains detailed tax enforcement data for each province and major city in China. To prevent outliers from unduly affecting our results, we winsorize the top and bottom one percentile of all scaled variables.

Table 1 describes the sample distribution by year and industry. We use the CSRC industry classification scheme, assigning two-digit codes to the manufacturing sector and one-digit codes to other sectors. Our sample firms are across multiple industries, with 51.84% in manufacturing and 11.46% in the real estate industry. Observations are fairly evenly spread across years. We also include the industry distribution of SOEs in the last two columns and find consistent industry distributions among these two groups of firms.

⁶We also try to use city level data, but sample size is much smaller due to the missing location information and incomplete city level fiscal data.

⁷Chinese Patents Database provides standardized, fine-grained information on the innovation concerned, including technical descriptions, the assignee(s), the inventor(s), the time, the location, the technological domain to which it belongs (technology classes), the scope of property rights (claims) and the priority link (where a patent application has earlier been filed with foreign jurisdictions) etc.

Table 1. Sample Distribution by Year and Industry

	2000-	2002-	2004-	2006-	2008-	2010-	2012-	2	T	%	S	%
Agriculture	12	16	18	18	17	22	19	1	1	1	1	1
Natural resources	13	18	15	16	16	22	27	1	1	2	3	4
Manufacturing	378	442	416	434	433	528	547	5	3	5	4	5
<i>Foods & beverages</i>	39	39	42	49	46	49	45	4	3	4	3	4
<i>Textiles, suits, & leathers</i>	30	39	44	37	39	45	49	5	3	4	1	1
<i>Wood products & furniture</i>	1	2	6	4	5	5	8	8	3	0	4	0
<i>Papers, stationery, sporting, & musical</i>	7	9	12	13	11	11	12	1	9	1	1	1
<i>Petroleum refining, chemicals, & allied</i>	60	65	61	69	61	72	78	7	5	7	8	9
<i>Electronics</i>	18	24	29	33	37	44	47	4	2	3	2	2
<i>Mineral products & metal products</i>	65	71	46	45	51	76	66	6	4	6	8	8
<i>Equipment & machineries</i>	87	110	92	98	96	128	139	1	8	1	1	1
<i>Medicine & Biological Products</i>	63	77	79	80	81	93	95	9	6	9	4	5
<i>Other Manufacturing</i>	8	6	5	6	6	5	8	8	5	0	2	0
Utilities	30	37	27	21	26	37	28	2	2	3	6	7
Construction	8	16	15	14	12	16	24	1	1	1	2	2
Transportation	32	37	35	30	34	28	26	2	2	3	6	6
Information technology	46	60	46	50	41	55	53	5	4	5	3	4
Wholesale & retail	65	67	56	67	71	90	87	8	5	8	8	8
Real estate	80	85	76	101	109	128	127	1	8	1	6	7
Services	34	35	39	35	31	32	35	3	2	3	2	3
Communication	20	21	19	16	9	20	21	2	1	2	9	1
Others	45	51	32	38	40	46	41	4	3	4	3	3
Total	763	885	794	840	839	1024	1035	9	7	1	9	1

Model Specification and Definition of Variables

To test the relationship between firm's effective tax rate and local government's expenditure shortage (H1), we estimate the following regression model.

$$ETR_{i,t} = \beta_0 + \beta_1 (\text{Government Demand for Additional Revenue}_{k,t-1}) + \beta_k X_{i,t} + \varepsilon_i (1)$$

where i , k and t are firm, province and year indicators. ETR is the 1-year effective tax rate, defined as the ratio of annual income tax expense to annual pretax income before special items (Hoopes et al. 2012). We let the ETR equal one if it is larger than one. We also consider whether our main results are sensitive to other measures of tax avoidance, including the 1-year cash ETR, 3-year book ETR, and 3-year book ETR adjusted for size and industry effects (Balakrishnan et al. 2011; Kim and Zhang 2016; Lin et al. 2017), and include them in our sensitivity tests.

We use four proxies to capture local government's demand for additional revenue and label them *Fiscal_Deficit*, *Trans_Payment*, *High_Increase*, and *Special_Projects*. *Fiscal_Deficit* is calculated as one year lagged standardized value of the difference between provincial annual general budget expenditure and annual general budget revenue (Fan and Zhang 2011). A larger value represents a stronger demanding for extra tax revenue by the local government. *Trans_Payment* denotes one year lagged standardized value of the provincial annual transfer payment from the central government to local government.¹ A larger value presents higher financial dependence on the central government and higher pressure for the local government to gather more tax. *High_Increase* is a dummy variable equal to 1 if the provincial fiscal revenue growth rate is above 20% att-1 and otherwise 0. *Financial Times* reported in the early of 2017 that the Chinese province of Liaoning, a major industrial region in northeastern China, inflated fiscal revenues in the province by at least 20 percent from 2011 to 2014 and the falsification led to additional taxes to USD 146 per person in recent years.² The audit conducted by the National Audit Office (NAO) in the third

¹Different natural conditions and different levels of economic development can cause a fiscal revenue imbalance between different regions. The central-to-regional fiscal transfer payment can redistribute fiscal resources between different regions so that the regions with a relatively low level of economic development and relatively less tax sources can provide local residents with the same basic public services as other regions do. China's current fiscal transfer payment system was gradually established on the basis of the 1994 tax-sharing reform. This method distributed fiscal funds according to the standard revenue and standard expenditure set for various places. (See the website of the State Council of the People's Republic of China, http://english.gov.cn/policies/latest_releases/2015/02/02/content_281475049185334.htm)

²See <https://www.ft.com/content/b25d1b32-dd37-11e6-9d7c-be108f1c1dce>

quarter of 2017 discovered more city or country government inflating their fiscal revenue by a total of USD 0.23 billion.¹ The higher the annual growth rate, the higher probability the government would call for additional tax revenue to meet the overstated growth rate. *Special_Projects* is a dummy variable equal to 1 if a local government invest in large-scale city construction projects (e.g. subway and express railway), undertake international exhibition and conferences (e.g. the World Exposition and the APEC meeting), hold significant sports events (e.g. Olympic Game and National Games of China), or suffer from severe natural disaster (e.g. earthquake and snow disaster) at $t-1$, and 0 otherwise. These activities or events result in significant increase in fiscal expenditure and create strong incentives for the local government to increase tax collection. We expect β_1 to be significantly positive if firms' tax overpayment is positively correlated with local governments' calls for additional revenue.

Prior literature document that the board political ties facilitate tax avoidance either through favorable tax term or lenient tax enforcement (Kim and Zhang 2016; Lin et al. 2017). All else equal, an already-connected firm may not need to pay additional taxes to establish/maintain good political connections. We, therefore, include *Connected%*, which is the percentage of connected members on board to control for the potential tax effect of personal level political connection. We also include a set of variables ($X_{i,t}$) to control the cross-sectional variation in firms' ETR (Chen et al. 2010; Wu et al. 2007; Kim and Zhang 2016; Mills et al. 2013). We measure these variables in year t , but our results are robust to measuring these variables at $t-1$. We include the following firm-level characteristics: firm size (*Size*), the natural logarithm of the firm's year-end total assets; profitability (*ROA*), the ratio of consolidated net income to consolidated total assets, and its standard deviation (*Std. Dev. of ROA*); financial leverage (*Leverage*), total debt over total assets; growth (*Growth*), the market value scaled by net book value of assets; asset liquidity (*Liquidity*), the current assets over current liabilities; plant, property, and equipment (*PPE*), the ratio of net PPE to total assets; intangibles assets (*Intangibles*), the ratio of intangible assets to total assets; inventory intensity (*Inventory*), the ratio of inventory to total assets; cash holdings (*Cash*), the ratio of year-end cash holdings to lagged assets; and ownership structure (*Shareholding*), the percentage of shares owned by the largest shareholder. We include discretionary accruals (*Accruals*), estimated from the modified cross-sectional Jones model to control for the effect of financial reporting aggressiveness (Frank et al. 2009).

We also include two factors to control for differences in regional economic and institutional conditions: *NERI*, an index score that reflects a region's institutional characteristics (Fan et al. 2010), and *GDP*, the annual growth rate of a

¹See <http://www.scmp.com/news/china/economy/article/2123614/chinese-local-governments-accused-faking-economic-data>.

province's gross domestic product. Finally, we include the year and industry fixed effects to control for macroeconomic conditions and changes in tax regulations that differ across years and industries. Appendix A summarizes the regression variable specifications.

To test whether firms with tax overpayments receive preferential access to government-controlled resources (H2), we estimate the following regression model.

$$Benefits_{i,t} = \beta_0 + \beta_1 (Overpayment_{i,t}) + \beta_k X_{i,t} + \varepsilon_{it} \quad (2)$$

Where $Benefits_{i,t}$ are proxies of the economic rents that firms could access through tax overpayment. Specifically, we use: 1) *Loan*, the ratio of long-term loan to total assets; 2) *Subsidy*, the ratio of subsidy from the government to net revenue; 3) *Gov_Purchase*, the ratio of government purchase to total sales revenue; and 4) *Patent*, the two-year-ahead successful rate of patent application.¹

Our variable of interest, *Overpayment*, is measured by the difference between firm's estimated *ETR* and actual *ETR*. Specifically, first, we estimate model (1) for each industry and year.² We assume that firms in the same industry facing similar tax rules in the same year and the effects of different firm attributes on *ETR* should show similar patterns across the same sector. Therefore, by using the estimated coefficients obtained from model (1), we can calculate estimated *ETR* for each observation. Finally, we measure the *Overpayment* as the difference between estimated *ETR* and actual *ETR*, which reflect the deviation of firm's actual *ETR* from the normal level. We use two continuous measures of local government's call for additional revenue (*Fiscal_Deficit* and *Trans_Payment*) to generate two overpayment variables, *Overpayment_Fiscal* and *Overpayment_Trans*.³ A higher value represents a larger magnitude of tax overpayment. We expect β_1 to be significantly positive if firms with tax overpayments receive preferential access to government-controlled resources. All the other variables are defined as earlier.

¹He et al. (2017) find that the average waiting time for the invention patents to be granted is 2-3 years. Thus, we use two-year-ahead successful rate of patent application to reflect this granting process.

²We require each industry to have at least 20 observations in any given year, which reduce our sample size to 6,736 observations.

³We consider the two continuous variables, *Fiscal_Deficit* and *Trans_Payment*, are more precise measures of government fiscal difficulties than the other two dummy variables, *High_Increase* and *Special_Projects*. Therefore, we use these two variables to generate overpayment variables.

Empirical Results

Descriptive Statistics

Table 2 describes our dependent and explanatory variables. Mean *ETR* is 22.5% and varies substantially in our sample with a standard deviation of 15.3%. Untabulated average annual provincial fiscal deficit and transfer payment from central government are around USD 11.4 billion and 11.80 billion respectively.¹ Untabulated descriptive statistics suggest provincial fiscal difficulty varies across region and time. For example, Sichuan province endures a total of fiscal deficit of USD 432.3 billion in the 16-year sample period, while the total fiscal deficit in Hainan province is USD 59.7 billion during the same period. The fiscal deficit also shows year variations with lowest average provincial deficit happened in 2000 and highest occurred in 2009. Additionally, Sichuan and Henan got more fiscal transfer payment from the central government than the other provinces, while Hainan and Ningxia presented the least. On average, around 43.6% observations locate in the provinces with an extremely high fiscal revenue growth rate and 30.1% observations in the provinces carrying special capital-intensive projects in the last year. Two tax overpayment measures show similar statistics and distribution with an average of -0.637 and -0.643 respectively.² The average long-term loan and subsidy ratio is 5.56% and 0.83%. Around 0.68% of firm's sales revenue comes from the government contract, and the success rate of patent application is 12.89%. In our sample, 9.7% of the board members are politically connected. The average firm size measured as total assets is around USD 25.5 million.

¹The figures reported in Table 2 are standardized values.

²A negative value indicates that actual *ETR* is lower than estimated *ETR* for an average firm. When we estimate model (1) by year and industry, we use the full population firms, which include both listed SOEs and private firms. We argue that, although it is unclear whether SOEs and non-SOEs having similar incentives in tax planning activities, the tax rules should be similar across all of the firms in the same sector. We note that including SOEs in our estimation process, on the one hand, helps to maximize our sample size, but also bring noises (such as SOEs may have different tax patterns compared to private firms). Therefore, we use a much smaller sample with only listed private firms, and re-do our estimation in the sensitivity test. We find consistent results.

Table 2. Descriptive Statistics

	N	Mean	Min	P25	P50	P75	Max	Std. dev
Variables of interest								
<i>ETR</i>	7161	0.225	0.002	0.129	0.195	0.287	0.876	0.153
<i>Fiscal_Deficit</i>	7161	-0.113	-0.244	-0.211	-0.168	-0.044	0.386	0.135
<i>Trans_Payment</i>	7161	0.436	-0.837	-0.399	0.027	1.028	4.082	1.091
<i>High_Increase</i>	7161	0.436	0.000	0.000	0.000	1.000	1.000	0.496
<i>Special_Projects</i>	7161	0.301	0.000	0.000	0.000	1.000	1.000	0.459
<i>Overpayment_Fiscal</i>	6736	-0.637	-2.564	-1.080	-0.637	-0.172	1.686	0.733
<i>Overpayment_Trans</i>	6736	-0.643	-2.382	-1.104	-0.662	-0.205	1.910	0.730
<i>Loan</i>	6736	5.759	0.000	0.000	1.644	8.469	39.435	8.585
<i>Subsidy</i>	6736	0.828	0.000	0.001	0.180	0.744	14.388	1.899
<i>Gov_Purchase</i>	6736	0.680	0.000	0.000	0.000	0.000	18.410	3.092
<i>Patent</i>	5834	12.893	0.000	0.000	0.000	16.667	100.000	24.161
Conditional variables								
<i>Market_Development</i>	7161	0.297	0.000	0.000	0.000	1.000	1.000	0.457
<i>SOE_Competition</i>	7161	0.498	0.000	0.000	0.000	1.000	1.000	0.500
Future performance								
<i>ΔROA</i>	4306	-0.048	-0.437	-0.070	-0.041	-0.017	0.174	0.061
<i>ΔSales</i>	4302	0.334	-2.304	0.007	0.345	0.664	3.360	0.707
<i>ΔOPINC</i>	4222	0.004	-0.196	-0.016	0.004	0.028	0.188	0.051
<i>ΔCFO</i>	4222	0.010	-0.329	-0.028	0.009	0.050	0.349	0.099
<i>ΔCAPEX</i>	4222	0.052	0.000	0.017	0.041	0.076	0.207	0.046
Control Variables								
<i>Connected%</i>	7161	0.097	0.000	0.000	0.077	0.154	0.417	0.100
<i>Size</i>	7161	21.607	18.783	20.773	21.490	22.305	25.102	1.185
<i>ROA</i>	7161	0.046	-0.021	0.018	0.037	0.062	0.206	0.039
<i>Std. dev. of ROA</i>	7161	0.028	0.000	0.007	0.014	0.030	0.363	0.045
<i>Leverage</i>	7161	0.478	0.070	0.343	0.483	0.619	0.936	0.186
<i>Growth</i>	7161	4.146	0.742	1.818	2.844	4.645	60.262	5.272
<i>Liquidity</i>	7161	1.770	0.263	1.007	1.392	2.004	9.831	1.398
<i>PPE</i>	7161	0.245	0.001	0.109	0.216	0.353	0.757	0.174
<i>Intangible</i>	7161	0.043	0.000	0.008	0.026	0.054	0.360	0.058
<i>Inventory</i>	7161	0.182	0.000	0.064	0.129	0.230	0.796	0.176
<i>Cash</i>	7161	0.173	0.003	0.086	0.143	0.230	0.589	0.120
<i>Accruals</i>	7161	0.010	-0.273	-0.028	0.000	0.042	0.371	0.094
<i>Shareholding</i>	7161	0.349	0.069	0.225	0.307	0.457	0.750	0.162
<i>NERI</i>	7161	7.505	2.530	6.100	7.660	9.100	11.540	1.953
<i>GDP</i>	7161	0.140	0.006	0.095	0.138	0.186	0.271	0.057
<i>TE</i>	4955	0.5096	0.0944	0.3833	0.5167	0.6056	0.8944	0.1512
Event								
<i>2008Rate_Cut</i>	6736	0.550	0.000	0.000	1.000	1.000	1.000	0.498

Regression Results of H1

Table 3 presents the regression results of the model (1) with four measures to capture the local government's demand for additional revenue. As the same firm can appear several times in our sample and the residuals may be correlated across observations, we use the Huber-White standard errors clustered at the firm level for all regressions (Petersen 2009). For simplicity, we do not report the yearly and industry indicator variables. Across all specifications in columns 1-4, the variables capture the local government's demand for additional revenue are all positive and statistically significant, indicating a strong positive relationship between local government's calls for additional revenue and firm's ETR. This result has economic significance as well. For example, our coefficient estimate on *Fiscal_Deficit* in column 1 implies that raising the standardized value of provincial fiscal deficit from -0.211 (the 25th percentile in our data) to the -0.044 (the 75th percentile) increases *ETR*, on average, by 1.85%, translating into an extra annual tax payment of USD 1.06 million (equivalent to 9.1% of the reported tax expense) for the average firm. This higher *ETR* translates into an increase in tax revenues of about USD 1.05 billion from all the listed private firms. To put this number into perspective, Shanghai spent USD 1.84 billion in operating cost to host Expo 2010, and the outturn cost of the Beijing 2008 Summer Olympics is USD 6.8 billion.¹

The sign and significance of other control variable coefficients are generally consistent with the prior literature (Chan et al. 2010; Hanlon and Heitzman 2010; Kim and Zhang 2016; Mills et al. 2013; Wu et al. 2007). Specifically, higher ETR are associated with firms reporting higher levels of inventory, cash, and locate in regions with more mature institutional environments, but reporting lower levels of firm size, net income, discretionary accruals, and located in regions with higher GDP growth. The coefficients on *Connected %* are all insignificant.

¹Data source: Wikipedia and The Oxford Olympics Study (2016).

Table 3. *Local Governments' Calls for Additional Revenue and Firms' Tax Overpayment*

	<i>Fiscal_Deficit</i>	<i>Trans_Payment</i>	<i>High_Increase</i>	<i>Special_Projects</i>
	(1)	(2)	(3)	(4)
<i>Government Demand for Additional Revenue</i>	0.111*** (3.48)	0.014*** (3.27)	0.011** (2.23)	0.011** (2.45)
<i>Connected %</i>	0.008 (0.31)	0.008 (0.32)	0.005 (0.18)	0.005 (0.19)
<i>Size</i>	-0.008** (-2.55)	-0.008** (-2.57)	-0.008*** (-2.64)	-0.008*** (-2.61)
<i>ROA</i>	-1.212*** (-15.98)	-1.212*** (-15.96)	-1.199*** (-15.77)	-1.199*** (-15.71)
<i>Std. dev. of ROA</i>	-0.033 (-0.56)	-0.034 (-0.58)	-0.029 (-0.50)	-0.030 (-0.50)
<i>Leverage</i>	0.009 (0.36)	0.008 (0.34)	0.007 (0.30)	0.008 (0.34)
<i>Growth</i>	0.001 (0.91)	0.001 (0.89)	0.001 (0.85)	0.001 (0.88)
<i>Liquidity</i>	0.002 (0.72)	0.002 (0.70)	0.001 (0.65)	0.001 (0.64)
<i>PPE</i>	0.012 (0.62)	0.013 (0.64)	0.018 (0.93)	0.019 (0.99)
<i>Intangibles</i>	0.034 (0.74)	0.034 (0.74)	0.045 (0.96)	0.046 (0.99)
<i>Inventory</i>	0.115*** (4.87)	0.115*** (4.86)	0.118*** (4.98)	0.118*** (4.99)
<i>Cash</i>	0.065*** (3.11)	0.065*** (3.12)	0.065*** (3.11)	0.066*** (3.12)
<i>Accruals</i>	-0.068*** (-3.36)	-0.068*** (-3.36)	-0.070*** (-3.43)	-0.070*** (-3.43)
<i>Shareholding</i>	0.018 (1.16)	0.018 (1.16)	0.018 (1.14)	0.017 (1.10)
<i>NERI</i>	0.005*** (2.99)	0.004** (2.52)	0.003* (1.86)	0.002 (1.14)
<i>GDP</i>	-0.116** (-1.97)	-0.109* (-1.84)	-0.116* (-1.91)	-0.093 (-1.57)
<i>Constant</i>	0.240*** (3.84)	0.229*** (3.67)	0.231*** (3.65)	0.235*** (3.71)
<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes
N	7161	7161	7161	7161
Adj. R ²	0.187	0.186	0.184	0.184
F	15.79	15.76	15.80	15.71

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

The results in Table 3 are consistent with our prediction that when the local government calls for additional revenue, firms pay more tax. While the results from our H1 test are consistent with our argument that firms' tax overpayment is positively correlated with local governments' calls for additional revenue, an alternative explanation for this results is that, when a local government needs more revenue, they could increase collecting effort to obtain more tax revenue. Thus the positive correlation we find between the government demand for revenue and the tax overpayment is due to the government's efforts but not the firms' incentives to voluntarily seeking political ties. We conduct two sets of tests to rule out this alternative explanation. Firstly, we control the government's tax enforcement efforts in the model (1). We obtain the tax enforcement data from the *China Tax Audits Yearbook*, published annually by the SAT. The yearbooks contain detailed tax effort data for each province and major city in China. Following Lin et al. (2017), we construct an aggregate measure of tax enforcement (*TE*), which capture both enforcement efforts made and enforcement outcomes achieved by the Chinese local tax authorities. Panel A of Table 4 presents the regression results after controlling *TE*. The coefficient on *TE* is significantly positive across all specifications, which is consistent with the prior findings that tax authorities' effort could substantially deter tax avoidance in both U.S. (Hoopes et al. 2012) and China (Lin et al. 2017). The coefficients on four variables that capture the local government's demand for additional revenue are all remained positive and statistically significant.

Secondly, we argue that, in equilibrium, all firms will choose, based on the cost-benefit analysis, a certain level of political connection to maximize firm value. If a firm is more reliance on the political network, a more active response to the government's demand for more revenue will be observed. Therefore, we perform analysis examining the relationship between ETR and fiscal difficulties conditional on firms' political dependence. While our arguments would predict that the positive relationship between ETR and government demand for tax revenue is more pronounced among firms with stronger political dependence, the alternative argument would predict no differences.

Table 4. *Analyses Examining the Role of Tax Enforcement and Political Dependence*

Panel A: Regression of local governments' calls for additional revenue and firms' tax overpayment, after further controlling for tax enforcement.				
	<i>Fiscal_De</i>	<i>Trans_Pa</i>	<i>High_Inc</i>	<i>Speci</i>
	<i>ficit</i>	<i>yment</i>	<i>rease</i>	<i>al_Projects</i>
	(1)	(2)	(3)	(4)
<i>Government Demand for Additional Revenue</i>	0.136*** (3.22)	0.016*** (3.13)	0.020*** (3.26)	0.008 (1.61)
<i>Tax Enforcement</i>	0.057*** (3.13)	0.058*** (3.23)	0.065*** (3.61)	0.060*** (3.30)
<i>Control variables</i>	Yes	Yes	Yes	Yes
<i>Year & Industry</i>	Yes	Yes	Yes	Yes
N	4955	4955	4955	4955
Adj. R ²	0.188	0.188	0.185	0.184
F	12.38	12.34	12.94	12.44
Panel B: Use local market development index as a proxy for dependence of political connection.				
	(1)	(2)	(3)	(4)
<i>Government Demand for Additional Revenue</i>	0.031 (0.90)	0.003 (0.73)	0.012** (2.16)	0.006 (1.17)
<i>Market_Development</i>	-0.009 (-1.27)	-0.025*** (-4.41)	0.018*** (-2.73)	0.021*** (-3.59)
<i>Market_Development × Government Demand for Additional Revenue</i>	0.107*** (2.93)	0.015*** (3.14)	-0.003 (-0.33)	0.021* (1.80)
<i>Control variables</i>	Yes	Yes	Yes	Yes
<i>Year & Industry</i>	Yes	Yes	Yes	Yes
N	7161	7161	7161	7161
Adj. R ²	0.190	0.190	0.186	0.186
F	15.62	15.62	15.60	15.69
Panel C: Use SOE Competition as a proxy for dependence of political connection.				
	(1)	(2)	(3)	(4)
<i>Government Demand for Additional Revenue</i>	0.084** (2.42)	0.010** (2.21)	0.005 (0.89)	0.014** (2.23)
<i>SOE_Competition</i>	0.007 (1.02)	-0.004 (-0.67)	-0.007 (-1.12)	0.001 (0.09)
<i>SOE_Competition × Government Demand for Additional Revenue</i>	0.063* (1.75)	0.008* (1.92)	0.012* (1.69)	-0.006 (-0.73)
<i>Control variables</i>	Yes	Yes	Yes	Yes
<i>Year & Industry</i>	Yes	Yes	Yes	Yes
N	7161	7161	7161	7161
Adj. R ²	0.187	0.187	0.184	0.184
F	15.40	15.36	15.35	15.43

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

We perform this analysis by expanding our model (1) after adding a conditional variable indicating strong political dependence and its interaction terms with *Fiscal_Deficit* and *Trans_Payment*. We use two measures, market development and competition from SOEs. Our first measure, market development, equals a firm's provincial market development index, which captures the importance of the market in the resource allocation of each province. The notion that underlies this measure is that firms in provinces with weaker market development are more dependent on political networks to conduct business. We classify firms with a score below the sample province-level median as having strong political dependence (i.e., weak provincial development). To measure the competition from SOEs, we use the number of SOE firms in the same sector in the same province. We classify firms having strong political dependence if the number of SOE competitors is above the sample firm-level median. Appendix A reports the definitions of these variables. Panel B and Panel C of Table 4 report the regression results using *Fiscal_Deficit* and *Trans_Payment*, respectively. Consistent with our predictions, Panel B shows that the coefficient on *Fiscal_Deficit*Market_Development (SOE_Competition)* is positive and significant, which implies that firms will respond more actively to government's call for revenue when they rely more on the political network to do business. Collectively, these results are consistent with our prediction that private firms with an incentive to develop political connections would like to pay more tax to respond to the government's call for additional revenue.

Regression Results of H2

We next study whether firms with tax overpayments would gain preferential access to government-controlled resources. We study four types of benefits and Panel A and Panel B in Table 5 reports the results of model (2) by using the *Overpayment_Fiscal* and *Overpayment_Trans* respectively. Columns 1, 2, 3 and 4 respectively use *Loan*, *Subsidy*, *Gov_Purchase* and *Patent* for benefits measures.

Across columns 1-4, *Overpayment_Fiscal (Overpayment_Trans)* explains higher level of long-term loan and subsidy, more government contracts awards, and be more successful in patent application.¹ As for economic significance, the coefficient on *Loan* in column 1 of Panel A implies that raising the value of *Overpayment_Fiscal* by one standard deviation (0.733) increases long-term

¹We also invite dummy variables for robust test. We generate *dum_government_purchase* and *dum_patent* equals to 1 if the firm to obtain the government contract or got the patent in the given year, and 0 otherwise. We estimate the logit models and get the similar results indicating that firms with tax overpayments obtain more the government contract awards and be more successful in patent application.

loan ratio, on average by 20%, translating into an extra long-term loan of USD 15.63million for an average firm. The same magnitude increase of *Overpayment_Fiscal* could also improve the patent successful rate by 81.3%, from 12.89% to 23.38% for an average firm. These results are consistent with our prediction that firms with tax overpayments receive preferential access to government-controlled resources.

Table 5. Tax Overpayment and Government Controlled Resources

Panel A: Use *Fiscal_Deficit* as the input to calculate tax overpayment.

	<i>Loan</i> (1)	<i>Subsidy</i> (2)	<i>Gov_Purchase</i> (3)	<i>Patent</i> (4)
<i>Overpayment_Fiscal</i>	0.279** (2.44)	0.065** (2.03)	0.126** (2.24)	0.895** (2.24)
<i>Control variables</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes
N	6736	6736	6736	5834
Adj. R ²	0.378	0.053	0.102	0.211
F	19.33	4.757	3.086	13.04

Panel B: Use *Trans_Payment* as the input to calculate tax overpayment.

	(1)	(2)	(3)	(4)
<i>Overpayment_Trans</i>	0.189* (1.66)	0.062* (1.95)	0.104* (1.78)	0.636* (1.65)
<i>Control variables</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes
N	6736	6736	6736	5834
Adj. R ²	0.378	0.053	0.102	0.211
F	19.31	4.767	3.076	12.99

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

China substantially reduced its statutory income tax rate for all domestic firms from 33 percent to 25 percent in 2008. Undoubtedly, the tax rate cut has a significant negative effect on tax revenue and increase the pressure for the local government to collect more revenue (Lin 2009). We then examine whether a plausibly exogenous change in the tax rate enhances this favor exchange phenomenon. We perform this analysis by expanding our model (2) after adding a conditional variable indicating the post-tax rate cut period (*2008Rate_Cut*) and its interaction terms with *Fiscal_Deficit* and *Trans_Payment*. If tax rate cut increases the “gift exchange,” our predicted sign for the coefficient on the interaction term is positive, consistent with the rate cut causing the local government collects more tax and grant favors in exchange. Panel A and B in Table 6 report the regression results using *Fiscal_Deficit* and *Trans_Payment*, respectively. Most of the

coefficients on the interaction terms are all significantly positive, implying that the “gift exchange” is stronger following the tax rate cut in 2008.

Table 6. The Effect of Changes in Statutory Tax Rate

Panel A: Use Fiscal_Deficit as the input to calculate tax overpayment.

	<i>Loan</i>	<i>Subsidy</i>	<i>Gov_Purchase</i>	<i>Patent</i>
	(1)	(2)	(3)	(4)
<i>Overpayment_Fiscal</i>	0.070 (0.52)	0.049 (1.52)	-0.015 (-0.43)	0.342 (0.65)
<i>2008Rate_Cut</i>	-0.557 (-0.81)	0.488** (2.57)	1.028*** (4.35)	3.379* (1.70)
<i>2008Rate_Cut * Overpayment_Fiscal</i>	0.530** (2.19)	0.039 (0.58)	0.356*** (2.72)	1.567* (1.85)
<i>Control variables</i>	Yes	Yes	Yes	Yes
<i>Year & Industry</i>	Yes	Yes	Yes	Yes
N	6736	6736	6736	5834
Adj. R ²	0.379	0.053	0.104	0.211
F	19.10	4.701	3.065	12.81

Panel B: Use Trans_Payment as the input to calculate tax overpayment.

	(1)	(2)	(3)	(4)
<i>Overpayment_Trans</i>	-0.065 (-0.47)	0.044 (1.35)	-0.042 (-1.12)	-0.018 (-0.04)
<i>2008Rate_Cut</i>	-0.442 (-0.64)	0.498*** (2.59)	1.038*** (4.36)	3.751* (1.89)
<i>2008Rate_Cut * Overpayment_Trans</i>	0.628** (2.53)	0.047 (0.68)	0.361*** (2.74)	1.822** (2.13)
<i>Control variables</i>	Yes	Yes	Yes	Yes
<i>Year & Industry</i>	Yes	Yes	Yes	Yes
N	6736	6736	6736	5834
Adj. R ²	0.379	0.053	0.103	0.211
F	19.06	4.728	3.053	12.76

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

Additional Analysis

We explore the economic consequences of this excessive tax payment practices. In this study, we argue that taxes paid to local governments represent an observable cost of establishing political ties (bribes are another potential cost of acquiring political ties, but these are unobservable). Given that tax expense represent a wealth transfer from shareholders to the government, the excessive tax payment is directly added to the business cost of firms and results in lower cash flow, poorer financial performance and decreasing investment (Zwick and Mahon 2017). Hersch et al. (2008) examine the relation between a firm’s campaign contributions and lobbying expenditures and its Tobin’s *q* and find little relation between them. Their results suggest that campaign contributions may not have

long-term effects on political markets and it is just a response to a short-term opportunity not as a way of building long-term political capital. However, as China maintains a single-party system, there is no fear that resources committed to supporting the government continuously over time will have no payback. We expect that excessive tax payment increase economic rents that firms could obtain from the government, and in turn, enhance firm long-term performance.

Table 7 presents the relationship between firm's tax overpayment and firm's future performance. The *Future Performance* includes a set of firm's future performance measures, including: ΔROA , the three-year-ahead changes in return on asset (i.e., ROA_{t+3} minus ROA_t) minus the contemporaneous change in industry median return on asset (Larcker et al. 2013); $\Delta Sales$, the natural logarithm of sales revenue at $t + 3$ divided by sales revenue at t (Cazavan-Jeny et al. 2011); $\Delta OPINC$, the operating income at $t+3$ minus operating income at t , then deflated by average market value of equity from t to $t+3$ (Aboody et al. 2010); ΔCFO , the operating cash flows at $t+3$ minus operating cash flows at t , then deflated by average market value of equity from t to $t+3$ (Aboody et al. 2010); and $\Delta CAPEX$, the average of capital expenditure cash flow divided by total asset from $t+1$ to $t+3$. On the one hand, tax expense is a direct business cost and result in lower cash flow, poorer financial performance, and decreasing investment. On the other hand, by paying more tax to support the government agenda, firms get preferential access to government-controlled resources and result in competitive advantage. Our results support this argument. We find two overpayment measures are positively associated with firms' long-term future performance, which supports our argument that pays more tax help to create political capital and benefit the firm in the long run in China.

Table 7. Tax Overpayment and Long-term Future Performance

Panel A: Use *Fiscal_Deficit* as the input to calculate tax overpayment.

	ΔROA	$\Delta Sales$	$\Delta OPINC$	ΔCFO	$\Delta CAPEX$
	(1)	(2)	(3)	(4)	(5)
<i>Overpayment_Fiscal</i>	0.003*** (2.84)	0.024* (1.67)	0.004*** (3.30)	0.004* (1.93)	0.002** (2.38)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes
<i>Year & Industry</i>	Yes	Yes	Yes	Yes	Yes
N	4306	4302	4222	4222	4222
Adj. R ²	0.196	0.054	0.047	0.049	0.285
F	17.19	3.991	4.825	4.516	25.01

Panel B: Use *Trans_Payment* as the input to calculate tax overpayment.

	(1)	(2)	(3)	(4)	(5)
<i>Overpayment_Trans</i>	0.003*** (2.90)	0.015 (1.06)	0.003*** (3.00)	0.004* (1.92)	0.002** (2.08)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes

<i>Year & Industry</i>	Yes	Yes	Yes	Yes	Yes
N	4306	4302	4222	4222	4222
Adj. R ²	0.196	0.054	0.046	0.049	0.284
F	17.28	3.924	4.820	4.513	25.01

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively

In this study, we investigate how government expenditure shortage influences corporate tax planning activities for listed private firms with the incentive to pursue political connection. We do not study SOEs, because, by definition, they are supposed to be politically connected and their contribution (in the form of tax or dividend) to the local government is already be part of budgetary revenue. Nevertheless it is quite possible for a SOE to pay additional taxes when government calls for more tax revenue. However, the real benefit that SOE executives want to achieve is to receive positive publicity and enjoy greater chances of promotions if they pay more tax. Therefore, the evidence of favor exchange may not be found in the SOE group. We test our H1 and H2 by using SOEs and present the results in Table 8. We find a positive association between government call for additional revenue and ETR, which suggest that when the government needs revenue, SOEs pay more tax. However, we did not find any significant relationship between overpayment and four benefit measures for SOE samples.

Table 8. Tax Overpayment and Government Controlled Resources Using SOEs
Panel A: Use Fiscal_Deficit as the input to calculate tax overpayment.

	<i>Loan</i>	<i>Subsidy</i>	<i>Gov_Purchase</i>	<i>Patent</i>
	(1)	(2)	(3)	(4)
<i>Overpayment_Fiscal</i>	0.157	-0.068***	0.427***	0.631
	(1.49)	(-3.04)	(3.77)	(1.63)
<i>Control variables</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes
N	8829	8829	8829	7887
Adj. R ²	0.441	0.064	0.156	0.208
F	25.07	5.790	4.525	15.85

Panel B: Use Trans_Payment as the input to calculate tax overpayment.

	(1)	(2)	(3)	(4)
<i>Overpayment_Trans</i>	0.053	-0.085***	0.241**	0.281
	(0.53)	(-3.60)	(2.22)	(0.73)
<i>Control variables</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes
N	8829	8829	8829	7887
Adj. R ²	0.441	0.064	0.155	0.208
F	25.06	5.980	4.480	15.82

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

Sensitivity Tests

We evaluate the sensitivity of our main results to different definitions of our dependent and test variables. The results are presented in Table 9.

We first confirm that our results are not sensitive to alternative measures of ETR for the dependent variable. We estimate annual cash ETRs (*CashETR*), using the ratio of current tax expense to pretax income.¹ We estimate the three-year book ETR (*Long-term_ETR*) using the ratio of the three-year sum of income tax expense to the three-year sum of pretax income in years t-1, t and t+1. Using *long-term_ETR* avoids significant year-to-year variation in the annual ETR (Dyreng et al. 2008; Kim and Zhang 2016). Our results in Panel A and B are not sensitive to these two alternative ETR measures.

Furthermore, although we control personal level political connection in our regression model, including these firms may introduce noises into our results. For example, these firms benefit from the already-existed connection and may contribute to the results we find in Table 5. Therefore, we exclude these firms and re-do our test. The results in Panel C are invariant.

We also evaluate alternative measures of tax overpayment. First, we use 3-year adjusted *Long-term_ETR(TA_ETR)* following Balakrishnan et al. (2011) and Kim and Zhang (2016) by subtracting each firm's 3-year *long-term_ETR* from the average 3-year *long-term_ETR* for firms in the same industry and quartile of total assets. An unusually high ETR compared to similar firms can be viewed as less tax aggressive (Balakrishnan et al. 2011), and a *negative* value of the adjusted ETR implies more tax payment because that firm reports *more* tax than its size-industry peers. Second, we use the coefficients on *Fiscal_Deficit* and *Trans_payment* in the estimation model used to generate overpayment measures to capture the relation between government calls for additional revenue and firm's ETR.² We name them *Deficit_Sensitivity* and *Trans_Sensitivity*, and the higher value represents a more active response to government's call for revenue. Our results for H2 are invariant to these three measures of the overpayment (Panel D, E, and F).

¹As Chinese firms do not disclose cash income tax payment information, we estimate this amount by taking total tax expense plus beginning taxes payable minus ending taxes payable, following Bradshaw et al. (2016).

²We borrow the idea from the measure of pay-performance sensitivity.

Table 9. Sensitivity Tests

Panel A: Alternative measurement of ETR: Cash ETR.						
	<i>Cash ETR</i>		<i>Loan</i>	<i>Subsidy</i>	<i>Gov_Purchas</i>	<i>Patent</i>
			(1)	(2)	(3)	(4)
<i>Fiscal_Deficit</i>	0.091** (1.97)	<i>Overpayment_Fisc</i>	0.167*** (3.03)	0.009** (1.99)	0.087** (2.07)	0.944*** (3.32)
<i>Controls</i>	Yes	<i>Controls</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	<i>Industry</i>	Yes	Yes	Yes	Yes
N	5519	N	5248	5248	5248	4467
Adj. R ²	0.199	Adj. R ²	0.215	0.103	0.111	0.228
F	20.21	F	10.44	4.871	2.747	12.53
Panel B: Alternative measurement of ETR: Long-term ETR.						
	<i>Long-term ETR</i>		(1)	(2)	(3)	(4)
<i>Fiscal_Deficit</i>	0.062** (1.99)	<i>Overpayment_Fisc</i>	0.057 (0.38)	-0.011 (-0.40)	0.192** (2.55)	1.497*** (2.86)
<i>Controls</i>	Yes	<i>Controls</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	<i>Industry</i>	Yes	Yes	Yes	Yes
N	5406	N	5315	5315	5315	4927
Adj. R ²	0.206	Adj. R ²	0.376	0.060	0.110	0.222
F	12.40	F	17.36	4.496	2.830	12.40
Panel C: Exclude political connected firms (firms with either CEO or chairman are politically connected).						
	<i>ETR</i>		(1)	(2)	(3)	(4)
<i>Fiscal_Deficit</i>	0.157*** (4.30)	<i>Overpayment_Fisc</i>	0.270* (1.96)	0.077** (1.99)	0.114* (1.68)	0.750* (1.65)
<i>Controls</i>	Yes	<i>Controls</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	<i>Industry</i>	Yes	Yes	Yes	Yes
N	5089	N	4826	4826	4826	4034
Adj. R ²	0.182	Adj. R ²	0.342	0.054	0.098	0.189
F	13.15	F	14.85	4.010	2.584	8.063

Table 9, continued

Panel D: Alternative measurement of tax overpayment: TA ETR.				
	<i>Loan</i>	<i>Subsidy</i>	<i>Gov_Purchase</i>	<i>Patent</i>
	(1)	(2)	(3)	(4)
<i>TA_ETR</i>	3.250*** (3.81)	0.395*** (4.67)	0.478 (1.28)	-0.027 (-1.25)
<i>Controls</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes
N	7161	7161	7161	6685
Adj. R ²	0.231	0.124	0.097	0.191
F	10.48	6.180	3.075	12.30
Panel E: Use coefficient as the proxy for the overpayment.				
<i>Deficit_Sensitivity</i>	0.239*** (3.13)	0.026 (1.43)	0.031 (1.51)	0.792*** (3.14)
<i>Controls</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes
N	6736	6736	6736	5834
Adj. R ²	0.350	0.053	0.102	0.213
F	17.50	4.754	3.081	13.02
Panel F: Use coefficient as the proxy for the overpayment.				
<i>Trans_Sensitivity</i>	2.364*** (3.26)	0.259 (1.44)	0.358* (1.85)	10.221*** (4.21)
<i>Controls</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes
N	6736	6736	6736	5834
Adj. R ²	0.351	0.053	0.102	0.214
F	17.57	4.744	3.083	17.57

***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

Conclusion

By studying Chinese listed private firms, we find that not all firms adopt tax-decreasing strategy when government desire higher tax revenue. Some firms are more responsive to government's call for additional revenue by contributing more taxes than their counterparts. It is contradicting to the traditional wisdom which suggests that, while tax authorities prefer more collection, companies use various tools to lower their tax bills. We explain that paying more tax is a legitimate and practical way to develop a political relationship. Therefore, private firms with an incentive to develop political connections would like to pay more tax to respond to the government's call for additional revenue. We find this result is not due to the strengthened government tax enforcement when the local government is facing fiscal difficulties. The further test suggests that the positive relationship between ETR and government demand for tax revenue is more pronounced among firms with stronger political dependence. Finally, we find that active respondents, compared to their peers, get more preferential access to government-controlled resources and as a result, the tax overpayment leads to better long-term future performance. However, we did not find any similar results in SOE group, which suggest that political incentives shape the different type of firms' tax planning activities in different ways.

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Appendix A. Variable Definitions

Variables of interest

<i>ETR</i>	=	GAAP effective tax rate, annual consolidated income tax expense scaled by annual consolidated pretax income.
<i>Fiscal_Deficit</i>	=	One year lagged standardized value of the difference between provincial annual general budget revenue and annual general budget expenditure.
<i>Trans_Payment</i>	=	One year lagged standardized value of the provincial annual transfer payment from the central government to local government.
<i>High_Increase</i>	=	A dummy variable equals to 1 if the local government revenue increase rate is above 20%, and otherwise 0.
<i>Special_Projects</i>	=	A dummy variable equals to 1 if the local government demand the capital for special projects (e.g., Olympic Game, World Exposition, or Express railway) and 0 otherwise.
<i>Overpayment_Fiscal</i>	=	Residual from the year and industry cross-sectional regression (equation (1) using <i>Fiscal_Deficit</i> as the independent variable). The larger the value means, the higher volume of the tax overpayment.
<i>Overpayment_Trans</i>	=	Residual from the year and industry cross-sectional regression (equation (1) using <i>Trans_Payment</i> as the independent variable). A larger the value means a higher volume of the tax overpayment.
<i>Loan</i>	=	The ratio of long-term loan to the total asset in year t.
<i>Subsidy</i>	=	The ratio of subsidy from the government to net revenue in year t.
<i>Gov_Purchase</i>	=	The ratio of government purchase to sales revenue in year t.
<i>Patent</i>	=	The two-year-ahead successful rate of patent application.

Conditional variables

<i>Market_Development</i>	=	A dummy variable equals to 1 if the score of marketization index below the sample province-level median, and otherwise 0. The marketization index captures the importance of the market in the resource allocation of each province based on National Economic Research Institute (NERI) Index of Marketization of China's provinces. Higher values represent stronger market development.
<i>SOE_Competitor</i>	=	A dummy variable equals to 1 if the number of firm's SOE competitions is above the sample firm-level median, and otherwise 0.

Future Performance

<i>ΔROA</i>	=	The three-year-ahead changes in return on asset (i.e., ROA_{t+3} minus ROA_t) minus the contemporaneous change in industry median return on asset.
<i>ΔSales</i>	=	The natural logarithm of Sales in year t + 3 divided by sales in year t.
<i>ΔOPINC</i>	=	The operating income in year t+3 minus operating income in year t, deflated by the average market value of equity.

<i>ΔCFO</i>	=	The operating cash flow in year t+3 minus operating cash flows in year t, deflated by the average market value of equity.
<i>ΔCAPEX</i>	=	The average three-year-ahead cash flow to capital expenditure divided by total asset

Control variables

<i>Connected%</i>	=	The percentage of connected board members on board.
<i>Size</i>	=	The natural logarithm of total assets.
<i>ROA</i>	=	The ratio of net income to total assets.
<i>Std. dev. of ROA</i>	=	The standard deviation of ROA over the past three years.
<i>Leverage</i>	=	The ratio of total debts to total assets.
<i>Growth</i>	=	The ratio of market value to book value of equity.
<i>Liquidity</i>	=	The ratio of current assets to current liabilities.
<i>PPE</i>	=	The ratio of property, plant, and equipment to total assets.
<i>Intangible</i>	=	The ratio of intangible assets to total assets.
<i>Inventory</i>	=	The ratio of inventory to total assets.
<i>Cash</i>	=	The ratio of year-end cash holdings to lagged assets.
<i>Accruals</i>	=	Discretionary current accruals estimated from the modified cross-sectional Jones model.
<i>Shareholding</i>	=	The percentage of shares owned by the largest shareholder.
<i>NERI</i>	=	An index that reflects institutional characteristics of a province based on the National Economic Research Institute (NERI) Index of Marketization of China's provinces.
<i>GDP</i>	=	The natural logarithm of provincial annual GDP growth.
<i>TE</i>	=	Tax enforcement measures at the regional level from 2003 – 2013.
<i>Industry</i>	=	Dummy variables indicating industry sector membership based on the CSRC classification.
<i>Year</i>	=	Dummy variables indicating years.

Event variables

<i>2008Rate_Cut</i>	=	A dummy variable equals to 1 if the observation occurs after the 2008 tax rate cut, and 0 otherwise.
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