Can Governments Harvest Connections with Firms? Evidence from China

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Abstract

It is well-known that governments sometimes favor connected firms. This paper provides first evidence on the reverse - firms providing favors to governments in a reciprocal relationship - exploiting a natural experiment from China. In October 2001, the tax revenue sharing rule between central and local governments was unexpectedly reformed: the higher the local tax revenue in 2001, the higher the share that local governments would get post-2001. From a newly collected dataset, I find that before the reform the governments that granted more favors to firms - access to credit and tax deductions were more able to mobilize assistance from firms in order to raise the tax revenue in 2001. Furthermore, this reciprocation is not an institutional relationship, but hinges on a repeated interaction between firms and local leaders. Exploring the variation in leadership turnover, I find that firms who had previously received government favors provided no assistance to leaders who would soon leave office. These results are consistent with a theory of reciprocal relationships between governments and firms. My findings not only suggest that governments and firms can form dynamic relationships to exchange favors intertemporally, but also shed light on the government-business relationship in China.

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1. Introduction

The rent-seeking behavior of politically connected firms and its associated costs have long been recognized by economists. Firms' rents are often generated through preferential treatment by governments, such as, better access to credit or lighter taxation (Fisman, 2001; Johnson and Mitton, 2003; Dinc, 2005; Khwaja and Mian, 2008; Ferguson and Voth, 2008; Chen, 2015).¹ The existing literature has mainly focused on the favors that firms receive, but much less attentions has been given to what politicians gain in return. Beyond personal rents, such as corruption, there are also other forms of returns. For example, when governments are in need, firms that have received preferential treatments can take actions to help achieve certain policy objectives. The literature on developmental states shows that the assistance from firms to governments is widely observed in developing countries, including industrial development, increasing business investment, the absorption of unemployment and so on. (Woo-Cumings, 1999).

This study focuses on what governments get from firms. In the process, it shows that the government-firm relationship is dynamic and reciprocal. In other words, their reciprocal relationship is sustained by the future value of the relationship. Using a unique reform in China which enables me to quantify the value of firms' assistance to governments, I examine the question: do governments gain from firms' assistance through a reciprocal relationship?

To examine how governments can mobilize the informal assistance of firms is a challenging task. Not only are these returns being hard to observe and quantify, but also it is equally challenging to assess whether governments have any incentive to seek this assistance. Therefore, to test this question, ideally, I would focus on governments that share similar political institutions and face a common shock that requires governments to seek assistance from firms. A tax-sharing reform in 2001 between central and local governments in China provides a unique set-up to examine this subject. First, the reform incentivized local governments to raise tax revenue, a quantifiable response that allows me to compare one with another, and its design leaves room for assistance from firms. Second, the reform was announced unexpectedly, which allows me to explore the pre-existing connections between governments and firms. Finally, exploring the variation within a country helps me to hold the underlying political institutions constant.

The central-local tax-sharing reform in question was announced in October 2001 by the central government, which specified that from 2002 local governments were required to share

¹Furthermore, these rents are highly likely to cause efficiency loss and other social cost; for example, the efficiency losses of channeling business to less productive firms (Cingano and Pinotti, 2013 and Amore and Bennedsen, 2013) and other social costs, such as workplace safety (Fisman and Wang, 2015; Jia and Nie, 2015).

their corporate income tax with the central government.² In order to avoid a negative shock to local fiscal budgets, the 2001 local corporate income tax was designed as a benchmark — no county will ever receive less corporate income tax revenue than the revenue collected in 2001. That is, the higher the 2001 tax revenue, the more tax could be retained at the local level in future years. This design incentivized local governments to raise the benchmark (the 2001 corporate income tax revenue) during the 2-month window period after the announcement.³ In both November and December 2001, abnormal tax growth was widely observed among local governments.⁴⁵

How was this jump in revenue attained? One important issue to note is that tax revenue needs to be remitted to the Treasury before being redistributed back to local governments. Therefore, the increase in tax revenue could not simply be a fake number. After careful auditing work done by central government, a government paper explicitly stated that local governments raised the 2001 tax revenue through two channels: (1) relabeling other tax revenues and 2) financing with the assistance of firms. In this paper, I first measure firms' assistance and then explore the determinants that explain the variation in firms' assistance in a cross-sectional framework in which county governments are the unit of observation.

The first empirical challenge is to quantify the level of firms' assistance in raising the 2001 tax revenue. In order to do so, I assemble a panel dataset of the corporate income tax revenues between 1998 and 2003 from nearly 500 county governments from various provincial, prefectural and county fiscal or tax yearbooks. On average, the 2001 corporate income tax nearly doubled what it would have been if it had maintained its time trend. However, a great variation was found between county governments, reaching in some instances about 30 times the counterfactual.⁶

In order to assist local governments, firms bear the cost of generating a large cash flow in a short time, as well as the risk of being punished by the central government. Given the risks and urgency, we hypothesize that governments are most likely to reach for assistance from

 $^{^2}$ Here, the term 'local governments' means all non-central governments, including provincial, prefectural and county governments. My focus in this paper is county governments where most of the variation is coming from.

³Incentives for local governments to raise benchmarks are two: first, the fiscal revenue is a main resource for local economic development, a dimension in which local governments are made to compete against each other for their leaders' career advancement; second, county leaders need to show that they are aligned with those in the prefectural or provincial governments who all intend to keep tax at the local level and also evaluate the county leaders' performance.

⁴There was no associated rise in other economic indicators, such as GDP and sales income of local firms.

 $^{^{5}}$ A government paper published on January 1st, 2002 stated that corporate income tax increased nationwide by 139.4% for November and 187.1% for December, compared with the tax revenue for the same months in 2000.

⁶ Aba county in Sichuan had the highest response in my sample, reaching almost 30 times what it should have been if it had stayed on its own trend.

firms which they have favored in the past. To test this, I trace the governmental favors to local firms before the reform and then to explore whether governments that granted favors to firms can mobilize firms' assistance in raising the 2001 tax revenue.

To provide a framework for my analysis, I present a simple model of the reciprocal relationships between governments and firms in an infinite horizon setting, in which both governments and firms are forward-looking and they choose whether to exchange favors with each other. To align with the empirics, governments now request favors from firms. Firms then need to decide whether to offer favors in exchange for future gain from reciprocity or not to offer favors and be punished by losing the reciprocal relationship with governments. The model predicts that if firms have previously received favors from governments, then a reciprocal relationship between governments and firms exists. In this case, firms would choose to return favors to governments. Furthermore, in a stationary environment the firms that have received more favors from governments previously would be the ones that also expect a higher value from future reciprocity. As a result, these firms are likely to offer more favors to governments. This leads to my first prediction: that governments can mobilize more firms' assistance if firms have in the past received more favors from them. However, since this relationship between governments and firms is informal, it is more likely to be a personal rather than institutional one. This leads to my second prediction: when the probability of government turnover is high, previously favored firms do not return favors to governments since the current official will not be there in the future to return them.

To test these predictions, I need a measure of favors. Guided by the literature, I focus on two of the most common favors that governments grant to firms in the Chinese context: access to credit and tax deductions. First, preferential access to credit is an important favor from local governments, since all banks in China are state-owned and capital mobility across regions is low. This gives local governments great influence over all decisions to grant loans. Many papers discuss how loans commonly discriminate in favor of state-related firms (Boyreau-Debray and Wei, 2005; Li. et al., 2008; Firth, et al., 2009) . In addition, others discuss how private firms rely significantly less on loans and more on retained earnings and private lending (Allen, et al., 2005; Dollar and Wei, 2007; Riedel, et al. 2007). Given the data limitation I use total liability normalized by assets, called debt leverage, in order to proxy for access to credit. Since loans that go to state-related firms are more likely to be preferential treatments from governments, I use debt leverage to proxy a government favor to state-related firms.⁷

The second favor that I consider is preferential corporate income tax deduction. Chinese

⁷State-related firms are defined to include both state-owned enterprises and collectively-owned enterprises which are owned by the rural community but under tight political controls.

corporate income tax codes for domestic firms are identical nationwide. But, given its complex nature, the tax code is often manipulated by local governments, which offer tax deductions. Bai et al. (2014) offers a lively example and discussion. Accordingly, the effective tax rate, defined as the corporate income tax paid divided by the firms' reported tax base, is adopted as a proxy for tax deductions. The tax deduction is a sensitive favor for private firms, but it is not a favor for state-related firms because both of their tax and revenue are part of local governments' fiscal budgets. To summarize, I have two measures for favors: (1) debt-leverage of state-related firms and (2) effective tax rate of private firms. Both measures for favors are constructed using data from China's Annual Surveys of Industrial Production and taking the average for 1999 to 2000, the years before the reform, to represent previous government favors to firms.

I take the measure of firms' assistance to test the predictions proposed by the model – the governments that granted more favors to firms before the reform - access to credit and tax deductions - were more able to mobilize assistance from firms in order to raise the tax revenue in 2001. I found that in counties where state-related firms had greater access to credit, county governments can mobilize more assistance from them in raising the 2001 benchmark. The estimated effect is large and statistically significant. A one standard deviation increase in the credit access measure of state-related firms leads to a 0.2 standard deviation increase in the measure for firms' assistance. I find no effect for private firms.⁸ The results remain robust after controlling for the sales share of the state-related firms in local economy and other firm characteristics, including turnover ratio (firms' capacity to translate assets into sales income), profitability (a proxy for productivity) and local industrial composition. Turning to the second favor, tax deduction, similar results emerge. I find that in counties where private firms enjoyed greater tax deductions, county governments can mobilize more assistance from them in raising the 2001 benchmark. Moreover, no similar effect for state-related firms is found and the results remain robust after controlling for the share of private firms as well as other firm characteristics. This is very much aligned with the predictions of the model as well as my conjecture on what constitutes a favor.

After confirming the existence of reciprocal relationships between governments and firms, I move on to examine whether this informal relationship is a personal or institutional one. To do so, I also assemble a new dataset comprising all county-level leadership turnover from all provincial and prefectural yearbooks between 1994 and 2008. This allows me to trace the year in which leaders take office and also the year in which they leave. Unlike previous studies, such as Ting and Kung (2015), in which only the county party secretary is recorded, I also

⁸As a counterfactual, the same measure of central-state-owned firms, which do not rely on local government favors, has no effect.

trace the county executive who is directly responsible for local governance affairs, including managing local fiscal planning. I find that when government leaders were soon to leave office in a few months, the firms that had previously received favors did not assist the government in raising the 2001 benchmark. This result confirms that this informal reciprocity between governments and firms is indeed a personal relationship. This finding is not because leaders lacked the incentive to respond, since county leaders need to show that they are aligned with those in the prefectural or provincial governments who all intend to keep tax at the local level and also evaluate the county leaders' performance. This is confirmed since leaving leaders are still found to relabel other taxes to finance their responses in the benchmark. In addition, I use leaders' tenure at the end of a term to proxy the likelihood of their leaving to show that the results for leaving leaders are not driven by reverse causality, i.e. leaders' leaving as a consequence of their responses to the reform.

Finally, I extend my theory in appendix A to understand firms' choice to assist local governments when leaders just arrived in office without pre-existing relationships. Being consistent with the theoretical prediction, I find that firms that previously enjoyed greater favors from previous government are also more likely to take the initiative to assist new leaders in order to build up a new reciprocal relationship to gain future government favors.

The findings of this study have implications beyond the Chinese context. First, this unique setting allows me to be one of the first studies to quantify that governments can gain from their connection with firms. There are also other examples, such as campaign contribution (Claessens, et al., 2008 and Sukhtankar, 2012) and lobby activities (Blanesi-Vidal, et al., 2012). But here I stress that, as the second contribution, firms' favors to governments are not necessarily personal transfers, e.g. corruption; in some circumstances firms can contribute to achieving governmental objectives. This implication corresponds to the literature on developing states in Asia, including Japan, South Korea and Taiwan, where governments form close relationships with firms in order to seek formal or informal assistance to attain their overall developmental objectives (Woo-Cumings, 1999). Third, by revealing how connections work behind the scenes, I show that, unlike a spot transaction, connections between governments and firms can be dynamic relationships to exchange favors between each other intertemporally. This logic also brings in important policy implications. Policymakers should bear in mind that a policy that leaves room for governments to seek assistance from firms to fulfil their objectives would be highly likely to promote cronyism. Furthermore, even though a frequent turnover of leaders may hold back cronyism, it also has a downside – it costs firms more resources to build up new connections, which can be socially wasteful.

The findings of this paper that local governments are in need of assistance from firms

are especially important when it comes to explain the government-business relationship in China. I focus on three Chinese institutional features to discuss this implication. First, as previous papers (Maskin, et al., 2000; Li and Zhou, 2005; Xu, 2011) have pointed out, this is a country that uses many policy goals and quotas from the top to manage lower-tier governments and sets local governments to compete with each other to advance the careers of the leaders. Second, in order to achieve the sometimes unreasonable policy objectives or to compete against others, local governments often need to rely on informal assistance from firms, for example achieving economic indicators, absorbing unemployment and cutting down polluting emissions, and so on. Third, not only local governments need assistance from firms, but they also have many resources to offer as an exchange. The decentralizing institution endows local governments with control over business resources, including capital, land and other public goods (Li, et al., 2008; Firth, et al., 2009; Bai, et al, 2015). Taking these aspects together, local governments are highly incentivized to build up crony economies. While the previous literature mainly focused on the first and the third aspects, this paper is one of the first studies to offer evidence on the second and thus to complete this picture in explaining the rise of crony capitalism in China.

The remainder of the paper is organized as follows. Section 2 describes the institutional background to the central-local government tax-sharing reform, local government institutions and government favors to local firms. In Section 3 I develop several testable predictions based on the theoretical framework. In Section 4 I provide details of the data set and variable construction. In Section 5 I present the baseline empirical results and robustness checks. In Section 6 the heterogeneous effects of local leadership turnover is presented and in section 7 I draw conclusions and policy implications.

2. Institutional Background

In this section, I begin by discussing the 2001 Chinese central-local tax-sharing reform (subsection 2.1). This is followed by introducing the underlying political institution. (subsection 2.2), and lastly I discuss local governments' common favors towards local firms. (subsection 2.3).

2.1. The Chinese Tax-sharing Reform in 2001

Corporate income tax was an important local government fiscal resource before 2002. The tax rate is 33% on profit income and local governments do not have the authority to alternate the tax rate. All corporate income tax had been retained to local governments as

a major fiscal resource until 2001, which accounted for about 11% of the local tax revenue in 2000, with a 25% annual growth rate.

In October 2001, central government unexpectedly announced a nationwide reform to partially centralise income tax to develop the Western part of China. From 2002, corporate income tax would be shared between central and local governments.⁹ The central-local sharing ratio began at 50:50 in 2002 and changed to 60:40 from 2003 onwards. To avoid a negative shock to local fiscal budgets, the 2001 tax revenue was designed to be a benchmark. Therefore, whenever the share that remained at the local level fell below the benchmark, central government would refund to local governments the difference between the benchmark and the local shares. That is, the higher is the 2001 tax revenue, the more tax would remain at the local level post-2001. This specific design incentivized local governments to increase as much as possible the 2001 tax revenue in November and December of 2001 right after the announcement of the policy. A government paper, published on January 1, 2002, illustrates how local governments responded:¹⁰

"After the announcement of the 2002 corporate income tax sharing reform in October this year, local corporate income tax had an ABNORMAL growth ... tax revenue of November 2001 increased by 139.4% compared with the same time last year ... and 187.1% for the first half of December... Areas with more than 100% growth during mid-December are as follows: Jiangxi increased by 816%, Ningbo city increased by 708.7%, Henan increased by 609%... Do not raise the benchmark purposely... "¹¹

Due to the extreme responses from local governments, the central government abandoned the 2001 benchmark. This was replaced by a formula derived from corporate income tax revenue in year 2000. In addition, auditors were sent to check local governments' abnormal responses. Some local governments were fined for having raised tax revenues on purpose.¹² Figure 1 shows how much local governments responded in the 2001 benchmark. Using annual corporate income tax from about 500 county governments, I plot the estimates of year dummies from 1998 to 2003.¹³ They clearly show that the 2001 estimate deviates from the time trend. At the same time, there is no associated increase in local value-added tax in 2001, as shown in Figure 2 (left) nor any other change in the economy, such as local firms' aggregate sales income, shown in Figure 2 (right).

⁹ The term 'local governments' here refers to all non-central government bodies, including provincial, prefectural and county governments (please refer to Figure 11)

¹⁰The same reform also applies to personal income tax with a similar reaction from local governments but smaller in extent. In this study I focus on corporate income tax.

¹¹Corporate income tax in China is collected by the tax authority every month.

¹²Their fine was recorded in the provincial aggregates published in the 2002 National Tax Yearbook.

 $^{^{13}}$ Unfortunately, the monthly tax data are not available for most counties.

An important issue to note is that all the tax revenue needs to be remitted to Treasury before being redistributed back to local governments. Therefore, local governments cannot simply fake the number. In the same government paper, how local governments raised the tax revenue through two channels are identified and explicitly stated: (1) relabeling tax revenue and (2) financing from firms' assistance. The first channel does not need the assistance of firms but simply relabeling other tax revenue as corporate income tax.¹⁴ However, operations through the second channels require assistance from firms. The logic behind the scene can be best described as follows: in any other normal times, shown in Figure 3 (left), firms pay tax to local governments. However, in November and December 2001 as shown in Figure 3 (right), firms paid tax and also other transfers. The money was again remitted to Treasury and then came back to the governments. Governments kept the tax and returned the extra money back to the firms. Indeed in Figure 4, using firm survey data I find a consistent evidence that firms were not paying abnormally high corporate income tax.

Assisting governments could be very costly for firms if they have to generate a large cash flow in a short time. In addition, these firms face political risks for they can be caught and punished by the central government. Given the costs and risks, governments are more likely to seek the assistance of firms with which they have a connection.

2.2. County Government as The Unit of Analysis

In this study, I use county governments as my unit of analysis for the following reasons. First, there is a great variation in how much the 2001 benchmarks are raised among county governments. Second, county governments enjoy greater autonomy over local fiscal budgets more than do district governments that share similar administrative hierarchy but have their budgets directly controlled by the prefectural governments.¹⁵ Third, I use firm location to match which governments firms deal with the most. However, this does not apply to firms registered under district governments because they are likely to operate in another district within the same prefecture. Furthermore, firms located in the district should value their relationship more with the prefectural governments, rather than with the district governments. This makes the county and district governments incompatible in many ways. Therefore, I only focus on county governments in this study. Next, I discuss the structure of county governments and the source of leaders' incentives to remain the tax at local.

 $^{^{14}}$ Despite that it is a simple accounting exercise for governments, it can be very costly since this doing can easily be detected by the center government. Therefore, as I will show later in the empirical section it only explains about 18% of the rise in the benchmark and possibly leaders utilitze this channel more only when firms are less willing to assist.

¹⁵The governmental hierarchy is shown in Figure 11.

2.2.1. Government Structure

Governments throughout the political hierarchy in China are running a dual-leadership system. The county executive is the *de jure* leader and responsible for all governance affairs while the county party secretary leads the county to obey the Party rule. There are no explicit rules on how their responsibilities should be distributed. In practice, the party secretary should be the *de facto* leader since the position enjoys a higher rank within the Party. Given the ambiguity in their roles in the government, when I examine the heterogeneous effects of leadership turnover, I take into account both county executive and county party secretary.

Regarding local leaders' turnover, both executive and party secretary have a *de jure* term which is fixed for 5 years but their *de facto* terms are determined by bureaucratic assignments. Based on my constructed turnover data, their terms on average is about 4 years and more than 80% of them leave the office within 5 years with a peak around 4 to 5 years.

2.2.2. Promotion As An Incentive Driver

Both leaders of county governments who manage to show competence in developing local economies are rewarded by promotion within the hierarchical political system. This is done by making local government leaders compete against each other for career advancement; for example, county leaders compete against each other for promotion in entering prefectural government. This jurisdictional yardstick competition has long been recognized, as in Maskin et al. (2000) and Xu (2011), and is supported by empirical evidence, such as Chen, et al. (2005), Jia et al. (2014), and Li and Zhou (2005). It is this urge to develop economically which incentivizes county leaders to raise the 2001 benchmarks to keep fiscal resources local. In addition, their personnel evaluations are usually compiled by governments in the ranks immediately above. For example, county leaders in my study are evaluated by prefectural governments, which also try to keep tax local. This puts in place another incentive for county leaders to respond to, as to cater for those who evaluate them.

2.3. Identifying Connection

To empirically identify firms that are connected to governments is particularly difficult. Most literature on political connections uses family ties or personal contacts to identify firmspecific connections. However, these methods do not apply to this study for two reasons: one, to conduct business at the grassroots level, such as counties, some level of connection (called *Guanxi* in Chinese) with government officials is necessary. Therefore, Guanxi is not binary but rather a relationship that varies in intensity. Second, I need an county-level measure for Guanxi in order to analyze county governments' aggregate responses. To address these two concerns, instead, I measure previous favors from governments to firms as a proxy for the value of the connection between them. This method gives a varying measure and enables me to aggregate at the county level. As seen in the literature, I focus on two of the most common and measurable favors that governments grant to firms in Chinese context are access to credit for state-related firms, and tax deductions for private firms.

I begin by discussing preferential access to credit. In China all banks are state-owned and capital mobility across regions is low. This gives local governments a great deal of power over decisions to grant loans. Therefore, as is widely recognized, capital in China is misallocated between firms. This has received significant attention in the literature, such as Hsieh and Klenow (2009) and Dollar and Wei (2007). In particular, literature, such as Firth, et al. (2009), Li, et al. (2008), Boyreau-Debray and Wei (2005), have pointed out that state-related firms are much easier to access credit through external finance comparing with private firms which mostly rely on retained earnings and private lending (Dollar and Wei, 2007, Riedel, et al., 2007 and Allen, et al., 2005). In addition, Song, et al. (2011) also points out that private firms are financially repressed so that their capital-output and capital-labor ratios are substantially lower. Based on these studies, I can conclude that loans that go to state-related firms are most likely to be preferential treatments from local governments. Therefore, I use the favor of granting access to credit as government favors for state-related firms.

The second favor to be discussed is preferential corporate income tax deduction. Chinese corporate income tax codes for domestic firms are identical nationwide. It had a flat rate at 33% before 2008 but a large grey area for deduction. Therefore, given the scope in which tax code can be manipulated, local governments often offer tax deductions. A lively discussion can be found in Bai, et al. (2014). However, for state-related firms both their profit or tax need to be remitted to local governments, which makes state-related firms less sensitive to tax deduction as a favor. Therefore, I use corporate income tax deduction as government favors for private domestic firms.

3. Theoretical Framework

Political connections can take various forms; here, I define connected firms as those receiving preferential treatments from governments. Therefore, I model the governments' mobilization of firms' assistance in a reciprocal relationship, following Kranton (1996). Government (G) and Firm (F) are two risk-neutral agents exchanging favors in an infinite time horizon. For simplicity, I assume their favors to be identical and non-storable. Furthermore,

favors are informal and no contractual agreements are possible. In each period, agents take turns to offer and then to request favors. In the empirics, I examine the link between previous favors to firms and firms' favor to governments. Therefore, here I assume that Firm is the first to request favors, followed by Government. Firm needs a favor, x, from Government, where x is randomly drawn from a distribution $F(\cdot)$ with support $[0, \bar{x}]$.¹⁶ Government who gives favors x incurs a private cost c(x) > 0, where c'(x) > 0, c(0) = 0, and $c(\bar{x}) < \bar{x}$.¹⁷ Government then turns to Firm to request favors as Firm previously did. Once a period is over and before a new period starts, nature determines that one of the two agents request a favor before the other and then the game proceeds as in the previous period. I assume for probability $\theta > \frac{1}{2}$ Firm would be the first to request for favors and $(1 - \theta) > 0$ for Government. Their per half period discount factor is $\delta > 0$. Furthermore, since this relationship between governments and firms is informal, it is more likely to be a personal rather than institutional one. Therefore, it is most likely that this relationship is a repeated interaction between government leaders and firms. That is, the leaders' leaving would affect how Firm expect its value from future of reciprocity. I assume the probability of leaders' staying is $\pi \in [0, 1]$ and it is only realized the half period before.¹⁸ This suggests that whether leaders are leaving or not will only be known in the previous half period.

Let $V_R^F = \theta V_1 + (1 - \theta)V_2$ and $V_R^G = (1 - \theta)V_1 + \theta V_2$ be the expected lifetime discounted utility (continuation value) from their reciprocal relationship for Firm (F) and Government (G) respectively, where V_1 and V_2 are the expected value of those who request favors first and second. V_1 is the expected utility when agent k requests the favors first:

$$V_1 = \int_0^{\bar{x}} z dF(z) + \pi \delta \int_0^{\bar{x}} -c(\omega) dF(\omega) + (\pi \delta)^2 V_R^k, \ k \in \{G, F\}$$
(1)

The first term is the expected favors received and the second term is the expected favors provided in the next half period before entering the next period to receive continuation value. V_2 is the expected utility when agent l requests the favors second:

$$V_2 = \int_0^{\bar{x}} -c(\omega)dF(\omega) + \pi\delta \int_0^{\bar{x}} zdF(z) + (\pi\delta)^2 V_R^l, \ l \in \{G, F\}$$
(2)

As a symmetry to the first agent to request favors, the first term is the expected favors

¹⁶For simplicity, we assume that Government and Firm share the same distribution, $F(\cdot)$ with the same support $[0, \bar{x}]$. This can be easily to extend to have Government and Firm drawing their favor request from different distributions.

¹⁷ I assume that the cost function is bounded above by the favor to ensure that it is beneficial in the expectation of staying in a reciprocal relationship. It is a reasonable assumption since many favors are costly because of the checks and balances by the institution rather than because of their inherent cost.

¹⁸This assumption is justified since county-level leaders' turnover are based on bureaucratic assignment without a fixed term. Furthermore, they often learn the decision at the very last minute.

provided and the second term is the expected favors received in the next half period before entering the next period to receive continuation value. As I discuss earlier, here I assume that Firm is the first to request a favor, I solve for V_R^k , $k \in \{G, F\}$, using (1) and (2). This gives

$$V_R^F(\bar{x}) = \frac{1}{2(1-\pi\delta)} M(\bar{x}) + \frac{(1-\pi\delta)(2\theta-1)}{2(1-\pi\delta^2(2\theta-1))} L(\bar{x})$$
(3)

$$V_R^G(\bar{x}) = \frac{1}{2(1-\pi\delta)} M(\bar{x}) - \frac{(1-\pi\delta)(2\theta-1)}{2(1-\pi\delta^2(2\theta-1))} L(\bar{x})$$
(4)

where $M(\bar{x}) = \int_0^{\bar{x}} (z - c(z)) dF(z)$ and $L(\bar{x}) = \int_0^{\bar{x}} (\omega + c(\omega)) dF(\omega)$. Since I assume $\theta > \frac{1}{2}$, then I have $V_R^F(\bar{x}) > V_R^G(\bar{x})$. This is mainly a result of time discounting, since Firm is always likely to be the earlier one to request favors. The parameter θ thus captures the degree to which Firm is needy, in relation to Government. The continuation value for Firm, $V_R^F(\bar{x})$, is increasing in θ , while the continuation value for Government, $V_R^G(\bar{x})$, is decreasing in θ .

3.1. A Reciprocal Relationship as An Equilibrium

Since a reciprocal exchange happens intertemporally, agents can choose whether to renege on offering favors. Therefore, I study conditions in which a reciprocal relationship is enforceable, a subgame perfect equilibrium, so that no one will have an incentive to renege on offering favors and to apply a punishment whenever someone does. First, a grim-trigger strategy can be a credible punishment: whenever an agent reneges on providing favors, the other agent will no longer provide favors. This is credible since when one agent stops offering favors, the best response for the other is to do the same. In this equilibrium, value for both agents will become 0. After establishing the outside option from the punishment, I turn to working out the conditions in which Government and Firm are willing to participate in a reciprocal relationship. Since I assume that Firm is the first to request a favor, for Government to stay in a reciprocal relationship the following condition needs to be satisfied.

$$-c(\bar{x}) + \pi\delta \cdot 0 + (\pi\delta)^2 V_R^G \ge 0 \tag{5}$$

This condition states that if the worst possible payoff of Government, Firm request \bar{x} and then Government request 0 favor and followed by the continuation value, is still greater than the payoff of never entering, a reciprocal relationship, 0, Government will choose to participate a reciprocal relationship and exchange favors with Firm. For Firm to stay in a reciprocal relationship, the following condition needs to be satisfied.

$$0 + \pi\delta \cdot -c(\bar{x}) + (\pi\delta)^2 V_R^F \ge 0 \tag{6}$$

If condition (5) for Government is satisfied, given that $V_R^F(\bar{x}) > V_R^G(\bar{x})$, the condition (6) will also be satisfied since Firm is closer to requesting a favor. This condition states that if the worst possible payoff of Firm, Firm request 0 favor and then Government request \bar{x} and followed by the continuation value, is greater than the payoff of never entering a reciprocal relationship, 0, Firm will choose to participate a reciprocal relationship with Government. Therefore, I have the following prediction:

Prediction 1. (*Reciprocal Relationship*) If governments have previously given favors to firms, the favored firms will return favors to the governments.

If firms have previously received favors from governments, then a reciprocal relationship between governments and firms is an equilibrium. This gives rise to Prediction 1 which implies that county governments can find assistance from firms, which have previously received favors, to raise the 2001 benchmark. Furthermore, since local governments are raising as much resources as they can, this suggests that governments request favors at its upper bound, i.e. $x = \bar{x}$. In the setup, I assume the distribution $F(\cdot)$ in which favors were drawn from is time-invariant. Therefore, the higher is *previous* favors from governments to firms, in a stationary environment, the higher is the expected value of *future* reciprocity for firms, which leads to a higher \bar{x} to be requested by governments while the reciprocal relationship can still be sustained. As a result, the variation of previous favors from governments to firms can capture the variation in \bar{x} across counties. This gives the following proposition.

Proposition 1. County governments which previously granted more favors to local firms can now harvest more assistance from those previously favored firms

Therefore, empirically I expect that the measures for favors to firms should be positively correlated with a firms' assistance in the 2001 benchmark.

When Firm decides whether to give favors to Government or to renege, it takes local leadership turnover into account, in particular when leaders are soon to leave. A reciprocal relationship is sustained because agents can gain from future reciprocity, as suggested in (5) and (6). If leaders are about to leave, the value of future reciprocity will not be received. This suggests that condition (6) will no longer hold and Firm will renege on its promise to return favors. This leads me to the following prediction.

Prediction 2. (*Reciprocity Without Future*) When leaders are about to leave shortly, leaders will not be able to find assistance from previously favored firms.

Empirically I expect that when leaders are about to leave, previous favors to firms no longer have an effect on firms' assistance measure in the benchmark. In the appendix A, I turn to look at leaders who have newly arrived in office to interpret my findings for new leaders. In the next section, I discuss the details of datasets and how I define and construct variables used in the empirical analysis.

4. Data on Fiscal, Economic, and Political Variables

In order to study local governments' mobilizing assistance from firms, I use data from 476 counties across China. I discuss my main data sources and the details on variable construction in this section. The descriptive statistics of variables are summarized in Table 1.

4.1. Corporate Income Tax and Other Fiscal Data

To measure local government responses in the 2001 benchmarks, I need a panel dataset of county-level corporate income tax revenue both pre- and post-2001. However, all the published sources are either aggregates at provincial level or have been openly available since 2001. Instead, I construct a dataset that uses first-hand data collected from various local tax and fiscal yearbook.¹⁹ In total, I have a sample of 476 counties across China out of about 2,000.²⁰ The samples lie within 112 prefectures across 25 provinces. The reason why data for other counties are not available is because governments before 2001 combined the profits of state-owned enterprises (SOE) and corporate income tax as one bookkeeping item. Before 2001 it was only for idiosyncratic reasons that the public was able to observe corporate income tax, for example, if local tax authorities decided to publish their own Yearbooks or fiscal authorities published more detailed records for idiosyncratic reasons. The concern of sample selection will be addressed in the robustness check of section 5. In addition, all other county fiscal revenue, county-level nominal GDP and population are constructed from the Provincial, Prefectural and County Fiscal Statistics. To control for a possible difference in the incentive to respond caused by local fiscal burden, I construct fiscal pressure for each county which is defined as fiscal expenses divided by fiscal revenue. In the following section, I measure my main outcome variable, the firms' assistance in the 2001 benchmark.

¹⁹ The data sources are listed in the Appendix.

 $^{^{20}}$ I exclude Tibet, Xinjiang and Qinghai from the analysis.

4.1.1. Measuring Assisted Corporate Income Tax Deviation (ATD)

While all other economic variables grew in a quadratic time trend, the deviation of 2001 corporate income tax from its own trend can be taken as a measure of the local governments' responses. In order to do so, using a panel data on corporate income tax from 476 counties from 1998 to 2003, I regress corporate income tax on individual quadratic time trends and include Ln GDP per capita as a control. For county i at time t,

Corporate Income
$$Tax_{it} =$$

 $b_0 + \omega_1 t + \omega_2 t^2 + \sum_i (\gamma_{1i} t + \gamma_{2i} t^2) \cdot \beta_i + \beta_i + \delta ln_GDPPC_{it} + u_{it}, \qquad (7)$
 $t = 1998....2003 \ but \ t \neq 2001$

My specification is particularly flexible and allows each county to follow its own trend.²¹ Using the above regression, I predict the counterfactual 2001 corporate income tax as if there were no distorted responses from local governments. The residuals for 2001 are my measure for the overall deviation. Using the residuals as outcome, I plot the coefficient estimates on year dummies in Figure 5. This shows how large the 2001 deviation is in absolute terms. However, the governments' responses are from two channels as shown in Figure 6, relabeling other taxes and firms' transfer, as pointed out by the central governmental paper. In order to construct a measure that is purely from firms' assistance, I proceed as follows: first, I show that governments indeed relabeled other taxes as part of the responses; second, I subtract the relabeled taxes from the total responses so that the remnants of responses are from firms' assistance.

As shown in Figure 7 (left), I find that all other taxes, the sum of business tax, agricultural tax and other fees, experienced a slight deviation from trends.²² Figure 7 (right) shows the graphical relationship between absolute deviation in the 2001 benchmark and the deviation of other taxes. The negative correlation suggests that the negative deviation of other taxes is associated with the rise in the 2001 benchmark. Their significant correlation is also formally established in a regression later in the empirical section. The channel of relabeling other

²¹One obvious alternative is log-linearity. There are two reasons why it is not prefered: first, I intend to use the deviation from trend as the governments' responses in absolute level. However, by taking log the absolute level of deviations will have their magnitude changed. Second, by taking log the variation of my main outcome variable, relative ATD, will be repressed because more than 50% of the observations have this measure exceeds 1.10, the threshold in which log transformation becomes to repress the variation greatly.

 $^{^{22}}$ Business tax is approximately 17% of local tax budgets. It is a tax that applies to taxable services, transferring intangible assets, or selling immovable properties. The sum of all these tax accounts for 64% of local tax revenue.

taxes accounts for about 18% of the average total corporate income tax deviation. I now construct my main outcome variable, a measure of relative ATD from firms' assistance, which is calculated by first subtracting relabeled tax revenue from 2001 corporate income tax and then divided by the predicted counterfactual. For county i,

$$Relative \ ATD_i = \frac{2001 \ Corporate \ Income \ Tax_i - Relabeled \ Other \ Taxes}{Counterfactual \ 2001 \ Corporate \ Income \ Tax_i} \tag{8}$$

If there were no firms' assistance, I would expect that the relative ATD measure would be distributed with a mean close to 1. As shown in Figure 8, the distribution has a long right tail and is skewed above 1 with a mean of 1.5 and standard deviation of 0.85. The measure ranges from 0 to almost 30 times the predicted counterfactual. In my sample, the largest relative ATD is from Aba County in Sichuan, as shown in Figure 9. It reaches almost 30 times the counterfactual. After established main outcome of interested, relative ATD, in the next subsection I turn to explain how to construct measures for previous favors to firms as my main regressors.

4.2. Data on Ownership, Size, Debt Leverage and Effective Tax Rate

All firm-related variables are constructed using the Annual Surveys of Industrial Production. The dataset contains universal firms that have annual sales above 5 million RMB (eq. to 800,000 USD) from 1999 to 2003. Detailed information for each firm is recorded, including their location, industry code, paid-in capital composition, liability, assets, sales income, taxable income, payable income tax, and etc. Next, I begin by classifying each firm according to ownership, whether state-related or private. This is followed by constructing the measure for favors, debt leverage for credit access and effective tax rates for tax deduction.

In my samples, the number of surveyed firms in each county ranges from 1 to 765 with a mean of about 73. I classify each firm into state-related and private domestic firms according to each firm's paid-in capital composition.²³ I define a firm to be local state-related if 50% or more of its paid-in capital is coming from the local state and collective capital. ²⁴ Under this definition, state-related firms include both local state-owned enterprise and collectively-owned firms. On average, 50% of the surveyed firms are state-related under this classification. I apply the same method when I calculate for private firms. A firm is defined as private if 50% or more of the paid-in capital consists of private and legal person capital. The legal

 $^{^{23}}$ There are 6 types of capital – local state, collective, private, legal person, central state, and foreign. Here I focus on local domestic firms and therefore the definition will include only the first 4 types of capital.

²⁴Collective capital is a type of capital collectively owned by the residents of the town or village and managed by the local council. Therefore, the use of collective capital is tightly controlled by local politicians.

person capital is capital contributed by registered organizations. On average, 43% of the surveyed firms are private according to the samples. The remaining 7% of firms are consist of central-state-owned firms and other foreign controlled firms.

After classifying firms by these two forms of ownership, I calculate their respective shares in the county. To assist governments in raising the 2001 benchmarks promptly, the firms' liquid assets matter more than their illiquid assets. Therefore, instead of using firms' total assets, I use their sales income to calculate the relative size for each ownership. For the surveyed firm j in county i,

Size of state-related firms_i =
$$\frac{\sum_{j \in i} I(State-related firms_{ji}) \cdot Sales income_{ji}}{\sum_{j \in i} Sales income_{ji}}$$
 (9)

Similarly, this method is also used to calculate the relative size of private firms. The average relative size of state-related firms is about 0.60 while private firms are smaller on average at about 0.32. Their variation is similar: private firms' standard deviation is at 0.23 and at 0.26 for state-related firms. Their shares sum up to 0.9 on average. ²⁵ I next construct the measure for each favor for all firms and for firms of both ownerships.

To measure firms' access to credit, given the data limitation, I do not observe firms' total loans but only their balance sheets are available. Therefore, I take firms' liability to proxy their access to loan and normalized by their assets. This measure is to be called debt leverage in this paper. I calculate aggregate debt leverage for each county. This measure is constructed by summing up the total liabilities and then normalizing by the total assets of all the surveyed firms in the county. For all surveyed firms j in county i,

$$Debt \ leverage_i = \ \frac{\sum_{j \in i} Liability_{ji}}{\sum_{j \in i} Assets_{ji}}$$
(10)

The debt leverage measure has a mean of 0.7 with a standard deviation of 0.16. I repeat the same exercise and calculate the measure for each ownership. While the average debt leverage for state-related firms is 0.71, the same measure for private firms is lower at approximately 0.59. The variation is greater for private firms with standard deviation at 0.26 and at 0.18 for state-related firms. This measure has a very different meaning for state-related firms as compared to for private ones. As discussed in the institutional background, state-related firms are more likely to finance through bank loans while private firms have to rely on private lending. Therefore, the debt leverage ratio for state-related firms should capture the variation of their access to credit as a government favor but this is not the case for private firms.

²⁵The remaining firms mainly consist of central-state-owned firms and foreign-owned firms.

The second favor is corporate income tax deduction and is measured using an effective corporate income tax rate, defined as the ratio of reported tax paid to a reported tax base. I take the average of the effective tax rate for each county. For the surveyed firm j in county i,

$$Effective \ corporate \ income \ tax \ rate_i = \ \frac{\sum_{j \in i} \frac{reported \ tax \ paid_{ji}}{reported \ tax \ base_{ji}}}{Number \ of \ surveyed \ firms_i}$$
(11)

The effective tax rate is low: an average of about 5% with standard deviation at 0.05. I also calculate the average effective tax rate for each ownership. The mean of effective tax is 0.053 for private firms and 0.047 for state-related firms. Their standard deviations are 0.054 for private firms and 0.042 for state-related firms.

In order to control for local firms or industry characteristics, for each ownership I also construct their respective turnover ratio, defined as total sales income divided by total assets, to capture firms' efficiency associated with assets utilization; and their profitability, defined as profit divided by total assets, to proxy for productivity; and finally industry composition based on sales income from resources, manufacturing and utility industry. Finally, in order to construct previous government favors to firms, both measures for favors are averaged from 1999 and 2000, before the reform in 2001.

4.3. Data on Local Political Leaders

In order to construct the tenure in office of local political leaders, I collect the names of local politicians from the Chinese provincial and prefectural Yearbook, which records the list of local politicians.²⁶ Tracing their names over time allows me to record the year in which they took office and the year in which they leave. Specifically, I collect the names of the top two leaders, the county party secretary and the county executive, from 1994 to 2008.²⁷ In addition to these leaders' tenure, I can also learn if the county party secretary was promoted from executive office in the same county.

To examine how the effect of favors changes with leadership turnover, I construct indicators for counties with leaders just starting office and those with leaders who are soon to leave. Given the unique dual-leadership system in China as I discussed in the institutional background, I construct an indicator for counties with new leaders as follows. The indicator takes a value of 1 if both conditions are satisfied and 0 otherwise:

1. County party secretary began office in 2001, not promoted from executive.

 $^{^{26}}$ The list of politicians names is based on those who are in position on the last day of the year.

 $^{^{27}}$ A caveat is that some Yearbooks, the earlier ones in particular, do not document the name list and therefore I do not have data on leaders' turnover for some counties.

2. County executive began office in 2001.

Out of 441 observations where the new leader indicator is not missing, about 34 (8%) county leaders had just taken office. Similarly, I construct an indicator for counties with both leaders leaving. This indicator takes a value of 1 if both conditions are satisfied and 0 otherwise:

- 1. County party secretary leaves office in 2002.
- 2. County executive leaves office in 2002, not promoted to party secretary.

Out of 440 observations where the indicator of leaving leaders is not missing, about 34 (8%) counties have leaders due to leave in the next few months. The indicator for leaders at the end of a term takes value of 1 if both leaders have stayed in the office for 4 years or more.²⁸ Out of 441 observations where the end-of-term leader indicator is not missing, about 40 (9%) both county leaders had stayed in the office for 4 years or more.

5. Empirical Analysis

This section begins by discussing my empirical specifications (subsection 5.1). I then discuss the estimates of each of the two favors. The first is state-related firms' access to credit, measured by debt leverage (subsection 5.2). This is followed by the second favor, private firms' tax deduction, measured by effective tax rate (subsection 5.3). After the baseline estimation, robustness checks are provided.

5.1. Empirical Specification

In order to examine if county governments can mobilize connected firms' assistance in raising the 2001 tax benchmark, I use data from 476 counties in 2001 to estimate the following specification:

$$y_{ik} = \beta_0 + \gamma Z_{ik} + \beta_k + \beta' X_{ik} + u_{ik} \tag{12}$$

 y_{ik} is the relative ATD of county *i* in prefecture *k*. Z_{ik} is the main regressor, favors from local governments towards firms. All the firm-related variables are averaged from 1999 to 2000 before the reform to avoid reverse causality. β_k is the prefectural fixed effects. A set of controls are included in X_{ik} . The first control is previous fiscal pressure which help to hold the incentive fixed so that I can focus on governments' capacity to mobilize firms' assistance.

 $^{^{28}}$ Regarding local leaders' turnover, both executive and party secretary have a *de jure* term which is fixed for 5 years but their *de facto* terms are determined by bureaucratic assignments. Based on my constructed turnover data, their terms on average is about 4 years and more than 80% of them leave the office within 5 years with a peak around 4 to 5 years.

Other controls include previous corporate income tax (normalized by GDP) and Ln GDP per capita. Robust standard errors are clustered at the prefectural level. Given the concern over extreme outliers, I exclude observations with its measure of relative ATD at the top 1%. In the robustness checks, I also estimate the effects using quantile regressions.

5.2. Assistance from Favored Firms: Credit Access

As I discuss previously, I expect that in counties with higher local state-related firms' credit access, as measured in debt leverage, governments can find more assistance from staterelated firms to raise the 2001 benchmark. Therefore, I start by looking at whether counties with higher previous debt leverage for firms would raise the 2001 benchmark more. As shown in column 1 of Table 2, the coefficient estimate for all firms' previous debt leverage is positive and significant. However, I point out earlier that not all bank loans should be treated as favors. Bank loans tend to favor local state-related firms. That is, empirically I expect that state-related firms' debt leverage should matter but not so for that of private firms. This conjecture is tested as shown in column 2 of Table 2. The coefficient estimate for state-related firms' previous debt leverage is positively significant and its magnitude is similar to the estimate in column 1 — one standard deviation increase in the firms' previous debt leverage increases the measure of relative ATD by about 0.2 standard deviation. This is a non-trivial effect and suggests that state-related firms which previously had more access to credit are more likely to assist governments. The same estimate for private firms' previous debt leverage is small and insignificant. This result confirms my first proposition: that governments which gave more favors to local firms can *harvest* more of their assistance. Furthermore, in column 3, I show that debt leverage matters only for local state-related firms and not for central-state ones, which have a small and insignificant estimate. This is important in that it suggests that only firms seeking to establish a relationship with local governments matter. In column 4, I show that this result is robust even after controlling for the relative sales share of state-related firms. This insignificant estimate for the relative size of state-related firms seems surprising and counterintuitive. One might expect that staterelated firms would be under local government control and counties with relatively larger state-related firms would be able to mobilize more resources in raising the 2001 benchmark. This result suggests that the informal relationship is even more important than the given institutional bonding between governments and state-related firms.

Recognizing that there may be unobservables biasing my results which cannot be addressed using a cross-sectional framework, I show that in Table 3 the point estimates starting from no controls in column 1 to full controls in column 4 stay significant and most importantly they all share similar magnitude. This suggests that concerns for bias due to unobservables perhaps are less of an issue. In the next subsection, I discuss my second favor, corporate income tax deduction.

5.3. Assistance from Favored Firms: Tax Deduction

In the previous subsection, I establish a positive relationship between state-related firm's access to credit and firms' assistance in the 2001 benchmark. Here I turn to another government favor: corporate income tax deduction. I expect private firms to be more sensitive to this favor and so in counties with more tax deduction for private firms, measured using an effective tax rate, governments can mobilize more private firms' assistance to raise the 2001 benchmark. Empirically, I expect a negative relationship between the previous effective tax rate for private firms and the relative ATD. In column 1 of Table 4, I show that the average effective tax rate has a negative effect on the relative ATD, but it is imprecisely estimated. Since private firms should be more responsive to this favor, I separate the tax rate calculation according to firms' ownership. The result is shown in column 2. The estimates of state-related and private firms are very different: while the significant estimate for private firms is large and negative, the same estimate for state-related firms is close to 0 and insignificant. The large estimate for tax rate of private firms suggests that one standard deviation decrease in effective tax rate is associated with a 0.14 standard deviation increase in the relative ATD. These results suggest that a lower corporate income tax rate for private firms has a positive effect on raising the 2001 benchmark. In column 3 it is shown that this result is robust after controlling for the relative sales share of private firms. Furthermore, when adding debt leverage for state-related firms in column 4, the estimates of both favors are significant and the estimate for tax rate does not seem to change much. This result establishes that the two favors work independently. These results suggest that governments previously providing more corporate income tax deductions to private firms were able to receive more assistance from them.

As in the previous subsection, to address the concerns that unobservables may bias the results, in Table 5 I show the effect of effective tax rates from no control in column 1 to full control in column 4. The point estimates stay significant for all regressions and again share similar magnitude. These results again mitigate me the concerns of bias due to unobservables. To further validate the baseline results, I discuss robustness checks in the following subsection.

5.4. Robustness Checks

5.4.1. Characteristics of Local Firms

To capture government favors to firms, I use credit access and tax deductions. However, the variation of these two favors may be due to other unexplained characteristics of local firms or industries. In order to address this concern, I include additional controls of firms' characteristics to test the robustness of the baseline results.

The first one is the asset turnover ratio, defined as total sales divided by total assets, which is a measure for firms' ability to use their assets to generate sales or revenues. The second one is the profitability, defined as total profit divided by total assets, which not only measures firms' capacity to generate profit but it is also a widely used proxy for productivity. My last control is the industry composition based on three industries — resource, utility and manufacturing industry— following classification from the firm survey data. All three variables capture important characteristics of local firms that may be associated with credit access and tax deduction. When calculating turnover ratio and profitability, I separate these variables according to their ownerships, state-related and private. The results are presented in Table 6.

I first examine the effect of debt leverage by adding each of these controls. In column 1 and 2, the estimates of state-related firms' debt leverage remain significant and the magnitude are very close to the baseline result in column 2 of Table 2. When controlling for industry shares as shown in column 3, the estimate remains significant but marginally smaller comparing with the one in the baseline. When turning to look at the effect of effective tax rate as shown in column 4 to 6, all three estimates are almost identical to the baseline estimate in column 2 of Table 4. Despite that the estimate in column 5 is imprecise estimated in column 5, the other estimates when controlling for turnover ratio in column 4 and industry composition in column 6 both remain significant. Overall these results suggest that my baseline findings are not driven by unexplained characteristics of local firms.²⁹

5.4.2. Quantile Regressions

In the previous section, I excluded the observations with top 1% relative ATD to address the concern of outliers. Alternatively, I can estimate the effect using quantile regressions. In Table 7, I show the effects at the 25, 50 and 75 percentiles. In column 1 - 3, the estimates of the debt leverage of state-related firms are smaller than the baseline estimate which evaluates at mean but remain significant for 25 and 75 percentiles. Furthermore, the effect is much greater at the higher percentile – the estimate at the 75 percentile is more than double

²⁹The significantly negative estimates of utility industry will be explained in section 5.4.4.

comparing with its counterpart at the 25 percentile. This result indeed suggests that the magnitude of the estimate at mean is somewhat driven by larger values but the coefficients remain significant even at a lower percentile. The results for effective tax rate give a very similar pattern as shown in column 4-6. The estimate is significant at the 75 percentile and more than double comparing with the estimate at the 25 percentile. This result suggests that even though the effect is much larger in counties with greater ATD but my baseline findings are not driven by the outliers.

5.4.3. 2002 Tax Revenue and Selection Bias

One worry concerning about the relative ATD measure is whether the following year tax revenue were also affected by this reform and led to my findings. To address this issue, I repeat the same exercise as how I measure the outcome variable as regression (7) but this time I not only drop observations of 2001 but also those of 2002.³⁰ I then repeat the calculation in (8) to construct this alternative outcome variable. The results are shown in column 1 and 2 of Table 8. Despite that the effect is marginally smaller for debt leverage of state-relater firms and larger for effective tax rate of private firms, the results are consistent with my baseline findings.

My sample covers a third of all counties in China, 476 out of 1,600. Despite that the sample size is limited, it has a wide geographical distribution, including 112 prefectures across 25 provinces. I previously discussed that the limited data availability is due to idiosyncratic reasons, for example more detailed bookkeepings. But in order to fully address this concern for sample selection, I examine whether my baseline results can hold robust when conditioning only on 4 provinces that covers most or all counties, including Anhui, Hubei, Sichuan and Zhejiang. The results are shown in column 3 and 4 of Table 8. Using a subsample of only 209 counties, the effects are slightly larger for both debt leverage of state-relater firms and effective tax rate of private firms comparing with those in the baseline but without significant difference. These results relieve my concerns for selection bias.

5.4.4. Firms That Need No Reciprocity Provide No Assistance

In the previous section, I discuss that firms provided assistance to governments when they rely on government favors. Another option to test this proposition is to check whether firms which do not rely on reciprocity to gain local government favors provide no assistance to raise the 2001 benchmark. In my firm survey data, firms are classified into resource, manufacturing

 $^{^{30}}$ If I drop observations of both 2002 and 2003 when measuring relative ATD, the measure becomes incredibly noisy and therefore I compromise by dropping only those of 2002.

and utility industries. The first two industries rely heavily on local governments' facilitations, such as targeted infrastructure, land and so on. Even though firms in the utility industries share same needs but they do not rely on reciprocal relationship with local governments to gain those favors. ³¹ For example, local electricity supply firms are managed by both a giant electricity agglomeration and a local government. However, the political power of the electricity agglomeration outweighs that of local governments since it enjoys a higher Party rank. Therefore, local governments need to cater for those firms in the utility industries rather than forming a reciprocal relationship with them. I expect that the larger is the utility industries, local governments would get less assistance of firms.

In column 5 of Table 8, I show that counties with greater sales share of utility industries have lower relative ATD. The estimate for the share of a utility industry, -1.024, is negative and significant. This magnitude suggests that when there is one standard deviation increase in the share of utility industries, it has a nontrivial effect, of 0.2 standard deviation decreases in the relative ATD. This allows me to conclude that when firms do not rely on reciprocal relationship to gain local government favors, they do not provide assistance to governments.

5.4.5. Firms' Assistance Or Strengthening Tax Enforcement?

In the previous section, I claimed that firms receiving tax deductions as a favor from governments will assist in raising the 2001 benchmark. Nonetheless, a similar result can also emerge if local governments renege on previously promised low tax rates and raise the tax to statutory level based on the legal tax code. If this alternative mechanism existed, the rise in the 2001 benchmark would be due to tax enforcement rather than a result of firms' assistance. However, given that governments collected more tax, one should observe an abnormal growth in the tax revenue reported by private firms. In Figure 10 I plot private firm tax revenue over time. It does not show that in 2001 private firms paid abnormally high tax and this result allows me to exclude this alternative explanation. After establishing the baseline results, in the next section, I discuss the heterogeneous effects of local leadership turnover.

³¹This is because firms in the utility industries have a unique administrative structure, called "Tiao-Kuai" (in Chinese). Put simply, this means that firms under this administrative structure have two principles. Giant state-owned firms or bureaucracies of the central government which have vertical lines of authority to coordinate functions, while local governments share horizontal lines of authority to coordinate according to the needs of the locality being governed.

6. Dynamics of Connections

Following my baseline results and the associated robustness checks, I confirm the existence of reciprocal relationships between governments and firms. In this section I move on to test whether this informal reciprocal relationship is personal or institutional. In order to do so, I focus on the scenario in which leaders are soon to leave office as predicted by my theoretical framework — when leaders are leaving, in the absence of future benefit, previously favored firms will be reluctant to assist in raising the 2001 benchmark.

To start with, as discussed in the data section I define the counties with leaving leaders as counties with both county party secretaries and county executives leaving office in 2002 and where the executive is not promoted to party secretary in the same county. In testing this prediction, I assume that whether both county party secretary and executive leave immediately in 2002 is predetermined and also public knowledge, in particular for local firms. This assumption is very likely to hold, since the reform was announced at the end of 2001 and an assigning order should already have been placed for those due to leave in a few months' time.³² In Table 9, I show that counties with both leaders leaving and other counties are similar, except that the share of private firms is slightly larger for counties with leaving leaders.

In Table 10, I look at whether the effect of favors is diminished when leaders are soon to leave. In column 1, the estimate of the leaving-leader indicator is negative but imprecisely estimated. However, its non-trivial magnitude of the estimate suggests that a lower response may be due to limited firms' assistance. As results in column 2 and 3 shows, counties with their leaders soon to leave do not have assistance from state-related firms which previously received credit access as government favors. In fact, in these counties the effect of debt leverage is significantly lower than its effect in other counties and the sum of estimates for interaction and main effect for debt leverage is not significantly away from 0 with p-value around 11. The null effect of debt leverage for counties with leaving leaders suggests that governments cannot find assistance from previously favored state-related firms.

When I turn to the favor of tax deduction, the results are similar to those for the favor of access to credit. In column 4 and 5, the result also shows that counties with leaving leaders do not have private firms' assistance even if those firms have previously received favor of tax deduction. The estimate of effective tax rate in these counties is significantly higher from the one for other counties. Furthermore, the insignificant sum of estimates for interaction

 $^{^{32}}$ Leaders' term is 5 years but leaders can still be reassigned before the term finishes. More than 80% of local leaders leave within the 5-year term with a peak at 4 years. Unfortunately, I cannot explore the variation of leaders' assignment because the logic behind the personnel management inside the Party remains a black box.

and main effect for effective tax rate suggests that the favor of tax deduction has no effect in counties when leaders are soon to leave; that is, governments cannot reach for assistance from previously favored private firms. These results, along with those on the favor of credit access, suggest that leaving leaders are less likely to find assistance from previously favored firms, which is consistent with my second prediction.³³ Therefore, I can conclude that this informal reciprocal relationship is personal rather than institutional.

6.1. Robustness Checks

6.1.1. Lack of Incentive or No Assistance from Firms

In the previous section, I showed that firms previously receiving favors do not assist governments in return when leaders are soon to leave office. However, in addition to the explanation which states that firms choose not to provide assistance when they do not expect future returns, it could also be the case that leaving leaders lack the incentive to respond to the reform. To address this concern, I argue that there is an institutional reason on why leaders are still incentivized to respond even when they are leaving. This is because raising the 2001 benchmark shows their alignment with the leaders in the prefectural governments who evaluate the county leaders' performance for promotion and also intend to keep tax local.³⁴

Furthermore, I use two observations to demonstrate that leaving leaders still have the incentive to respond. First, as shown in column 1 of Table 11, overall relative deviation from counties with leaders soon to leave office are no different from other counties.³⁵ Second, I show that when leaders are soon to leave, other taxes were still relabeled as corporate income tax to be used to raise the 2001 benchmark.

In previous discussion on constructing the main outcome of interest, firms' assistance, in Figure 6 I show the strong negative correlation between relabeling other taxes and the overall deviations in the 2001 corporate income tax revenue. I now turn to formally testing this relationship using regression and the results are shown in Table 11. In column 2, this negative relationship is shown to be robust and significant after adding the full set of controls and prefectural fixed effects. On average, relabeling other taxes accounts for about 18% of the total deviations. Furthermore, in columns 3 to 4, I show that when leaders are leaving,

 $^{^{33}}$ Furthermore, in the appendix B I find no evidence that my heterogeneous effects are driven by either of the leaders' leaving and suggest that both leaders matter.

 $^{^{34}}$ This is supported by the fact that prefectural governments also have abnormal responses in raising the 2001 benchmark.

³⁵Overall relative deviation includes transfer from both channels - relabeling other tax resouces and finance from firms.

this channel is still utilized because the interaction is negative and insignificant. More importantly, despite that the interaction is imprecisely estimated, the effect of deviation of other taxes when leaders are soon leaving is close to 1 ($\approx 0.144 + 0.850$) with a 0.49 p-value when testing the sum equals to 1. This result suggests that this channel becomes the dominate source to raise the benchmark when leaders are leaving. This result not only demonstrates leaders' incentive to respond even when they are leaving, but it also implies that leaving leaders cannot find firms' assistance. Therefore I can conclude that leaving leaders are still incentivized to respond and therefore the result is not due to the lack of incentive from a leaving leadership.

6.1.2. Leaders' Leaving Could be Endogenous

In the above analysis, I use ex post information on whether leavers actually leave or not to construct indicators for leaders soon to leave. However, whether leaders leaving or not could be a result of raising the benchmark and so the use of ex post information may create a problem of endogeneity. To address this concern, I use the fact that the reform was unanticipated so that I can treat leaders' time in office in 2001 as an exogenous variation. I use the leaders who are close to the end of their *de jure* term, fixed at 5 years, to proxy the likelihood of their leaving.³⁶ I construct an indicator that takes a value of 1 if both county party secretary and executive are at the end of their term by 2001, having served 4 years or more, and 0 otherwise.³⁷ Using this newly constructed indicator, I repeat the same exercise as those in Table 10. The results are shown in Table 12.

In column 1, counties with end-of-term leaders' relative ATD on average are similar to other counties. In column 2 and 3, I look at the heterogeneous effects of leaders' leaving on credit access for state-related firms, measured in debt leverage, on relative ATD. The results are similar to those in Table 10 in which the favor has no effect when leaders are expected to leave. Despite that the negative estimate of interaction is imprecisely estimated, its magnitude is close to the main effect for debt leverage and thus makes the sum almost 0. In column 4 and 5, a similar pattern is observed when looking at the effect of tax deductions for private firms, measured in the effective tax rate. While there is no effect from tax deduction when leaders are expected to leave judging by the sum of interaction and main effect for effective tax rate, other counties have a large and significant effect similar to those in column

 $^{^{36}}$ The 5-year term is not fixed, for leaders can still be reassigned before the term finishes. More than 80% of local leaders leave within the 5-year term with a peak at 4 years. Unfortunately, I cannot explore the variation of leaders' assignment because the logic behind the personnel management inside the Party remains a black box.

³⁷Since the executive is likely to be promoted to party secretary, to proxy the likelihood of both leaders' leaving I also ensure the current party secretary was not previously promoted from local executive.

5 of Table 10. My results show that the findings in the previous subsection are robust to this alternative definition of leaders due to leave. After testing my second prediction, I now turn to discuss my additional findings.

6.2. Previous Favored Firms under New Leaderships

In this section, I look whether firms that receive favors from previous governments will also assist local governments under new leadership. New leaders should have built limited reciprocal relationships with local firms. Therefore, this reform provides a unique opportunity to test if firms that were relied on favors from governments whether these firms are more likely to assist new leaders and thus to build up a relationship with leaders for future reciprocity. In the appendix A, based on my theory of reciprocal relationship, I modify the model and let firms to take the initiative and decide whether to assist local governments. The theory predicts that firms which rely more on government favors would be more willing to assist governments.

I first discuss the variation from an indicator for new leaders. It is likely that some unobservable factors which determine the turnover of local leadership also affect how much they the local leaders respond. However, as in my construction of an indicator for end-ofterm leaders, I use the fact that the reform was unanticipated to treat those counties with new leaders as if they were determined exogenously. Here, counties with new leaders are defined as counties with both county party secretaries and executives taking office in 2001 where the party secretary was not promoted from the executive in the same county. In Table 13, I show that counties with both new leaders and other counties are very much balanced in all aspects. Now I turn to examine my empirical findings, shown in Table 14.

As shown in column 1, there is no significant difference in relative ATD between counties with new leaders and other counties. In column 2 and 3, I interact the state-related firms' debt leverage, as favors of credit access, with the indicator for new leaders. The result suggests that state-related firms which enjoyed credit access as favor under previous leadership will also assist new leaders. In column 4 and 5, I find that despite that the effect may be discounted but private firms that previously enjoyed greater tax deduction also assist new leaders. Overall my results suggest that firms that previously relied on government favors will also take the initiative to assist new leaders in order to build up a new reciprocal relationship to exchange for favors in the future. ³⁸

³⁸Furthermore, in the appendix B I find no evidence that my heterogeneous effects are driven by either of the leaders' leaving and suggest that both leaders matter.

7. Conclusion

To better understand how connections work and thus their benefits and costs, in this study I use another perspective to look at government-firm connections through their twoway interactions. Using an event study in China, instead of focusing on firms' gain, I examine whether governments can mobilize more assistance from those firms to which they have already given favors. But it is not easy to do so, since favors are usually traded in secrecy or simply cannot be quantified. Yet this event study not only enabled me to measure the value that governments (or politicians) attribute to connections but also broadened my understanding of other possible forms of return. I summarize my findings as follows.

In order to respond to a central-local tax-sharing reform, I found a robust positive correlation between government favors to firms before the reform, credit access and tax deductions, and firms' assistance to governments in responding the reform. Furthermore, I found that this reciprocal relationship between governments and firms is personal rather than institutional. When leaders are about to leave office, I find that previously favored firms do not provide assistance, because no future gain can be expected from leaders once they have left. The results are consistent with the predictions derived from a theory of reciprocal relationships between governments and firms. As an additional result, I found evidence suggesting that private firms took the initiative to offer more assistance to new leaders in exchange for gains from future reciprocity.

The findings of this study have implications beyond the Chinese context. First, this unique setting allows me to be one of the first studies to examine the two-way interaction between governments and connected firms. Second, returns to governments' connections with firms are not necessarily personal transfers, such as corruption, and in some circumstances the returns can contribute to achieving governmental objectives. Third, by unveiling how connections work behind the scene, connections can be dynamic relationships that governments and firms exchange favors intertemporally. Following this logic, there are also important policy implications. Policymakers should bear in mind that a policy that leaves room for governments to fulfil their objectives by seeking assistance from firms is highly likely to promote cronyism. Furthermore, even though frequent leadership turnover is evidenced as perhaps holding back cronyism, it also has a downside: it costs firms more resources to build up new connections, which can be socially wasteful.

Finally, the findings in this study broaden my understanding of the government-business relationship in China: first, even when state-related firms share institutional bonding with local governments, local governments cannot mobilize assistance from state-related firms without informal relationships. Second, as stated in the introduction, in authoritarian regimes, such as China's, higher tiers of government often dictate local government policy objectives which involve unreasonable missions or quotas. To carry out these tasks, the local governments often seek assistance of local firms. This gives local governments the incentive to invest in their relationships with local firms and to create local crony economy. Third, unlike other studies that focus on the party secretary, the findings about leadership turnover suggest when looking at connections with firms one should take the county executive into account together with the party secretary. Finally, the two measures for favors seem to capture the variation of government-firm connections and can be used for future study on cronyism in China.

Appendix A. Reciprocal Relationship Without Past

Now I look at leaders who have newly taken office. If leaders are new to office, it is likely that no previous reciprocal relationships exist with firms. This suggests that I should amend my framework to look at whether firms take the initiative in offering favors by raising the 2001 benchmark. Assuming that Government is the first to receive favors, I solve for $\overline{V}_{R}^{k}(\bar{x}), k \in \{G, L\}$. Similarly, I use (1) and (2), which gives

$$\bar{V}_{R}^{F}(\bar{x}) = \frac{1}{2(1-\pi\delta)}M(\bar{x}) + \frac{(1-\pi\delta)(2\theta-1)}{2(1+(\pi\delta)^{2}(2\theta-1))}L(\bar{x})$$
(13)

$$\bar{V}_{R}^{\bar{G}}(\bar{x}) = \frac{1}{2(1-\pi\delta)}M(\bar{x}) - \frac{(1-\pi\delta)(2\theta-1)}{2(1+(\pi\delta)^{2}(2\theta-1))}L(\bar{x})$$
(14)

where $M(\bar{x}) = \int_0^{\bar{x}} (z - c(z)) dF(z)$ and $L(\bar{x}) = \int_0^{\bar{x}} (\omega + c(\omega)) dF(\omega)$. In this setting, since $\theta > \frac{1}{2}$, then I still have $V_R^F(\bar{x}) > V_R^{\bar{G}}(\bar{x})$. But, compared with the previous case, in which Firm first requested favors, the difference between $V_R^F(\bar{x})$ and $V_R^{\bar{G}}(\bar{x})$ is smaller. To sustain a reciprocal relationship, the following condition for Firm needs to hold.

$$-c(\bar{x}) + \delta \cdot 0 + \delta^2 V_R^F \ge 0 \tag{15}$$

For Government to stay in a reciprocal relationship,

$$0 + \delta \cdot -c(\bar{x}) + \delta^2 \bar{V}_R^G \ge 0 \tag{16}$$

All else being equal, $\bar{V}_R^F(\bar{x})$ increases in θ . This suggests that when Firm is needier, the value of its continuation is higher. Thus, under general conditions when $\pi\delta\bar{V}_R^G > (\pi\delta)^2\bar{V}_R^F$, a higher θ allows a greater \bar{x} to satisfy both (15) and (16) conditions in order to sustain a reciprocal relationship; I have the following hypothesis.

Prediction 3. (Reciprocity Without Past) When leaders are new, firms which rely more on governments' favors will take the initiative by offering more favors.

In counties with new leaders, previous favors no longer matter. Those new leaders cannot find assistance from firms which received favors from previous governments. However, firms that are sensitive to government favors might provide assistance in exchange for future reciprocity. While state-related firms share institutional bonding with governments, private firms rely more on this informal relationship. Empirically, I expect that private firms are more likely to offer assistance when leaders are new to office. Furthermore, previous favors should have no effect on relative ATD.

Appendix B. Which Leader Matters?

B.1. Leaving Executive or Leaving Party Secretary

In constructing an indicator for counties where leaders are due to leave, unlike the literature that mainly focuses on party secretary turnover, I take into account both the executive and party secretary post. To test whether this innovation is valid, in theory I should include a quadruple interaction on the criteria for leaving leaders, a leaving executive without promoting to party secretary and a leaving party secretary. In practice, however, the limited sample size sets a barrier against this practice. Instead, I look individually at the two leaders' leaving. I start by looking at executives soon to leave office. The results are shown in Table A1.

In column 1 of panel A, counties with leaving executives respond no differently from other counties. The estimates in column 2 and 3 do align with my prediction that the measure for the favor of credit access, debt leverage, of state-related firms has no effect in counties where executives are soon to leave office but the effect exists for all other counties. However, the same pattern does not apply to the measure for tax deduction, the effective tax rate, of private firms. As shown in column 4 and 5 the estimate for interaction is negative, an opposite sign that is predicted by the theory. When I turn to examine the effect of party secretaries soon to leave office. I use the variation of party secretaries leaving and no executives promoted to fill the office. This is mainly to avoid the possibility that executives soon to be promoted to party secretary may bias the effect of a leaving party secretary. In column 1 of panel B, similarly, counties with leaving party secretaries respond no differently from other counties. In column 2 and 3 the results suggest that a leaving party secretary may moderate the effect of debt leverage of state-related firms. However, I don't have a significant estimate for the interaction term. In column 4 and 5, the signs of the estimates do correspond to those in Table 10. However, the interaction term is imprecisely estimated.

To sum up, I find no evidence that my heterogeneous effects are driven by either of the leaders' leaving and this suggests that taking both leaders into account is a valid innovation when examining their relationships with firms.

B.2. New Executive or New Secretary

As in the last part of the previous section, I again look at which leader matters – executives or party sectaries. I start by looking at the new executive. To do this, I use the variation from counties with new executives and party secretaries who were not promoted from the executive office. This is to avoid the possibility that my estimates may be biased because the party secretaries promoted from executive office still own executive power. In column 1 of panel A in Table A2, I show that counties with new executives do not respond differently from other counties. The results in column 2 and 3 suggest that state-related firms that were previously favored with credit access do not assist local governments differently when only the executives are newly arrived. The same results can be found in column 4 and 5 when interacting the new executive indicator and effective tax rate of private firms- private firms previously favored with tax deduction do not assist local governments differently when only the executives are newly arrived. In panel B of Table A2, I repeat the same exercise as in panel A but this time I focus on the effects for new party secretary. The results are very similar to those in panel A. Firms that were previously favored through better credit access or greater tax deduction do not assist local governments differently when only the party secretaries are newly arrived. Overall these results suggest that no matter which leader, county party secretary or executive, is new to office, previously favored firms will choose to assist no differently from their assistance to county governments without new leaderships.

Appendix C. Figure



Figure 1: Corporate Income Tax (From 1998 To 2003)

Note: Using observations from 476 counties, this figure plots the regression coefficients of year dummies from 1998 to 2003 (1998 as base year) with corporate income tax (in 10,000 RMB) as the outcome variables. The regression controls for Ln GDP per capita and county fixed effects. Robust standard errors are clustered at county level. Corporate income tax data is collected from various local fiscal and tax yearbooks. GDP data is from Province, prefecture, and county fiscal statistics. Details on the data source can be found in the appendix.





Note: On the left, this figure plots the regression coefficients of year dummies from 1998 to 2003 (1998 as base year) with local value-added tax from 476 counties. On the right, this figure plots the regression coefficients of year dummies from 1998 to 2003 (1998 as base year) with surveyed firms' aggregate sales income from 476 counties. The regression controls for Ln GDP per capita and county fixed effects. Robust standard errors are clustered at county level. GDP and local VAT data are from Province, prefecture, and county fiscal statistics. Data on sales income is from Annual Surveys of Industrial Production. Details on the data source can be found in the appendix.



Note: This figure show how firms assist local governments in raising the 2001 tax revenue. In any other normal times, shown in Figure 3 (left), firms pay tax to local governments and the revenue is then remitted to Treasury before being redistributed back to the governments. However, in November and December 2001 as shown in Figure 3 (Right), firms paid tax and also other transfers. The money was again remitted to Treasury and then came back to the governments. Governments kept the tax and returned all the extra money back to the firms.

Figure 4: Corporate Income Tax (From A Large-scale Firm Survey)



Note: Using observations from 476 counties, this figure plots the regression coefficients of year dummies from 1998 to 2003 (1998 as base year) with corporate income tax from Annual Surveys of Industrial Production. The regression controls for Ln GDP per capita and county fixed effects. Robust standard errors are clustered at county level. GDP data is from Province, prefecture, and county fiscal statistics. Details on the data source can be found in the appendix.



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Figure 5: Corporate Income Tax Deviation from Trend







Note: This figure shows that the deviation of 2001 corporate income tax consist of transfers from two channels: (1) relabeling other tax revenue and (2) transfer from firms.

Figure 7: Relabeling Other Taxes — A Channel to Response



Note: On the left, this figure plots the regression coefficients of year dummies from 1998 to 2003 (1998 as base year) with local other tax from 476 counties, including business tax, agriculture tax and other fees. The regression control for Ln GDP per capita and county fixed effects. Robust standard errors are clustered at county level. On the right, I scatterplot the absolute deviations in the 2001 corporate income tax and off-trend deviation of the other taxes. Business tax, agriculture tax, other fees, and GDP data are from Province, prefecture, and county fiscal statistics. Details on the data source can be found in the appendix.



Figure 8: Distribution of Relative ATD Measure

Note: This figure shows the distribution of my main outcome variable, the relative ATD in the 2001 benchmarks. Red line indicates the value of relative ATD being 1. My observations are 473 counties across 112 prefectures and 25 provinces in China. Details of constructing relative ATD can be found in the text of data section.

Figure 9: Relative ATD For Aba County in Sichuan



Note: This figure I plot the corporate income tax revenue of Aba county in Sichuan from 1998 to 2003. The data is collected from Aba County Tax Authority Year Books.

Figure 10: Corporate Income Tax of Private Firms (From A Large-scale Firm Survey)



Note: Using observations from 476 counties, this figure plots the regression coefficients of year dummies from 1998 to 2003 (1998 as base year) with corporate income tax of private firms from Annual Surveys of Industrial Production. The regression controls for Ln GDP per capita and county fixed effects. Robust standard errors are clustered at county level. GDP data is from Province, prefecture, and county fiscal statistics. Details on the data source can be found in the appendix.



Note: Hierarchy of Chinese government: starting from the central government, provincial governments, prefecture governments, and followed by county and district governments.

Appendix D. Tables

Variables	Obs.	Mean	Std Dev.	Max	Min
Relative ATD	471	1.47	0.85	5.99	0
Debt leverage (All firms)	471	0.69	0.16	1.31	0.02
Debt leverage (State-related)	471	0.71	0.18	2.03	0.02
Debt leverage (Private)	471	0.59	0.26	1.62	0
Debt leverage (Central-state)	471	0.14	0.30	1.67	0
Debt leverage (Utility industry)	471	0.50	0.23	1.38	0
Effective tax rate (All firms)	471	0.05	0.05	0.67	0
Effective tax rate (Private)	471	0.05	0.05	0.45	0
Effective tax rate (State-related)	471	0.05	0.04	0.36	0
Sales share (State-related)	471	0.59	0.26	1.00	0.02
Sales share (Private)	471	0.32	0.23	0.92	0
Sales share (Utility industry)	471	0.12	0.17	1.00	0
Ln GDP per capita	471	8.54	0.72	10.99	5.55
Normalized corp. income tax	471	0.00	0.01	0.07	0
Previous fiscal pressure	471	2.45	3.22	44.26	0.84
Absolute deviation	471	$1,\!087$	2,575	29,801	-3,200
Deviation of other tax	471	-574	$1,\!655$	$9,\!103$	-14,433

Table 1A: Descriptive Statistics

Notes: This table presents descriptive statistics for variables used in the analysis. The unit of observation is county in year 2001. *Relative ATD* is a measure for the extent of firms' assistance in the 2001 corporate income tax; *Debt leverage* variables measures the amount of loans that go to different type of firms (normalized by total assets); *Effective tax rate* captures the extent of tax deduction for firms of different ownerships; *Sales share* measures the size of firms for each type; *Normalized corporate income tax* is the previous corporate income tax normalized by GDP; *Fiscal pressure* captures the extent of tightness in fiscal budget; *Absolute deviation* is a measure on the absolute deviations in the 2001 corporate income tax from trend; *Deviation of other tax* measures how much fiscal resources were transferred to raise the 2001 corporate income tax. All firm-related variables are taken average from 1999 to 2000 and constructed from Annual Surveys of Industrial Production. Corporate Income tax are collected from various local fiscal or tax yearbooks. All other taxes and GDP data are from Province, prefecture, and county fiscal statistics. Details on the data source can be found in the appendix.

Variables	Obs.	Mean	Std Dev.	Max	Min
Indicator for leaving leaders	440	0.08	0.27	1	0
Indicator for end-of-term leaders	440	0.09	0.29	1	0
Indicator for leaving executive	440	0.21	0.41	1	0
Indicator for leaving party secretary	440	0.14	0.35	1	0
Indicator for new leaders	441	0.08	0.27	1	0
Indicator for leaving executive	441	0.15	0.36	1	0
Indicator for leaving party secretary	441	0.14	0.35	1	0

Table 1B: Descriptive Statistics cont.

Notes: This table presents descriptive statistics for variables used in the analysis. The unit of observation is county in year 2001. *Indicator for new leaders* is an indicator that takes value of 1 if both county executive and party secretary are new to office and 0 otherwise; *Indicator for leaving leaders* is an indicator that takes value of 1 if both county executive and party secretary are soon to leave office and 0 otherwise; *Indicator for new executive* is an indicator that takes value of 1 if county executive just arrive in office and without party secretary promoted from executive and 0 otherwise. *Indicator for new party secretary* is an indicator that takes value of 1 if county party secretary just arrive in office and without being promoted from executive and 0 otherwise; *Indicator for end-of-term leaders* is an indicator that takes value of 1 if both county executive and party secretary are at the end of term in office and 0 otherwise; *Indicator for leaving executive* is soon to leave and without promoting to party secretary and 0 otherwise. *Indicator for leaving party secretary* is an indicator that takes value of 1 if county executive and 0 otherwise. *Indicator for leaving party secretary* is an indicator that takes value of 1 if county executive and 0 otherwise. *Indicator for leaving executive* is soon to leave and without promoting to party secretary and 0 otherwise. *Indicator for leaving party secretary* is an indicator that takes value of 1 if county party secretary is soon to leave and without executive promoting to party secretary and 0 otherwise. Data on local political leaders are collected from Provincial Yearbooks. Details on the data source can be found in the appendix.

Table 2: Relative ATD and Credit Access							
	(1)	(2)	(3)	(4)			
VARIABLES		Relativ	ve ATD				
Debt leverage (All firms)	0.759**						
	(0.353)						
Debt leverage (State-related)		0.816^{**}	0.819^{**}	0.817^{**}			
		(0.333)	(0.337)	(0.330)			
Debt leverage (Private)		-0.211	-0.211	-0.204			
		(0.183)	(0.184)	(0.187)			
Debt leverage (Central-state)			0.0316				
			(0.144)				
Sales share (State-related)				0.0750			
				(0.215)			
Constant	3.741***	4.026^{***}	4.050^{***}	3.913^{***}			
	(0.907)	(0.910)	(0.900)	(1.003)			
Prefecture FE	YES	YES	YES	YES			
All Controls	YES	YES	YES	YES			
Observations	471	471	471	471			
R-squared	0.415	0.422	0.422	0.422			

Notes: This table presents estimates of debt leverage (a measure for credit access) on relative ATD in the 2001 benchmark. *Relative ATD* is a measure for the extent of firms' assistance in the 2001 corporate income tax; *Debt leverage* variables measures the amount of loans that go to different type of firms (normalized by total assets); *Sales share* measures the size of firms for each type. All regressions control for previous fiscal pressure, previous corporate income tax (normalized by GDP), Ln GDP per capita and prefecture fixed effects. Robust standard errors are clustered at prefecture level. Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

	(1)	(2)	(3)	(4)
VARIABLES		Relati		
Debt leverage (State-related)	0.976***	0.941***	0.874**	0.816**
	(0.354)	(0.334)	(0.348)	(0.333)
Debt leverage (Private)	-0.175	-0.157	-0.171	-0.211
	(0.215)	(0.197)	(0.195)	(0.183)
Ln GDP per capita		-0.286**	-0.299***	-0.338***
		(0.112)	(0.107)	(0.110)
Normalized corp. income tax			-12.15^{*}	-13.70**
			(6.627)	(6.272)
Previous fiscal pressure				-0.0280
				(0.0209)
Constant	0.878^{***}	3.337***	3.556^{***}	4.026^{***}
	(0.271)	(0.948)	(0.931)	(0.910)
Prefecture FE	YES	YES	YES	YES
All Controls	YES	YES	YES	YES
Observations	471	471	471	471
R-squared	0.395	0.412	0.418	0.422

Table 3: Robustness Check: Credit Access as a Favor

Notes: This table presents robustness check on estimates of debt leverage of state-related firms on relative ATD in the 2001 benchmark. *Relative ATD* is a measure for the extent of firms' assistance in the 2001 corporate income tax; *Debt leverage* variables measures the amount of loans that go to different type of firms (normalized by total assets); *Normalized corporate income tax* is the previous corporate income tax normalized by GDP; *Fiscal pressure* captures the extent of tightness in fiscal budget. All regressions control for prefecture fixed effects. Robust standard errors are clustered at prefecture level. Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

Table 4: Relative ATD and Tax Deduction							
	(1)	(2)	(3)	(4)			
VARIABLES		Relativ	ve ATD				
Effective tax rate (All firms)	-0.509						
	(1.512)						
Effective tax rate (Private)		-2.246*	-2.217^{*}	-2.003*			
		(1.198)	(1.241)	(1.128)			
Effective tax rate (State-related)		0.144	0.157	0.188			
		(1.139)	(1.148)	(1.104)			
Sales share (Private)			-0.0565				
			(0.248)				
Debt leverage (State-related)				0.754^{**}			
				(0.322)			
Constant	4.671^{***}	4.339^{***}	4.337***	3.625^{***}			
	(1.048)	(1.016)	(1.020)	(0.905)			
Prefecture FE	YES	YES	YES	YES			
All Controls	YES	YES	YES	YES			
Observations	471	471	471	471			
R-squared	0.405	0.416	0.416	0.429			

Notes: The table presents estimates of effective corporate income tax rate (a measure for tax deduction) on relative ATD in the 2001 benchmark. Relative ATD is a measure for the extent of firms' assistance in the 2001 corporate income tax; Debt leverage variables measures the amount of loans that go to different type of firms (normalized by total assets); Effective tax rate captures the extent of tax deduction for firms of different ownerships; Sales share measures the size of firms for each type. All regressions control for previous fiscal pressure, previous corporate income tax (normalized by GDP), and Ln GDP per capita. Robust standard errors are clustered at prefecture level. Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

	(1)	(2)	(3)	(4)				
VARIABLES	Relative ATD							
Effective tax rate (Private)	-2.944***	-2.504^{**}	-2.289*	-2.246*				
	(1.100)	(1.150)	(1.197)	(1.198)				
Effective tax rate (State-related)	-0.157	0.0839	0.473	0.144				
	(1.314)	(1.302)	(1.401)	(1.139)				
Ln GDP per capita		-0.243**	-0.265**	-0.307**				
		(0.122)	(0.118)	(0.121)				
Normalized corp. income tax			-12.53**	-13.67**				
			(5.835)	(5.899)				
Previous fiscal pressure				-0.0329				
				(0.0245)				
Constant	1.629^{***}	3.672^{***}	3.885^{***}	4.339***				
	(0.0745)	(1.033)	(1.005)	(1.016)				
Prefecture FE	YES	YES	YES	YES				
All Controls	YES	YES	YES	YES				
Observations	471	471	471	471				
R-squared	0.393	0.405	0.411	0.416				

Table 5: Robustness Check: Tax Deduction as A Favor

Notes: This table presents robustness check on estimates of effective tax rate of private firms on relative ATD in the 2001 benchmark. *Relative ATD* is a measure for the extent of firms' assistance in the 2001 corporate income tax; *Effective tax rate* captures the extent of tax deduction for firms of different ownerships; *Normalized corporate income tax* is the previous corporate income tax normalized by GDP; *Fiscal pressure* captures the extent of tightness in fiscal budget. All regressions control for provincial fixed effects. Robust standard errors are clustered at prefecture level. Robust standard errors in parentheses: *** p < 0.01, ** p < 0.05, * p < 0.1.

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES			Relati	ve ATD	(-)	(-)
Debt Leverage (State-related)	0.817**	0.830**	0.692*			
	(0.335)	(0.333)	(0.349)			
Debt Leverage (Private)	-0.220	-0.218	-0.233			
	(0.188)	(0.179)	(0.200)			
Effective tax rate (Private)				-2.238*	-2.123	-2.334*
				(1.201)	(1.292)	(1.263)
Effective tax rate (State-related)				0.161	0.157	-0.361
				(1.120)	(1.081)	(0.869)
Turnover ratio (State-related)	-0.0641			-0.0349		
	(0.128)			(0.119)		
Turnover ratio (Private)	-0.00359			0.00555		
	(0.0557)			(0.0514)		
Profitability (State-related)		1.130			0.362	
		(2.138)			(2.213)	
Profitability (Private)		-1.264			-0.720	
		(0.869)			(1.109)	
Sales share (Utility industry)			-0.775**			-1.027^{***}
			(0.357)			(0.376)
Sales share (Resource industry)			0.357			0.228
			(0.446)			(0.468)
Constant	4.025^{***}	4.034^{***}	4.365^{***}	4.335^{***}	4.351^{***}	4.630^{***}
	(0.902)	(0.932)	(1.053)	(1.015)	(1.034)	(1.112)
Prefecture FE	YES	YES	YES	YES	YES	YES
All Controls	YES	YES	YES	YES	YES	YES
Observations	471	471	471	471	471	471
R-squared	0.422	0.424	0.436	0.416	0.417	0.436

Table 6: Robustness Check: Other Firm Characteristics

Notes: The table presents robustness checks on estimates of favors on the relative ATD. Columns (1) - (3) present estimates on debt leverage when controlling for turnover ratio, profitability or industry shares. Columns (4) - (6) present estimates on effective tax rate when controlling for turnover ratio, profitability or industry shares. Relative ATD is a measure for the extent of firms' assistance in the 2001 corporate income tax; Debt leverage variables measures the amount of loans that go to different type of firms (normalized by total assets); Effective tax rate captures the extent of tax deduction for firms of different ownerships; Sales share measures the size of firms for each type; Turnover ratio measures the efficiency on how assets are used to generate sales income; Profitability tries to capture the variation of productivity of local firms, defined by profit normalizing by assets. All regressions control for previous fiscal pressure, previous corporate income tax (normalized by GDP), Ln GDP per capita and prefecture fixed effects. Robust standard errors are clustered at prefecture level. Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

	(1)	(2)	(3)	(4)	(5)	(6)	
VARIABLES			Relative ATD				
Percentile	0.25	0.50	0.75	0.25	0.50	0.75	
Panel A: Quantile regression with	prefectur	e fixed-effec	ets				
Debt leverage (State-related)	0.304^{**}	0.425	0.788^{**}				
	(0.132)	(0.407)	(0.314)				
Debt leverage (Private)	-0.0659	-8.19e-06	-0.264				
	(0.111)	(0.372)	(0.277)				
Effective tax rate (Private)				-0.970	-1.592	-2.120***	
				(0.998)	(1.185)	(0.760)	
Effective tax rate (State-related)				0.469	-0.283	-1.130*	
				(1.076)	(1.195)	(0.640)	
Constant	-0.184	1.765^{***}	2.549^{***}	-0.00103	1.598^{***}	2.444^{***}	
	(0.343)	(0.542)	(0.669)	(0.416)	(0.495)	(0.608)	
Prefecture FE	YES	YES	YES	YES	YES	YES	
All Controls	YES	YES	YES	YES	YES	YES	
Observations	471	471	471	471	471	471	
R-squared	0.287	0.351	0.338	0.272	0.344	0.329	

Table 7: Robustness Check: Effect of Favors in Quantile Regression

Notes: The table presents estimates of two favors on the relative ATD using quantile regressions. Columns (1) - (3) present estimates of debt leverage (measure for favor of credit access) in 25th, 50th, and 75th percentile. Columns (4) - (6) present estimates of effective tax rate (measure for favor of tax deduction) in 25th, 50th, and 75th percentile. Relative ATD is a measure for the extent of firms' assistance in the 2001 corporate income tax; Debt leverage variables measures the amount of loans that go to different type of firms (normalized by total assets); Effective tax rate captures the extent of tax deduction for firms of different ownerships; All regressions control for previous fiscal pressure, previous corporate income tax (normalized by GDP), and Ln GDP per capita. Robust standard errors are clustered at prefecture level. Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

	(1)	(2)	(3)	(4)	(5)
VARIABLES		л 	$\frac{1}{2}$		
	Excludi	ing 2002	Only 4	Provinces	
Debt leverage (State-related)	0.595^{*}		1.174^{*}		
	(0.335)		(0.662)		
Debt leverage (Private)	-0.191		-0.0621		
	(0.263)		(0.478)		
Effective tax rate (Private)		-3.506**		-4.163***	
		(1.421)		(1.512)	
Effective tax rate (State-related)		-0.657		1.134	
		(1.156)		(2.404)	
Sales share (Utility Industry)					-1.024**
					(0.416)
Constant	4.197***	4.086***	4.569^{*}	5.696^{**}	5.075^{***}
	(1.132)	(1.058)	(2.367)	(2.388)	(1.102)
Prefecture FE	YES	YES	YES	YES	YES
All Controls	YES	YES	YES	YES	YES
Observations	470	470	209	209	471
R-squared	0.437	0.449	0.390	0.397	0.422

Table 8: F	Robustness	Check:	Sample	Selection
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Notes: The table presents robustness checks on estimates of favors on the relative ATD. Columns (1) - (2) present estimates of favors when conditioning only on 4 provinces — Anhui, Hubei, Sichuan and Zhejiang. Columns (3) - (4) present estimates of favors but using an alternative outcome measures that exclude 2002 when estimating. *Relative ATD* is a measure for the extent of firms' assistance in the 2001 corporate income tax; *Debt leverage* variables measures the amount of loans that go to different type of firms (normalized by total assets); *Effective tax rate* captures the extent of tax deduction for firms of different ownerships; *Sales share* measures the size of firms for each type of firms; All regressions control for previous fiscal pressure, previous corporate income tax (normalized by GDP), Ln GDP per capita and prefecture fixed effects. Robust standard errors are clustered at prefecture level. Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

Leaving	Leaving		
leader=1	leader=0	Difference	(Stand Error)
0.710	0.703	0.007	(0.027)
0.740	0.721	0.029	(0.034)
0.615	0.621	-0.070	(0.052)
0.549	0.532	0.017	(0.037)
0.042	0.051	-0.009	(0.008)
0.044	0.059	-0.015*	(0.009)
0.035	0.047	-0.012	(0.007)
0.511	0.582	-0.071	(0.045)
0.421	0.330	0.091^{**}	(0.041)
0.110	0.097	0.013	(0.023)
8.489	8.558	-0.069	(0.128)
0.004	0.005	-0.001	(0.001)
1.866	1.920	-0.054	(0.176)
-718.892	-591.698	-127.194	(298.658)
	Leaving leader=1 0.710 0.740 0.615 0.549 0.042 0.042 0.044 0.035 0.511 0.421 0.110 8.489 0.004 1.866 -718.892	LeavingLeavingleader=1leader=00.7100.7030.7400.7210.6150.6210.5490.5320.0420.0510.0440.0590.0350.0470.5110.5820.4210.3300.1100.0978.4898.5580.0040.0051.8661.920-718.892-591.698	LeavingLeavingleader=1leader=0Difference 0.710 0.703 0.007 0.740 0.721 0.029 0.615 0.621 -0.070 0.549 0.532 0.017 0.042 0.051 -0.009 0.044 0.059 -0.015^* 0.035 0.047 -0.012 0.511 0.582 -0.071 0.421 0.330 0.091^{**} 0.110 0.097 0.013 8.489 8.558 -0.069 0.004 0.005 -0.001 1.866 1.920 -0.054 -718.892 -591.698 -127.194

Table 9: Summary Statistics: Counties With And Without Leaving Leaders

Notes: This table presents descriptive statistics between counties with leaving leaders and counties without. Debt leverage variables measures the amount of loans that go to different type of firms (normalized by total assets); Effective tax rate captures the extent of tax deduction for firms of different ownerships; Sales share measures the size of firms for each type; Normalized corporate income tax is the previous corporate income tax normalized by GDP; Fiscal pressure captures the extent of tightness in fiscal budget; Absolute deviations is a measure on the absolute deviation in the 2001 corporate income tax from trend; Deviation of other tax measures how much fiscal resources were transferred to raise the 2001 corporate income tax.All firm-related variables are taken average from 1999 to 2000 and constructed from Annual Surveys of Industrial Production. Corporate Income tax are collected from various local fiscal or tax yearbooks. All other taxes and GDP data are from Province, prefecture, and county fiscal statistics. Details on the data source can be found in the appendix.

	(1)	(2)	(3)	(4)	(5)	
VARIABLES	Relative ATD					
Indicator for leaving leaders	-0.117	-0.130	0.941*	-0.127	-0.394**	
-	(0.115)	(0.118)	(0.540)	(0.118)	(0.186)	
Debt leverage (State-related)		0.580^{**}	0.679^{**}			
		(0.292)	(0.313)			
Debt leverage \times Leaving Leaders			-1.482**			
			(0.738)			
Effective tax rate (Private)				-2.264*	-2.441**	
				(1.169)	(1.197)	
Effective tax rate \times Leaving Leaders					5.841**	
					(2.811)	
Constant	3.395***	2.895**	2.825**	3.109***	3.180***	
	(1.149)	(1.133)	(1.111)	(1.152)	(1.155)	
Prefecture FE	YES	YES	YES	YES	YES	
All Controls	YES	YES	YES	YES	YES	
Observations	440	440	440	440	440	
R-squared	0.438	0.446	0.450	0.451	0.454	

Table 10: Leaving Leaders and Assistance from Previously Favored Firms

Notes: The table presents heterogeneous effects of leaving leaders for each of the favors. Relative ATD is a measure for the extent of firms' assistance in the 2001 corporate income tax; Debt leverage variables measures the amount of loans that go to different type of firms (normalized by total assets); Effective tax rate captures the extent of tax deduction for firms of different ownerships; Indicator for leaving leaders is an indicator that takes value of 1 if both county executive and party secretary are soon to leave office and 0 otherwise. All regressions control for previous fiscal pressure, previous corporate income tax (normalized by GDP), Ln GDP per capita and prefecture fixed effects. Robust standard errors are clustered at prefecture level. Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

VARIABLES	Total Relative		Level	
	Responses		Responses	
	(1)	(2)	(3)	(4)
Indicator for leaving leaders	-0.0600		-142.5	-714.2
	(0.154)		(404.7)	(767.4)
Deviation of other tax		-0.178**	-0.176**	-0.144*
		(0.0794)	(0.0814)	(0.0803)
Deviation of other tax \times Leaving leaders				-0.850
				(0.706)
Constant	4.359^{***}	-5,593**	-5,234**	-4,984**
	(1.078)	(2,249)	(2,534)	(2,503)
Prefecture FE	YES	YES	YES	YES
All Controls	YES	YES	YES	YES
Observations	440	471	440	440
R-squared	0.426	0.591	0.587	0.591

Table 11: Robustness Checks: Government Responses and Relabeling Other Taxes

Notes: The table presents the negative correlation between the deviation of other tax and the deviation of corporate income tax in 2001. Total relative deviation is a measure for the extent of total deviations in the 2001 corporate income tax; Absolute deviation is a measure on the absolute deviation in the 2001 corporate income tax from trend; Deviation of other tax measures how much fiscal resources were transferred to raise the 2001 corporate income tax; Indicator for leaving leaders is an indicator that takes value of 1 if both county executive and party secretary are soon to leave office and 0 otherwise. All regressions control for previous fiscal pressure, previous corporate income tax (normalized by GDP), Ln GDP per capita and prefecture fixed effects. Robust standard errors are clustered at prefecture level. Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

Table 12: Robustness Check: Effects of	Favors WI	<u>nen Leade</u>	rs Are At	The End o	f lerm.
	(1)	(2)	(3)	(4)	(5)
VARIABLES		R	elative A	ГD	
Indicator for end-of-term leaders	0.0125	0.0225	0.563	0.0270	-0.157
	(0.143)	(0.145)	(0.528)	(0.144)	(0.184)
Debt leverage (State-related)		0.572^{*}	0.632^{*}		
		(0.297)	(0.324)		
Debt leverage \times End-of-term leaders			-0.784		
			(0.738)		
Effective tax rate (Private)				-2.254*	-2.738**
				(1.167)	(1.191)
Effective tax rate \times End-of-term leaders					3.525^{*}
					(2.084)
Constant	3.371***	2.872^{**}	2.831^{**}	3.080^{***}	3.081^{***}
	(1.146)	(1.136)	(1.144)	(1.148)	(1.147)
Prefecture FE	YES	YES	YES	YES	YES
All Controls	YES	YES	YES	YES	YES
Observations	440	440	440	440	440
R-squared	0.437	0.445	0.446	0.450	0.454

Notes: The table presents heterogeneous effects of end-of-term leaders for each of the favors. *Relative ATD* is a measure for the extent of firms' assistance in the 2001 corporate income tax; Debt leverage variables measures the amount of loans that go to different type of firms (normalized by total assets); Effective tax rate captures the extent of tax deduction for firms of different ownerships; Indicator for end-of-term leaders is an indicator that takes value of 1 if both county executive and party secretary are at the end of term in office and 0 otherwise. All regressions control for previous fiscal pressure, previous corporate income tax (normalized by GDP), Ln GDP per capita and prefecture fixed effects. Robust standard errors are clustered at prefecture level. Robust standard errors in parentheses: *** p < 0.01, ** p < 0.05, * p < 0.1.

	New	New		
Variable	leader=1	leader=0	Difference	(Stand Error)
Debt leverage (All firms)	0.699	0.704	-0.004	(0.027)
Debt leverage (State-related)	0.710	0.723	-0.013	(0.031)
Debt leverage (Private)	0.680	0.615	0.064	(0.040)
Debt leverage (Utility industry)	0.521	0.534	-0.013	(0.041)
Effective tax rate (All firms)	0.055	0.050	0.004	(0.008)
Effective tax rate (Private)	0.060	0.057	0.003	(0.009)
Effective tax rate (State-related)	0.052	0.046	0.006	(0.007)
Sales share (State-related)	0.545	0.579	-0.034	(0.045)
Sales share (Private)	0.347	0.336	0.011	(0.041)
Sales share (Utility industry)	0.068	0.101	-0.033	(0.023)
Ln GDP per capita	8.630	8.547	0.083	(0.128)
Normalized corp. income tax	0.005	0.005	0.000	(0.001)
Previous fiscal pressure	1.747	1.930	-0.183	(0.175)
Deviation of other tax	-597.291	-601.856	4.566	(298.719)

Table 13: Summary Statistics: Counties With And Without New Leaders

Notes: This table presents descriptive statistics between counties with leaving leaders and counties without. *Debt leverage* variables measures the amount of loans that go to different type of firms (normalized by total assets); *Effective tax rate* captures the extent of tax deduction for firms of different ownerships; *Sales share* measures the size of firms for each type; *Normalized corporate income tax* is the previous corporate income tax normalized by GDP; *Fiscal pressure* captures the extent of tightness in fiscal budget; *Absolute deviation* is a measure on the absolute deviation in the 2001 corporate income tax from trend; *Deviation of other tax* measures how much fiscal resources were transferred to raise the 2001 corporate income tax. All firm-related variables are taken average from 1999 to 2000 and constructed from Annual Surveys of Industrial Production. Corporate Income tax are collected from various local fiscal or tax yearbooks. All other taxes and GDP data are from Province, prefecture, and county fiscal statistics. Details on the data source can be found in the appendix.

			v		
	(1)	(2)	(3)	(4)	(5)
VARIABLES		F	Relative A	ГD	
Indicator for new leaders	-0.0649	-0.0642	-0.347	-0.0643	-0.296
	(0.124)	(0.121)	(0.721)	(0.127)	(0.212)
Debt leverage (State-related)		0.586^{*}	0.580^{*}		
		(0.296)	(0.297)		
Debt leverage \times New leaders			0.387		
			(0.960)		
Effective tax rate (Private)				-2.206*	-2.403**
				(1.178)	(1.180)
Effective tax rate \times New leaders					3.962
					(3.078)
Constant	3.500^{***}	2.988^{**}	2.986^{**}	3.227^{***}	3.295^{***}
	(1.163)	(1.151)	(1.148)	(1.167)	(1.172)
Prefecture FE	YES	YES	YES	YES	YES
All Controls	YES	YES	YES	YES	YES
Observations	441	441	441	441	441
R-squared	0.438	0.446	0.446	0.450	0.452

Table 14: New Leaders and Assistance from Previously Favored Firms

Notes: The table presents heterogeneous effects of new leaders for each of the favors. Relative ATD is a measure for the extent of firms' assistance in the 2001 corporate income tax; Debt leverage variables measures the amount of loans that go to different type of firms (normalized by total assets); Effective tax rate captures the extent of tax deduction for firms of different ownerships; Indicator for new leaders is an indicator that takes value of 1 if both county executive and party secretary are new to office and 0 otherwise. All regressions control for previous fiscal pressure, previous corporate income tax (normalized by GDP), Ln GDP per capita and prefecture fixed effects. Robust standard errors are clustered at prefecture level. Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

VARIABLES Relative ATD Panel A: Heterogeneous effect of leaving executive 0.108 -0.111 0.937^* -0.0808 0.0852 Indicator for leaving executive (0.107) (0.105) (0.553) (0.101) (0.160) Debt leverage (State-related) 0.620^{**} 0.800^{**} (0.299) (0.344) Debt leverage × Leaving executive -1.462^* (0.798) (1.142) (1.037) Effective tax rate (Private) -2.206^* -1.172 (1.142) (1.037) Effective tax rate × Leaving executive -2.944^* (1.774) Constant 3.898^{***} 3.312^{***} 2.952^{***} 3.549^{***} 3.505^{***} All Controls YES YES YES YES YES YES YES
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Effective tax rate (Private) -2.206^* -1.172 Effective tax rate × Leaving executive (1.142) (1.037) Effective tax rate × Leaving executive -2.944^* (1.774) Constant 3.898^{***} 3.312^{***} 2.952^{***} 3.549^{***} (1.065) (1.047) (0.998) (1.059) (1.022) Prefecture FEYESYESYESYESAll ControlsYESYESYESYESYES
Effective tax rate \times Leaving executive(1.142)(1.037)Effective tax rate \times Leaving executive-2.944*(1.774)Constant 3.898^{***} 3.312^{***} 2.952^{***} 3.549^{***} Constant (1.065) (1.047) (0.998) (1.059) (1.022) Prefecture FEYESYESYESYESYESAll ControlsYESYESYESYESYES
Effective tax rate \times Leaving executive -2.944* Constant 3.898^{***} 3.312^{***} 2.952^{***} 3.549^{***} 3.505^{***} Constant 3.898^{***} 3.312^{***} 2.952^{***} 3.549^{***} 3.505^{***} Prefecture FE YES YES YES YES YES All Controls YES YES YES YES YES
Constant 3.898^{***} 3.312^{***} 2.952^{***} 3.549^{***} 3.505^{***} (1.065)(1.047)(0.998)(1.059)(1.022)Prefecture FEYESYESYESYESAll ControlsYESYESYESYES
Constant 3.898^{***} 3.312^{***} 2.952^{***} 3.549^{***} 3.505^{***} (1.065)(1.047)(0.998)(1.059)(1.022)Prefecture FEYESYESYESYESAll ControlsYESYESYESYES
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Prefecture FEYESYESYESYESYESYESAll ControlsYESYESYESYESYESYES
All Controls YES YES YES YES YES
Observations 447 447 447 447 447 447 447 647
R-squared 0.446 0.455 0.462 0.458 0.463
(1) (2) (3) (4) (5)
VARIABLES Relative ATD
Panel B: Heterogeneous effect of leaving party secretary
Indicator for leaving party secretary -0.0625 -0.0980 0.0997 -0.0782 -0.172
(0.111) (0.108) (0.348) (0.110) (0.150)
Debt leverage (State-related) 0.645^{**} 0.724^{*}
(0.297) (0.381)
Debt leverage \times Leaving party secretary -0.264
(0.504)
Effective tax rate (Private) -2.301^* -2.420^{**}
(1.165) (1.216)
Effective tax rate \times Leaving party secretary 2.080 (2.150)
(2.150)
Constant 3.840^{+++} 3.253^{+++} 3.130^{+++} 3.504^{+++} (1.055) (1.055) (1.055) (1.055) (1.055)
(1.055) (1.037) (1.095) (1.051) (1.053)
Frelecture FE YES YES YES YES YES All Controls VES VES VES VES VES
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Table A1: Robustness Check: Which One Matters? Leaving Executive or Leaving Party Secretary

Notes: The table presents heterogeneous effects of leaving leaders on each of the favors. Panel A presents heterogeneous effects of leaving executive and not promoted to party secretary. Panel B presents heterogeneous effects of leaving party secretary and no executive promoting to party secretary. *Relative ATD* is a measure for the extent of firms' assistance in the 2001 corporate income tax; *Debt leverage* variables measures the amount of loans that go to different type of firms (normalized by total assets); *Effective tax rate* captures the extent of tax deduction for firms of different ownerships; *Indicator for leaving executive* is an indicator that takes value of 1 if county executive is soon to leave and without promoting to party secretary and 0 otherwise. *Indicator for leaving party secretary* is an indicator that takes value of 1 if county party secretary is soon to leave and without executive promoting to party secretary and 0 otherwise. All regressions control for previous fiscal pressure, previous corporate income tax (normalized by GDP), Ln GDP per capita and prefecture fixed effects. Robust standard errors are clustered at prefecture level. Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

	(1)	(2)	(3)	(4)	(5)
VARIABLES]	Relative Al	TD	
Panel A: Heterogeneous effect of new executive					
Indicator for new executive	-0.0472	-0.0489	-0.411	-0.0453	-0.0428
	(0.108)	(0.105)	(0.704)	(0.112)	(0.260)
Debt leverage (State-related)		0.586^{**}	0.562^{*}		
		(0.296)	(0.299)		
Debt leverage \times New executive			0.508		
			(1.036)		
Effective tax rate (Private)				-2.205*	-2.200*
				(1.179)	(1.261)
Effective tax rate \times New executive					-0.0423
					(3.515)
Constant	3.484***	2.972**	2.963**	3.212***	3.211***
	(1.153)	(1.142)	(1.140)	(1.155)	(1.155)
Prefecture FE	YES	YES	YES	YES	YES
All Controls	YES	YES	YES	YES	YES
Observations	441	441	441	441	441
R-squared	0.438	0.446	0.446	0.450	0.450
	(1)	(2)	(3)	(4)	(5)
VARIABLES			Relative A'	ĽD	
Panel B: Heterogeneous effect of new party secre	tary				
Indicator for new party secretary	0.128	0.135	-1.512	0.126	0.192
	(0.147)	(0.147)	(1.233)	(0.143)	(0.238)
Debt leverage (State-related)		0.595^{**}	0.391		
		(0.298)	(0.293)		
Debt leverage \times New party secretary			2.235		
			(1.747)		
Effective tax rate (Private)				-2.202*	-2.083
				(1.195)	(1.288)
Effective tax rate (State) \times New party secretary					-1.297
					(2.854)
Constant	3.378***	2.851**	3.046***	3.107***	3.066**
	(1.170)	(1.156)	(1.071)	(1.173)	(1.181)
Pretecture FE	YES	YES	YES	YES	YES
All Controls	YES	YES	YES	YES	YES
Observations	441	441	441	441	441
K-squared	0.440	0.448	0.461	0.452	0.453

Table A2: Robustness Checks: Which One Matters? New Executive or New Party Secretary

Notes: The table presents heterogeneous effects of new leaders on each of the favors. Panel A presents heterogeneous effects of new executive and party secretary was not promoted from executive. Panel B presents heterogeneous effects of new party secretary and not promoted from executive. Relative ATD is a measure for the extent of firms' assistance in the 2001 corporate income tax; Indicator for new executive is an indicator that takes value of 1 if county executive just arrive in office and without party secretary promoted from executive and 0 otherwise. Indicator for new party secretary is an indicator that takes value of 1 if county party secretary just arrive in office and o otherwise. All regressions control for previous fiscal pressure, previous corporate income tax (normalized by GDP), Ln GDP per capita and prefecture fixed effects. Robust standard errors are clustered at prefecture level. Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

Province	Prefecture	County	Data Sources	Province	Prefecture	County	Data Sources
Anhui	Anqing	Wangjiang	Tax Yeabook	Anhui	Tongling	East	Tax Yeabook
Anhui	Anqing	Lake	Tax Yeabook	Anhui	Wuhu	Wuhu	Tax Yeabook
Anhui	Anqing	Tongcheng	Tax Yeabook	Anhui	Wuhu	Nanling	Tax Yeabook
Anhui	Anqing	Yuexi	Tax Yeabook	Anhui	Xuancheng	Jing	Tax Yeabook
Anhui	Anqing	Zongyang	Tax Yeabook	Anhui	Xuancheng	Langxi	Tax Yeabook
Anhui	Anqing	Huaining	Tax Yeabook	Anhui	Xuancheng	Jixi	Tax Yeabook
Anhui	Anqing	Susong	Tax Yeabook	Anhui	Xuancheng	Guangde	Tax Yeabook
Anhui	Bengbu	Wuhe	Tax Yeabook	Anhui	Xuancheng	Jingde	Tax Yeabook
Anhui	Bengbu	Huaiyuan	Tax Yeabook	Anhui	Xuancheng	Ningguo	Tax Yeabook
Anhui	Bengbu	Guzhen	Tax Yeabook	Anhui	Bozhou	Guoyang	Tax Yeabook
Anhui	Chaohu	Wuwei	Tax Yeabook	Chongqing	Chongqing	Zhongxian	Fiscal Yearbook
Anhui	Chaohu	Hanshan	Tax Yeabook	Chongqing	Chongqing	Youyang	Fiscal Yearbook
Anhui	Chaohu	hexiang	Tax Yeabook	Chongqing	Chongqing	Fengjie	Fiscal Yearbook
Anhui	Chaohu	Lujiang	Tax Yeabook	Chongqing	Chongqing	Fengdu	Fiscal Yearbook
Anhui	Chuzhou	Mingguang	Tax Yeabook	Chongqing	Chongqing	Wulong	Fiscal Yearbook
Anhui	Chuzhou	Tianchang	Tax Yeabook	Chongqing	Chongqing	Yunyang	Fiscal Yearbook
Anhui	Chuzhou	Dingyuan	Tax Yeabook	Chongqing	Chongqing	Rongchang	Fiscal Yearbook
Anhui	Chuzhou	Lai'an	Tax Yeabook	Chongqing	Chongqing	Bishan	Fiscal Yearbook
Anhui	Chuzhou	Quanjiao	Tax Yeabook	Chongqing	Chongqing	Pengshui	Fiscal Yearbook
Anhui	Chuzhou	Fengyang	Tax Yeabook	Chongqing	Chongqing	Dianjiang	Fiscal Yearbook
Anhui	Fuyang	Taihe	Tax Yeabook	Chongqing	Chongqing	Dazu	Fiscal Yearbook
Anhui	Fuyang	Linquan	Tax Yeabook	Chongqing	Chongqing	Yongchuan	Fiscal Yearbook
Anhui	Fuyang	Jieshou	Tax Yeabook	Chongqing	Chongqing	Liangping	Fiscal Yearbook
Anhui	Fuyang	Yingshang	Tax Yeabook	Chongqing	Chongqing	Tongnan	Fiscal Yearbook
Anhui	Fuyang	Funan	Tax Yeabook	Chongqing	Chongqing	Wushan	Fiscal Yearbook
Anhui	Hefei	Feidong	Tax Yeabook	Chongqing	Chongqing	Wuxi	Fiscal Yearbook
Anhui	Hefei	Feixi	Tax Yeabook	Chongqing	Chongqing	Kaixian	Fiscal Yearbook
Anhui	Hefei	Changfeng	Tax Yeabook	Chongqing	Chongqing	Tongliang	Fiscal Yearbook
Anhui	Huaibei	Suixi	Tax Yeabook	Chongqing	Chongqing	Jiangjin	Fiscal Yearbook
Anhui	Huainan	Fengtai	Tax Yeabook	Chongqing	Chongqing	Hechuan	Fiscal Yearbook
Anhui	Huangshan	Shexian	Tax Yeabook	Chongqing	Chongqing	Nanchuan	Fiscal Yearbook
Anhui	Huangshan	Xiuning	Tax Yeabook	Chongqing	Chongqing	Qijiang	Fiscal Yearbook
Anhui	Huangshan	Yi Xian	Tax Yeabook	Chongqing	Chongqing	Shizhu	Fiscal Yearbook
Anhui	Huangshan	Qimen	Tax Yeabook	Fujian	Fuzhou	Minhou	Fiscal Yearbook
Anhui	Lu'an area	Shou	Tax Yeabook	Fujian	Quanzhou	Anxi	Tax Yeabook
Anhui	Lu'an area	Huoshan	Tax Yeabook	Gansu	Jinchang	Yongchang	Fiscal Yearbook
Anhui	Lu'an area	Jinzhai	Tax Yeabook	Gansu	Lanzhou	Yuzhong	Fiscal Yearbook
Anhui	Lu'an area	Huoqiu	Tax Yeabook	Gansu	Tianshui	Qinan	Fiscal Yearbook
Anhui	Lu'an area	Shucheng	Tax Yeabook	Gansu	Tianshui	Wushan	Fiscal Yearbook
Anhui	Ma'anshan	Dangtu	Tax Yeabook	Gansu	Tianshui	Gangu	Fiscal Yearbook
Anhui	Suzhou	Sixian	Tax Yeabook	Gansu	Tianshui	Shimizu	Fiscal Yearbook
Anhui	Suzhou	Xiaoxian	Tax Yeabook	Gansu	Tianshui	Zhang Chuan	Fiscal Yearbook
Anhui	Suzhou	Lingbi	Tax Yeabook	Guangdon	Guangzhou	Zengcheng	Fiscal Yearbook
Anhui	Suzhou	Dangshan	Tax Yeabook	Guangdon	Guangzhou	Conghua	Fiscal Yearbook
Anhui	Tongling	Tongling	Tax Yeabook	Guangxi	Guilin	Xing'an	Fiscal Yearbook
Anhui	Tongling	Shitai	Tax Yeabook	Guangxi	Guilin	Yangshuo	Fiscal Yearbook
Anhui	Tongling	Qingyang	Tax Yeabook	Guangxi	Guilin	Yongfu	Fiscal Yearbook

Province	Prefecture	County	Data Sources	Province	Prefecture	County	Data Sources
Guangxi	Guilin	Lipu	Fiscal Yearbook	Hebei	Xingtai	Rural	Fiscal Yearbook
Guangxi	Guilin	Guanyang	Fiscal Yearbook	Hebei	Zhangjiakou	Wanquan	Fiscal Yearbook
Guangxi	Guilin	Lingui	Fiscal Yearbook	Hebei	Zhangjiakou	Xuanhua	Fiscal Yearbook
Guangxi	Guilin	Longsheng	Fiscal Yearbook	Heilongjiar	Jiamusi	Tangyuan	Fiscal Yearbook
Guangxi	Guilin	Ziyuan	Fiscal Yearbook	Heilongjiar	Jiamusi	Huanan	Fiscal Yearbook
Guangxi	Guilin	Pingle	Fiscal Yearbook	Heilongjiar	Jiamusi	Fuyuan	Fiscal Yearbook
Guangxi	Guilin	Quanzhou	Fiscal Yearbook	Heilongjiar	Jiamusi	Tongjiang	Fiscal Yearbook
Guangxi	Guilin	Gongcheng	Fiscal Yearbook	Heilongjiar	Jiamusi	Huachuan	Fiscal Yearbook
Guangxi	Guilin	Lingchuan	Fiscal Yearbook	Heilongjiar	Jiamusi	Fujin	Fiscal Yearbook
Guangxi	Nanning	Wuming	Fiscal Yearbook	Heilongjiar	Mudanjiang	Linkou	Fiscal Yearbook
Guangxi	Nanning	Ра	Fiscal Yearbook	Heilongjiar	Mudanjiang	East	Fiscal Yearbook
Guizhou	Anshun	Guanling	Tax Yeabook	Heilongjiar	Mudanjiang	Hailin	Fiscal Yearbook
Guizhou	Anshun	Ziyun	Tax Yeabook	Heilongjiar	Mudanjiang	Muling	Fiscal Yearbook
Guizhou	Anshun	Pingba	Tax Yeabook	Heilongjiar	Mudanjiang	Suifenhe	Fiscal Yearbook
Guizhou	Anshun	Zhenning	Tax Yeabook	Heilongjiar	Mudanjiang	Ning'an	Fiscal Yearbook
Guizhou	Anshun	Puding	Tax Yeabook	Heilongjiar	Qiqihar	Taylor	Fiscal Yearbook
Guizhou	Guiyang	Huaxi	Tax Yeabook	Heilongjiar	Qiqihar	Longjiang	Fiscal Yearbook
Guizhou	Guiyang	Baiyun	Tax Yeabook	Heilongjiar	Qiqihar	Baiquan	Fiscal Yearbook
Guizhou	Guiyang	Ming	Tax Yeabook	Heilongjiar	Qiqihar	Yian	Fiscal Yearbook
Guizhou	Guiyang	Kaiyang	Tax Yeabook	Heilongjiar	Qiqihar	Kedong	Fiscal Yearbook
Guizhou	Guiyang	Ukrainian	Tax Yeabook	Heilongjiar	Qiqihar	Fuyu	Fiscal Yearbook
Guizhou	Guiyang	Creek	Tax Yeabook	Heilongjiar	Qiqihar	Gannan	Fiscal Yearbook
Guizhou	Guiyang	Yunyan	Tax Yeabook	Heilongjiar	Qiqihar	Keshan	Fiscal Yearbook
Guizhou	Guiyang	Xiuwen	Tax Yeabook	Heilongjiar	Shuangyasha	Jixian	Fiscal Yearbook
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Hebei	Hengshui	King	Fiscal Yearbook	Henan	Kaifeng	Weishi	Fiscal Yearbook
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Hebei	Hengshui	Wuqiang	Fiscal Yearbook	Henan	Luoyang	Yanshi	Fiscal Yearbook
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Hebei	Hengshui	Raoyang	Fiscal Yearbook	Henan	Luoyang	Yichuan	Fiscal Yearbook
Hebei	Hengshui	Jizhou	Fiscal Yearbook	Henan	Pingdingshan	Baofeng	Fiscal Yearbook
Hebei	Langfang	Xianghe	Fiscal Yearbook	Henan	Pingdingshan	Jia	Fiscal Yearbook
Hebei	Langfang	ANALYSIS	Fiscal Yearbook	Henan	Pingdingshan	Ruzhou	Fiscal Yearbook
Hebei	Langfang	Sanhe	Fiscal Yearbook	Henan	Pingdingshan	Ye	Fiscal Yearbook
Hebei	Langfang	Grand	Fiscal Yearbook	Henan	Pingdingshan	Wugang	Fiscal Yearbook
Hebei	Langfang	Yongqing	Fiscal Yearbook	Henan	Pingdingshan	Lushan	Fiscal Yearbook
Hebei	Langfang	Bazhou	Fiscal Yearbook	Henan	Sanmenxia	Yima	Fiscal Yearbook
Hebei	Langfang	Guan	Fiscal Yearbook	Henan	Sanmenxia	Lushi	Fiscal Yearbook
Hebei	Langfang	Dachang	Fiscal Yearbook	Henan	Sanmenxia	Mianchi	Fiscal Yearbook
Hebei	Shijiazhuang	Yuanshi	Fiscal Yearbook	Henan	Sanmenxia	Lingbao	Fiscal Yearbook
Hebei	Shijiazhuang	Jingxing	Fiscal Yearbook	Henan	Sanmenxia	Sheqi	Fiscal Yearbook
Hebei	Shijiazhuang	Gaoyi	Fiscal Yearbook	Henan	Sanmenxia	Shan	Fiscal Yearbook

Province	Prefecture	County	Data Sources	Province	Prefecture	County	Data Sources
Henan	Zhengzhou	Dengfeng	Fiscal Yearbook	Hubei	Xianning	Jiayu	Tax Yeabook
Henan	Zhengzhou	Zhongmou	Fiscal Yearbook	Hubei	Xianning	Chongyang	Tax Yeabook
Henan	Zhengzhou	Xinmi	Fiscal Yearbook	Hubei	Xianning	Tongcheng	Tax Yeabook
Henan	Zhengzhou	Xinzheng	Fiscal Yearbook	Hubei	Xianning	Chibi	Tax Yeabook
Henan	Zhengzhou	Gongyi	Fiscal Yearbook	Hubei	Xianning	Tongshan	Tax Yeabook
Henan	Zhengzhou	Rong Yang	Fiscal Yearbook	Hubei	Xiangfan	Zaoyang	Tax Yeabook
Henan	Zhumadian	Xiping	Fiscal Yearbook	Hubei	Xiangfan	Yi	Tax Yeabook
Henan	Luohe	Yancheng Xian	Fiscal Yearbook	Hubei	Xiangfan	Nanzhang	Tax Yeabook
Henan	Luohe	Wuyang	Fiscal Yearbook	Hubei	Xiangfan	Laohekou	Tax Yeabook
Henan	Luohe	Lin Ying	Fiscal Yearbook	Hubei	Xiangfan	Baokang	Tax Yeabook
Hubei	Enshi	Xianfeng	Tax Yeabook	Hubei	Xiangfan	Valley	Tax Yeabook
Hubei	Enshi	Exemplifying	Tax Yeabook	Hubei	Xiaogan	Hanchuan	Tax Yeabook
Hubei	Enshi	Jianshi	Tax Yeabook	Hubei	Xiaogan	Dawu	Tax Yeabook
Hubei	Enshi	Icheon	Tax Yeabook	Hubei	Xiaogan	Should Cities	Tax Yeabook
Hubei	Enshi	Xuan'en	Tax Yeabook	Hubei	Xiaogan	Anlu	Tax Yeabook
Hubei	Enshi	Badong	Tax Yeabook	Hubei	Xiaogan	Yunmeng	Tax Yeabook
Hubei	Enshi	Hefeng	Tax Yeabook	Hubei	Xiaogan	Xiaochang	Tax Yeabook
Hubei	Huanggang	Hongan	Tax Yeabook	Hubei	Yichang	Yuan Anxian	Tax Yeabook
Hubei	Huanggang	Yingshan	Tax Yeabook	Hubei	Yichang	Changyang	Tax Yeabook
Hubei	Huanggang	Macheng	Tax Yeabook	Hubei	Yichang	Geng	Tax Yeabook
Hubei	Huanggang	Luotian ,	Tax Yeabook	Hubei	Yichang	Zhijiang	Tax Yeabook
Hubei	Huanggang	Tuanfeng	Tax Yeabook	Hubei	Yichang	Wufeng	Tax Yeabook
Hubei	Huanggang	Huangmei	Tax Yeabook	Hubei	Yichang	Xingshan	Tax Yeabook
Hubei	Huanggang	Leaking	Tax Yeabook	Hubei	Yichang	Dangyang	Tax Yeabook
Hubei	Huanggang	Wei Chun	Tax Yeabook	Hubei	Yichang	Yidu	Tax Yeabook
Hubei	Huanggang	Wuxue	Tax Yeabook	Hunan	Huaihua	Hongjiang	Fiscal Yearbook
Hubei	Huangshi	Yangxin	Tax Yeabook	Hunan	Zhuzhou	Youxian	Fiscal Yearbook
Hubei	Huangshi	Daye	Tax Yeabook	Jiangsu	Changzhou	Drift Shenyang	Fiscal Yearbook
Hubei	Jingmen	Jingshan	Tax Yeabook	Jiangsu	Changzhou	Jintan	Fiscal Yearbook
Hubei	Jingmen	Shayang	Tax Yeabook	Jiangsu	Lianyungang	Ganyu	Fiscal Yearbook
Hubei	Jingmen	Bell-like	Tax Yeabook	Jiangsu	Lianyungang	GuanNaXian	Fiscal Yearbook
Hubei	Jingzhou	Jiangling	Tax Yeabook	Jiangsu	Lianyungang	Donghai	Fiscal Yearbook
Hubei	Jingzhou	Songzi	Tax Yeabook	Jiangsu	Lianyungang	Guanyun	Fiscal Yearbook
Hubei	Jingzhou	Gong'an	Tax Yeabook	Jiangsu	Nantong	Qidong	Fiscal Yearbook
Hubei	Jingzhou	Jianli	Tax Yeabook	Jiangsu	Nantong	Hai'an	Fiscal Yearbook
Hubei	Jingzhou	Honghu	Tax Yeabook	Jiangsu	Nantong	Tongzhou	Fiscal Yearbook
Hubei	Jingzhou	Shishou	Tax Yeabook	Jiangsu	Nantong	Rugao	Fiscal Yearbook
Hubei	Forest zone	Forest zone	Tax Yeabook	Jiangsu	Nantong	Haimen	Fiscal Yearbook
Hubei	Qianjiang	Qianjiang	Tax Yeabook	Jiangsu	Nantong	Rudong	Fiscal Yearbook
Hubei	Ten Kansas	Members	Tax Yeabook	Jiangsu	Suzhou	Kunshan	Fiscal Yearbook
Hubei	Ten Kansas	Namely West	Tax Yeabook	Jiangsu	Suzhou	Wujiang	Fiscal Yearbook
Hubei	Ten Kansas	Zhushan	Tax Yeabook	Jiangsu	Suzhou	Zhangjiagang	Fiscal Yearbook
Hubei	Ten Kansas	Zhuxi	Tax Yeabook	Jiangsu	Suzhou	Taicang	Fiscal Yearbook
Hubei	Ten Kansas	Housing	Tax Yeabook	Jiangsu	Suzhou	Changshu	Fiscal Yearbook
Hubei	Suizhou	Guangshui	Tax Yeabook	Jiangsu	Wuxi	Yixing	Fiscal Yearbook
Hubei	Tianmen	Tianmen	Tax Yeabook	Jiangsu	Wuxi	Jiangyin	Fiscal Yearbook
Hubei	Xiantao	Xiantao	Tax Yeabook	Jiangsu	Yancheng	Yandu	Fiscal Yearbook

Province	Prefecture	County	Data Sources	Province	Prefecture	County	Data Sources
Jiangsu	Yancheng	Xiangshui	Fiscal Yearbook	Shandong	Liaocheng	Chiping	Fiscal Yearbook
Jiangsu	Yancheng	Funing	Fiscal Yearbook	Shandong	Qingdao	Lacey	Fiscal Yearbook
Jiangsu	Yancheng	Sheyang	Fiscal Yearbook	Shandong	Qingdao	Pingdu	Fiscal Yearbook
Jiangsu	Yancheng	Binhai	Fiscal Yearbook	Shandong	Qingdao	Jimo	Fiscal Yearbook
Jiangsu	Yancheng	Dongtai	Fiscal Yearbook	Shandong	Qingdao	Jiaonan	Fiscal Yearbook
Jiangsu	Yancheng	Jianhu	Fiscal Yearbook	Shandong	Qingdao	Jiaozhou	Fiscal Yearbook
Jiangsu	Yancheng	Dafeng	Fiscal Yearbook	Shandong	Tai'an	Fat	Fiscal Yearbook
Jiangxi	Jiujiang	Yongxiu	Fiscal Yearbook	Shandong	Weifang	Shouguang	Fiscal Yearbook
Jiangxi	Yichun	Wanzai	Fiscal Yearbook	Shanxi	Changzhi	Qinyuan	Fiscal Yearbook
Jiangxi	Yichun	Jing'an	Fiscal Yearbook	Shanxi	Changzhi	Changzhi	Fiscal Yearbook
Jiangxi	Yichun	Tonggu	Fiscal Yearbook	Shanxi	Jincheng	Yangcheng	Fiscal Yearbook
Jiangxi	Yichun	Yifeng	Fiscal Yearbook	Shanxi	Jincheng	Gaoping ()	Fiscal Yearbook
Jiangxi	Yichun	Zhangshu	Fiscal Yearbook	Shanxi	Jinzhong	Qixian	Fiscal Yearbook
Jiangxi	Yichun	GAOAN	Fiscal Yearbook	Shanxi	Jinzhong	Heshun	Fiscal Yearbook
Jiangxi	Yichun	High on the	Fiscal Yearbook	Shanxi	Linfen	Xiangfen	Fiscal Yearbook
Jiangxi	Yichun	Feng	Fiscal Yearbook	Shanxi	Yuncheng	Yuanqu	Fiscal Yearbook
Jiangxi	Yichun	Fengxin	Fiscal Yearbook	Shanxi	Yuncheng	Wanrong	Fiscal Yearbook
Jilin	Siping	Lishu	Fiscal Yearbook	Shanxi	Yan'an	Extend the	Fiscal Yearbook
Jilin	Siping	Yitong	Fiscal Yearbook	Shanxi	Yan'an	Yichuan	Fiscal Yearbook
Jilin	Siping	Shuangliao	Fiscal Yearbook	Shanxi	Yan'an	Ansai	Fiscal Yearbook
Jilin	Siping	Gongzhuling	Fiscal Yearbook	Shanxi	Yan'an	Zhidan	Fiscal Yearbook
Jilin	Yanbian	Yanji	Fiscal Yearbook	Shanxi	Yan'an	Luochuan	Fiscal Yearbook
Ningxia	Yinchuan	Helan	Fiscal Yearbook	Shanxi	Yan'an	Yanchuan	Fiscal Yearbook
Ningxia	Yinchuan	Yongning	Fiscal Yearbook	Shanxi	Yan'an	Huanglong	Fiscal Yearbook
Shandong	Dezhou	Plain	Tax Yeabook	Shanxi	Yan'an	Sub Long	Fiscal Yearbook
Shandong	Dezhou	Qihe	Tax Yeabook	Shanxi	Yan'an	Fuxian	Fiscal Yearbook
Shandong	Dezhou	Ning	Tax Yeabook	Shanxi	Yan'an	Wuqi	Fiscal Yearbook
Shandong	Dezhou	Ling	Tax Yeabook	Shanxi	Yan'an	Oasis	Fiscal Yearbook
Shandong	Dezhou	Yucheng	Tax Yeabook	Shanxi	Yan'an	Huangling	Fiscal Yearbook
Shandong	Dezhou	Leling	Tax Yeabook	Sichuan	Aba	Ruoergai	Tax Yeabook
Shandong	Dezhou	Wu	Tax Yeabook	Sichuan	Aba	Jinchuan	Tax Yeabook
Shandong	Dezhou	Xiajin	Tax Yeabook	Sichuan	Aba	Li	Tax Yeabook
Shandong	Dezhou	Qingyun	Tax Yeabook	Sichuan	Aba	Blackwater	Tax Yeabook
Shandong	Dongying	Guangrao	Tax Yeabook	Sichuan	Aba	Wenchuan	Tax Yeabook
Shandong	Dongying	Kenli	Tax Yeabook	Sichuan	Aba	Aba	Tax Yeabook
Shandong	Dongying	Lijin	Tax Yeabook	Sichuan	Aba	Malcolm	Tax Yeabook
Shandong	Jinan	Zhangqiu	Fiscal Yearbook	Sichuan	Aba	Songpan	Tax Yeabook
Shandong	Jinan	Pingyin	Fiscal Yearbook	Sichuan	Aba	Hongyuan	Tax Yeabook
Shandong	Jinan	Jiyang	Fiscal Yearbook	Sichuan	Aba	Rangtang	Tax Yeabook
Shandong	Jinan	SHANGHE	Fiscal Yearbook	Sichuan	Aba	Jiuzhaigou	Tax Yeabook
Shandong	Liaocheng	Dong'e	Fiscal Yearbook	Sichuan	Aba	Xiaojin	Tax Yeabook
Shandong	Liaocheng	SHENXIAN	Fiscal Yearbook	Sichuan	Aba	Maoxian	Tax Yeabook
Shandong	Liaocheng	Liaocheng	Fiscal Yearbook	Sichuan	Bazhong	Tongjiang	Fiscal Yearbook
Shandong	Liaocheng	Yanggu	Fiscal Yearbook	Sichuan	Ganzi	Seda	Tax Yeabook
Shandong	Liaocheng	Gaotang	Fiscal Yearbook	Sichuan	Ganzi	Xiangcheng	Tax Yeabook
Shandong	Liaocheng	Linqing	Fiscal Yearbook	Sichuan	Ganzi	Shiqu	Tax Yeabook
Shandong	Liaocheng	Guan	Fiscal Yearbook	Sichuan	Ganzi	Kangding	Tax Yeabook

Province	Prefecture	County	Data Sources	Province	Prefecture	County	Data Sources
Sichuan	Ganzi	Luhuo	Tax Yeabook	Zhejiang	Hangzhou	Lin'an	Fiscal Yearbook
Sichuan	Ganzi	Kowloon	Tax Yeabook	Zhejiang	Hangzhou	Tonglu	Fiscal Yearbook
Sichuan	Ganzi	Danba	Tax Yeabook	Zhejiang	Heng	Changshan	Tax Yeabook
Sichuan	Ganzi	Batang	Tax Yeabook	Zhejiang	Heng	Kaihua	Tax Yeabook
Sichuan	Ganzi	Luding	Tax Yeabook	Zhejiang	Heng	Longyou	Tax Yeabook
Sichuan	Ganzi	Ganzi	Tax Yeabook	Zhejiang	Heng	Jiangshan	Tax Yeabook
Sichuan	Ganzi	Dege	Tax Yeabook	Zhejiang	Huzhou	Anji	Tax Yeabook
Sichuan	Ganzi	Baiyu	Tax Yeabook	Zhejiang	Huzhou	Deqing	Tax Yeabook
Sichuan	Ganzi	Inagi	Tax Yeabook	Zhejiang	Huzhou	Changxing	Tax Yeabook
Sichuan	Ganzi	Litang	Tax Yeabook	Zhejiang	Jiaxing	Jiashan	Tax Yeabook
Sichuan	Ganzi	Derong	Tax Yeabook	Zhejiang	Jiaxing	Pinghu	Tax Yeabook
Sichuan	Guang'an	Wusheng	Tax Yeabook	Zhejiang	Jiaxing	Haiyan	Tax Yeabook
Sichuan	Mianyang	Zitong	Fiscal Yearbook	Zhejiang	Jiaxing	Haining	Tax Yeabook
Sichuan	Nanchong	Alleviation	Tax Yeabook	Zhejiang	Jiaxing	Tongxiang	Tax Yeabook
Sichuan	Nanchong	Nanbu	Tax Yeabook	Zhejiang	Jinhua	Pan'an	Fiscal Yearbook
Sichuan	Nanchong	Yingshan	Tax Yeabook	Zhejiang	Jinhua	Yiwu	Fiscal Yearbook
Sichuan	Panzhihua	Yanbian	Fiscal Yearbook	Zhejiang	Jinhua	Lanxi	Fiscal Yearbook
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Sichuan	Suining	Daying	Fiscal Yearbook	Zhejiang	Jinhua	Wuyi	Fiscal Yearbook
Sichuan	Ziyang	Lezhi	Tax Yeabook	Zhejiang	Jinhua	Yongkang	Fiscal Yearbook
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Yunnan	Chuxiong	Mouding	Tax Yeabook	Zhejiang	Lishui	Jingning	Fiscal Yearbook
Yunnan	Chuxiong	South	Tax Yeabook	Zhejiang	Lishui	Pine	Fiscal Yearbook
Yunnan	Chuxiong	Wuding	Tax Yeabook	Zhejiang	Lishui	Qingyuan	Fiscal Yearbook
Yunnan	Chuxiong	Shuangbai	Tax Yeabook	Zhejiang	Ningbo	Yuyao	Fiscal Yearbook
Yunnan	Chuxiong	Yao	Tax Yeabook	Zhejiang	Ningbo	Fenghua	Fiscal Yearbook
Yunnan	Chuxiong	Dayao	Tax Yeabook	Zhejiang	Ningbo	Xiangshan	Fiscal Yearbook
Yunnan	Chuxiong	Lufeng	Tax Yeabook	Zhejiang	Ningbo	Ninghai	Fiscal Yearbook
Yunnan	Chuxiong	Chuxiong	Tax Yeabook	Zhejiang	Ningbo	Cixi	Fiscal Yearbook
Yunnan	Dali	Yangbi Yi	Fiscal Yearbook	Zhejiang	Shaoxing	Zhuji	Fiscal Yearbook
Yunnan	Kunming	Anning	Fiscal Yearbook	Zhejiang	Shaoxing	Shaoxing	Fiscal Yearbook
Yunnan	Simao	Lahu	Tax Yeabook	Zhejiang	Shaoxing	Xinchang	Fiscal Yearbook
Yunnan	Simao	Jinggu Dai	Tax Yeabook	Zhejiang	Shaoxing	Shengzhou	Fiscal Yearbook
Yunnan	Simao	Simao	Tax Yeabook	Zhejiang	Shaoxing	Shangyu	Fiscal Yearbook
Yunnan	Simao	Ximeng Va	Tax Yeabook	Zhejiang	Taizhou	Wenling	Fiscal Yearbook
Yunnan	Simao	Jiangcheng	Tax Yeabook	Zhejiang	Taizhou	Yuhuan	Fiscal Yearbook
Yunnan	Simao	Jingdong Yi	Tax Yeabook	Zhejiang	Taizhou	Linhai	Fiscal Yearbook
Yunnan	Simao	Lancang Lahu	Tax Yeabook	Zhejiang	Taizhou	Tiantai	Fiscal Yearbook
Yunnan	Simao	Ning'er Hani and	Tax Yeabook	Zhejiang	Taizhou	Sanmen	Fiscal Yearbook
Yunnan	Simao	Mojiang Hani	Tax Yeabook	Zhejiang	Taizhou	Xianju	Fiscal Yearbook
Zhejiang	Hangzhou	Chunan	Fiscal Yearbook	Zhejiang	Wenzhou	Taishun	Tax Yeabook
Zhejiang	Hangzhou	Jiande	Fiscal Yearbook	Zhejiang	Wenzhou	Pingyang	Tax Yeabook

Province	Prefecture	County	Data Sources
Zhejiang	Wenzhou	Dongtou	Tax Yeabook
Zhejiang	Wenzhou	Yueqing	Tax Yeabook
Zhejiang	Wenzhou	Yongjia	Tax Yeabook
Zhejiang	Wenzhou	Cangnan	Tax Yeabook
Zhejiang	Wenzhou	Rui'an	Tax Yeabook
Zhejiang	Wenzhou	Wencheng	Tax Yeabook
Zhejiang	Zhoushan	Shengsi	Fiscal Yearbook
Zhejiang	Zhoushan	Daishan	Fiscal Yearbook