

# The Logic of De Facto Power and Local Education Spending: Evidence from China\*

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## **Abstract**

Decentralization has been embraced as a major institutional framework to promote economic development, but scholars have suggested that decentralization engenders several potentially unintended consequences for accountability, such as local elite capture, which subsequently undermines public services delivery. Existing studies have primarily evaluated these unintended consequences in democracies but not in autocracies. To fill this gap, we investigate the variations of local public service delivery in a decentralized autocracy—China. Specifically, we argue that local politicians possess two sources of de facto political power—political connection with higher-ranking officials and the mobilization capacity of local political actors. When political connection is absent and local politicians face strong local political rivals, they are incentivized to use public spending as a patronage strategy to garner local political support in order to assure political survival. We draw evidence from an original county-level dataset in China that contains itemized education spending data.

**Keywords:** Distributive politics, education spending, local politics, autocracies, China

Decentralization has been embraced as a major institutional framework to promote development in the last two decades, but it has achieved vastly different outcomes both across and within countries (Bardhan 2002). For example, scholars have often considered education and healthcare as the yardsticks to measure the effectiveness of public goods and services provision under decentralization. Some studies have shown the positive impact of decentralization on education outcomes (Faguet and Sanchez 2008; Galiani et al. 2008), but other studies do not show any evidence to support this claim (Enikolopov and Zhuravskaya 2007; Parry 1997). Scholars have attributed the mixed results to either the variation in the design and implementation of decentralization (Hankla 2009) or the quality of the empirical evidence (Channa and Faguet 2016).

The mixed evidence should not come as a surprise, because the second-generation literature on decentralization has suggested that decentralization could potentially undermine local accountability, which subsequently hinders the benefits of decentralization.<sup>1</sup> One of the major concerns of decentralization is local elite capture by powerful local political players (e.g., wealthy nobles, large enterprises, tribe leaders etc.), who prefer policies that benefit the powerful at the expense of ordinary citizens (Bardhan and Mookherjee 2000; Reinikka and Svensson 2004). The empirical evidence in most studies is drawn from studying democracies, but we still know very little about the relationship between decentralization and local accountability concerning public services delivery in autocracies.<sup>2</sup> Given the absence of electoral institutions, political accountability is generally weaker in non-democratic regimes. The natural question becomes whether decentralization exacerbates the political accountability problem for public services delivery in autocracies.

To help fill this gap in the existing debate, we study local politicians' incentives in education provision in China. We contend that the intra-elite rivalry faced by local politicians is a key factor

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<sup>1</sup> For a review of the second-generation literature on decentralization, see for example Oats (2005) and Prud'homme (1995).

<sup>2</sup> See Martinez-Vazquez et al. 2017 for a review.

shaping local politicians' incentives. Although local politicians do not face electoral competitions in non-democratic regimes, they still face challenges from other local political elites. Given political competition has been a key driver in explaining local public spending in democratic regimes, it is important to evaluate the extent to which intra-elite rivalry shapes local public spending in non-democratic regimes. In this paper, we first conceptualize that the intensity of intra-elite rivalry among local politicians in non-democratic regimes is driven by their de facto political power, which originates from two sources.<sup>3</sup> The primary source is political connections with their patrons in the higher-level government (i.e., power from above). The secondary source is the mobilization capacity of key local political actors, such as local bureaucracies (i.e., power from below). We then study the ways through which the possession of these two sources of political power, or lack thereof, shapes local politicians' incentive in education spending.

We present quantitative and qualitative evidence from China to bolster our arguments. Our empirical analysis is based on an original dataset that contains itemized local education spending data between 2001 and 2007 for all the county-level jurisdictions in six randomly selected provinces. Our dataset is unique in two important respects. First, our education spending data is itemized, thus allowing us to evaluate the targeting strategies of local politicians. Second, we constructed measures for these two sources of de facto political power by collecting detailed background information on Chinese local politicians. We bolster our results by providing qualitative evidence drawn from extensive interviews of local politicians and education bureaucrats across China.

Our empirical results are twofold. Focusing on Chinese Communist Party (CCP) party secretaries (the No. 1-ranking official in a county), we first show that their strong political connections have a

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<sup>3</sup> We follow similar definitions of de jure and de facto political power in Acemoglu and Robinson (2005). De jure political power is allocated by institutional arrangement defined by law and regulations. De facto political power depends on the ability of the group in question to solve its collective action problem and uses non-institutional means to influence policy outcomes.

negative correlation with the overall level of education spending, and the negative effect is primarily driven by spending on education personnel. We then empirically evaluate the intra-elite rivalry between party secretaries and county heads (the No. 2- ranking official in a county). We demonstrate that if county heads have strong de facto power through political connections, party secretaries still have little incentives in education spending. If, however, county heads have strong de facto power through their capacity to mobilize local political actors, unconnected party secretaries are incentivized to spend more on education, especially targeting education personnel, in order to bolster their local political support. We conducted a number of robustness checks to account for alternative explanations, and our results remain robust.

Our paper contributes to the debate on decentralization by shedding new light on the impact of decentralization on public services delivery in non-democratic regimes. We specify the conditions under which intra-elite rivalry helps explain the variation in local public goods provision, even in a one-party authoritarian regime. In particular, we show that intra-elite rivalry induces a patronage strategy for public spending in authoritarian regimes, because this patronage strategy is more effective in enhancing their political survival. This line of logic shares some similarities with the studies of patronage in developing democracies, where public employment is a means to garner political support, especially in the realm of education provision in Latin America (Murillo 1999) and India (Sáez and Sinha 2010). Our finding is also consistent with Martinez-Vazquez and Yao (2009), whose cross-national analyses show that fiscal decentralization has a positive correlation with the size of public employees.

This paper also extends existing research on the consequences of fiscal decentralization in local government preferences for public spending in China. A number of researchers have focused on county and township levels of governments to understand local politicians' behaviors in policymaking and implementation. Some have investigated how the system of cadre responsibility shapes local

policymaking<sup>4</sup> and the roles of fiscal institutions in education spending;<sup>5</sup> others focus on electoral and informal institutions at the village level.<sup>6</sup>

Our paper makes three new contributions to the study of fiscal decentralization in China. First, we study the incentives of local politicians while most existing studies focus on the institutional features of China's fiscal decentralization. Second, we study Chinese local politicians who have career mobility across jurisdictions, thus facing different incentive structures compared to the immobile village officials in many previous studies.<sup>7</sup> Third, our theoretical framework and empirical analysis account for the power struggle between party secretaries and county heads, a subject that to our knowledge has not been studied extensively.

The next section outlines a stylistic theoretical framework of local politicians' incentives in public goods provision in autocracies. We then contextualize our theoretical framework by discussing the local political structure and education policymaking in China. To test the generalizability of our claim, we constructed a unique panel dataset of county-level jurisdictions from six provinces in China. We detail our empirical strategy to evaluate the major claims in our paper and discuss the evidence. We also corroborate our statistical analysis with our qualitative evidence from interviews in the next section. We conclude by discussing the implications of our findings.

## **The Logic of Local Public Spending in Decentralized Autocracies**

Public spending is often used as a means to garner citizens' political support in democracies.<sup>8</sup> Specifically, politicians are incentivized to increase public spending in areas such as education, healthcare, and conditional cash transfer to garner political support in the targeted population when

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<sup>4</sup> Edin 2003; O'Brien and Li 1999; Whiting 2004.

<sup>5</sup> Park et al. 1996; Wang, Zheng, and Zhao 2012; World Bank 2002.

<sup>6</sup> Luo et al. 2010; Tsai 2007; Xu and Yao 2015; Zhang et al. 2004.

<sup>7</sup> In addition, the amount of public spending allocated by the county governments is significantly greater than that by villages.

<sup>8</sup> For example, the commonly observed "political budget cycle" (e.g., Brender and Drazen 2005; Franzese 2002; Remmer 2007) suggests that politicians strategically use public spending based on electoral cycles.

they approach reelection.<sup>9</sup> Taken together, local politicians' political careers hinge on winning elections, and electoral competition is the main mechanism to engender greater public goods and services provision under decentralization.

Although local politicians' careers in autocracies are not determined by the ballot box, they still face challenges from political rivals within the political system. We argue that local politicians rely on their de facto power to overcome these challenges. We conceptualize their de facto power mainly originates from two sources. The primary source comprises political connections with their patrons in higher-level governments (i.e., power from above). The secondary source is the mobilization capacity of key local political actors (i.e., power from below). The variation of public spending within a decentralized autocracy thus depends on intra-elite rivalry as a result of different sources of de facto power that local politicians possess.

The politics of authoritarian rule is rooted in factional politics<sup>10</sup> instead of winning the hearts and minds of the ordinary citizens (Svolik 2012). Cultivating political connections with higher-level political elites is a primary concern in sustaining authoritarian politicians' careers (Nathan 1973; Willerton 1992). When local politicians possess strong political connections, they often receive preferential treatment in their political careers (Easter 1996; Meyer; Shih, and Lee 2016; Shih, Adolph, and Liu 2012). The strength of political connections has a significant influence on intra-elite rivalry in local politics, because powerful patrons could help local politicians to mitigate the challenges from their local rivals. Hence, we argue that political connections with higher-level officials are local politicians' primary source of de facto power in autocracies.

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<sup>9</sup> See for example Ansell (2010), Brown and Hunter (2004), Bueno de Mesquita et al. (2003), De La O (2013), Lake and Baum (2001), and Stasavage (2005).

<sup>10</sup> Factional politics means political competition among different political factions within the same ruling party or ruling political organization (e.g., military, monarchy).

Factional politics, however, is not limited to building political connections with higher-level political elites. The nature of patron–client relationship in factional politics implies that local politicians have to possess a secondary source of de facto power—mobilization capacity of key local political actors as their clients—to maintain their political careers (Nathan 1973; Scott 1972). In other words, local politicians have to develop their own local political machines, especially when they do not possess strong political connections with their superiors.

Strong mobilization capacity mainly serves two functions in intra-elite rivalry. First, it facilitates policy implementation. Although local politicians have the authority to make any policies, policy implementation requires compliance from both local bureaucrats and citizens. Despite the lack of electoral accountability in autocracies, non-compliance has been often used as the “weapon of the weak.” (Scott 1985; Tsai 2015). Hence, local politicians have to develop certain level of mobilization capacity of local political actors for successful policy implementation. Second, strong mobilization capacity allows politicians to prevent their local political rivals from challenging their power in policymaking. In particular, policymaking in authoritarian regimes often requires consensus building among different regime insiders in the winning coalition (Buono de Mesquita et al. 2003; Lieberthal and Lampton 1992). As a result, intra-elite rivalry could hinder local politicians’ ability to build consensus for policymaking, unless they have strong mobilization capacity.

The possession of these two sources of de facto political power, or lack thereof, has a significant impact on local politicians’ incentives in education spending. When local politicians possess strong political connections with higher-level officials, they have little incentive to direct public spending in education provision because this type of public spending rarely benefits their patrons. Even if their patrons in the higher-level governments are interested in improving education, Keefer and Khemani (2005) point out that the concrete benefits of education are hard to measure and may not emerge until several years later. Hence, the information problem undermines politicians’ incentives in education



investment, particularly for those politicians who have short tenure in local offices. We formulate our first hypothesis as follows:

*H1: All else being equal, local politicians possessing strong political connections allocate less education spending.*

Although strong political connections undermine education spending, weak political connections do not imply that local politicians immediately become incentivized in education provision. We contend that the key condition is whether they face rivals who have strong mobilization capacity of local political actors. When rivals have strong mobilization capacity, they could undermine local politicians' policymaking and implementation. In order to overcome the challenges from rivals, local politicians use public spending to garner political support from key political actors in order to assure their political survival. Precisely because local politicians face no electoral competition in autocracies, they strategically use a patronage strategy to appeal to key local political actors.

Key to this strategy is building their own local political machine among regime insiders (e.g., public employees, party members) in order to prevent their political rivals from mobilizing local political actors to turn against them. This strategy is effective in garnering local political support to survive intra-elite rivalry in authoritarian regimes for two reasons. First, the resource mobilization model suggests that regime insiders are most likely to have the resources to take political action against leaders (Verba, Schlozman, and Brady 1995). A growing body of research has shown that regime insiders in developing countries, such as party members and government employees, are more active in engaging in politics than ordinary citizens (Boone 2003; Manor 2000). Hence, these regime insiders are the most critical group to which local politicians offer patronage benefits. Second, local bureaucracies are an important group of local constituencies who help local politicians to implement policies and manage local population. They are often the brokers between local leaders and the general population (Stokes et al. 2013). Without support from local bureaucracies, local leaders

cannot effectively rule their jurisdictions, thus undermining their political survival. Hence, our second hypothesis is as follows:

*H2: Local politicians with weak political connections and facing local political rivals with strong mobilization capacity are likely to increase education spending that target at education personnel.*

In summary, we maintain that sources of de facto political power shape local politicians' incentives in local education provision in autocracies. Our theoretical claim can be summarized in Figure 1 below. The key political actors for building local political support, however, could vary in different contexts. In what follows, we contextualize our arguments through the case of education spending in Chinese counties.

[Figure 1 about here]

## **The Structure of Local Political Power in China**

In this section, we first briefly discuss the institutional context of local politics and education policymaking in China in order to contextualize our arguments. In the next section, we will formally test our arguments based on an original dataset of education spending from Chinese counties.

### **The Structure of Local Politics and Policymaking in China**

Although China's Constitution designates de jure political power in the legislature and government organs, de facto power is held by the Chinese Communist Party. The CCP Politburo Standing Committee, headed by the CCP Party General Secretary, is at the very top of the political structure. The State Council (i.e., the Central Government) is headed by the Premier, who serves concurrently as the CCP's No.2-ranked official. Although the State Council is responsible for crafting and implementing economic policies, the CCP remains in firm control of key policymaking, such as economic reforms, fiscal policies, military affairs, and foreign relations (Lawrence 2013; Lieberthal 2004).

The structure of the political system duplicates itself at the sub-national level jurisdictions.<sup>11</sup> At the county level, the CCP party secretary is the de facto No.1-ranked official, and the county head (i.e., government executive, similar to mayor at the municipality level) is the No.2-ranked official. Both the CCP party secretary and county head serve on the local party committee, and key policies, such as the annual government budget, are subject to approval by the party committee. The appointments of both party secretaries and county heads are both governed by the CCP cadre management system, which is administrated by the CCP's Organization Department (*zuzhi bu*) at the higher-level jurisdiction.

The CCP party secretary and county head could behave as rivals or cooperators in policymaking, largely because no clear boundary in responsibilities exists between the CCP party secretary and county head. In principle, county heads are primarily responsible for economic affairs, but the CCP party secretaries have the ultimate influence over policymaking for two reasons. First, one unique feature of the political system in China is the overlap between government and Party affairs departments. The CCP adopted a collective leadership principle after the 1980s, meaning that major policy decisions, such as fiscal policies and major infrastructure projects, are made by the local Communist Party Committee. Because this committee is chaired by the CCP party secretary in the jurisdiction, the CCP party secretary has both agenda-setting power and veto power in policymaking (Landry 2008; Lieberthal 2004; Miller 2008). Second, party secretaries cannot ignore local economic policymaking because economic performance plays an important role in their political careers (Oi 1999). Key spending in the annual government budget is subject to approval by the party committee and the party secretary.<sup>12</sup> Although the county heads are involved in decisions on education, the party

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<sup>11</sup> See Lieberthal (2004) for more details about the Chinese political system.

<sup>12</sup> The education sector is a typical case because local governments are fully responsible for financing local education from kindergarten all the way to vocational schools. Annual local education spending is decided by the local party committee collectively. The salary of local teachers has three parts: the basic salary, supplemental salaries, and other salaries. The basic salary is set by the central government, and supplemental salaries and other salaries are set by the local governments.

secretary has significant influence on important issues, such as salary raises, teacher recruitment, and infrastructure spending. For these reasons, CCP party secretaries' incentives in public goods provision play the most instrumental role in local fiscal policymaking.

As in other authoritarian regimes, local politicians are not elected by the local population in China.<sup>13</sup> The institutions of political selection in China imply that the political survival of local party secretaries and county heads is determined by two factors. First, maintaining political connections with higher-level officials is critical to their survival. Numerous studies have shown that political connections play an important role in cadre management in China (Choi 2012; Jia et al. 2015; Shih et al. 2012; Meyer et al. 2016; Pye 1995). The prefecture party secretaries are highly instrumental in appointing county party secretaries and county heads because of the “one-level-up” appointment system (Landry 2008). During the appointment process, the prefecture party secretaries signal the Organization Department, which administrates cadre promotion, about their preferences for potential candidates. They often prefer to appoint individuals with whom they have good political connections. Although prefecture party secretaries might face pressure from their superiors in their appointments, designating someone they regard very unfavorably is highly unlikely.

Second, mobilizing key local political actors is also important to the survival of local politicians in China, especially when they have no strong political connections and face rivals with strong local mobilization capacity. Locally, the public sector is one of the most important political actors that politicians can mobilize because public employees can either take political action against leaders or help them implement policies and manage local populations. Numerous studies have shown that public employees in China are key regime insiders, who have resources and opportunities for active political engagement (Guo 2007; Jennings 1997; Scoggins and O'Brien 2016).

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<sup>13</sup> Although China's constitution specifies that county heads should be elected by the delegates of the local people's congress, party-nominated candidates rarely lose “elections” (Manion 2008).

One institutional opportunity to allow regime insiders to take action against local leaders is the cadre evaluation system, which mandates that the prefecture Organization Department conduct annual evaluation of county party secretaries and county heads among local public employees (Manion 1985). Although the direct impact of these evaluations on cadre promotion could be limited, they are critical to local politicians who aim to maintain their offices.<sup>14</sup> In addition, these public employees are more likely to make use of various internal channels, such as writing anonymous complaints or using their political connections, to engage in local politics (Tsai and Xu 2017). Hence, local politicians often use a patronage strategy to expand their own political network in order to appeal to the local public sector (Ang 2016).

Note that not all local public employees are equally active in these types of political engagement. The local education sector is a unique group of local actors who are often mobilized.<sup>15</sup> Although teachers in China are not as powerful as those in the teachers' unions in Latin American countries, they can be effectively mobilized during struggles among local politicians for a number of reasons.<sup>16</sup> First, the education sector is one of the largest local bureaucracies in terms of the budgetary size and number of public employees.<sup>17</sup> It is simply too large for local politics in China to ignore. Second, mobilizing teachers to voice their discontent with local politicians to higher-level governments in China has been a common tactic during local political struggle. A number of studies have shown that

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<sup>14</sup> For example, Edin (2005) points out that although evaluations were indecisive, the CCP sometimes launches an investigation if many local public employees are dissatisfied with a local leader.

<sup>15</sup> The party secretary could also focus on securing political support from other potentially powerful groups, such as local police; however, existing studies have included different views on whether local politicians appeal to local police through budgetary allocation (Wang 2014; Greitens 2017). Given that the purpose of our paper is to explain the variation in local education spending, it is beyond the scope of this paper to investigate the ways through which party secretaries appeal to other potential powerful groups.

<sup>16</sup> See Appendix – 2 for our qualitative evidence of local education sector as an important local political actor being mobilized by local politicians. The qualitative evidence is based on our fieldwork interviews across seven provinces.

<sup>17</sup> For example, education spending usually accounts for more than 30% of the annual government budget. In addition, the education sector is often the largest public sector in terms of number of public employees.

local teachers are an important group who engage in petitions and grievance directed against local leaders.<sup>18</sup>

To this point, we have presented a theoretical framework and provided the contextual information on China's local politics and policymaking. To test the generalizability of our argument, we make use of a newly constructed dataset to provide statistical evidence in the next section.

## **Data and Measures of Key Variables**

We constructed an original dataset on county education spending and political appointments for 658 county-level jurisdictions<sup>19</sup> in six randomly selected provinces between 2001 and 2007. In this section, we first explain the data on local education spending, then detail the way we constructed the county politician database and measured de factor power.

### **Education Spending Data**

We constructed a panel dataset with county-level data from the Ministry of Education on education spending in six randomly selected provinces from 2001 to 2007.<sup>20</sup> The random selection follows the following steps. We first assigned the provinces to three groups (i.e., eastern, central, and western regions) based on their geographic locations. Within each group, we then randomly selected two provinces as representative of the region, resulting in the following province selection: the eastern region (Zhejiang and Shandong), central region (Henan and Hunan), and western region (Gansu and Guizhou).<sup>21</sup> This dataset offers several advantages to testing the arguments in our theoretical framework. First, our dataset contains itemized local education spending, which allows us to investigate targeting spending on education personnel, a key outcome based on our theoretical

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<sup>18</sup> See Heurlin (2016) and Hess and Chang (forthcoming), for example, on petitions and protests by local teachers.

<sup>19</sup> They include counties, county-level cities, and urban districts, which have the same administrative status in the Chinese administrative divisional hierarchy.

<sup>20</sup> As a result of data availability, we are able only to obtain itemized county-level education spending from six randomly selected provinces.

<sup>21</sup> We compared the county social economic indicators between the selected provinces and the national sample for the period under investigation. As shown in Table A17 in the appendix, the county characteristics of our selected provinces are not statistically different from the national sample.

argument. Another advantage of our data is that it contains both budgetary and extra-budgetary spending; thus we have a complete picture of local education spending.<sup>22</sup>

We then merged the education data with county-level social and economic data, such as total government revenues, intergovernmental transfers, GDP, and population from the *National Prefecture and County Finance Statistics Compendiums (Quanguo Di Shi Xian Caizheng Tongji Ziliao)*. These data provide a comprehensive picture of a county's education provision and its social and economic conditions. Table A1 in the Online Appendix reports the summary statistics of education spending and social economic indicators in the county-level jurisdictions in our dataset.

### **Politician Data**

We obtained data on appointments of prefecture party secretaries, county party secretaries, and county heads by employing several strategies involving multiple sources. We first relied on each province's yearbooks to obtain the names of party secretaries and county heads for all counties. We then filled in the missing data by using the published documents from CCP's Organization Departments at the province and prefecture levels as well as from online sources. Although the data on education spending covers only between 2001 and 2007, we extended our data collection of local political appointments to 1996 to avoid left censoring of a politician's tenure for those observations in the early 2000s. In total, we have collected appointment information for 176 prefecture party secretaries, 1,617 county party secretaries, and 1,804 county heads. Table A2 in the Online Appendix reports the distribution of tenure length of county party secretaries and county heads.<sup>23</sup> As shown, the

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<sup>22</sup> Extra-budgetary spending is an inherent feature of the fiscal system in China. Most publicly available Chinese government statistics on spending report only budgetary spending. Extra-budgetary spending is not made public, and it could account for a large share of government spending in some categories, such as capital investment and the benefits to local public employees.

<sup>23</sup> Some politicians may not experience any changes in their appointment in 2007, thus the tenure length of these politicians is artificially shorter mainly because we do not have data beyond 2007. To avoid right censoring when calculating tenure length in this table, we exclude politicians who did not leave office in 2007.

traditional political budgetary cycles may not apply to the Chinese case because most local politicians did not complete even their first term before they were either transferred or promoted.

### **Measuring Sources of De Facto Power**

Our theoretical framework suggests that de facto power originates from two sources: 1) political connection with higher-level officials; and 2) the mobilization capacity of key local political actors. We provide two strategies to measure these two sources of de facto power.

We followed the commonly accepted approach in the existing literature to measure political connection—the professional link between the county officials and their superiors at the higher-level government. Identifying a political connection between two politicians is challenging because no ethnic, religious, or partisan ties clearly define political connections in China. The most recent work develops four different sets of factional ties to measure political connections among Chinese elites (Meyer et al. 2016), and our measure is based on their definition of restrictive work ties. Note that both Meyer et al. (2016) and Keller (2016) argue that using an overly broad definition of factional ties is likely to produce greater measurement errors; thus we prefer a more restrictive measure through appointment timing—whether the prefecture party secretary who appointed county politicians was concurrently staying in office in any given year. We contend that when a prefecture party secretary was removed from his or her current position and reappointed elsewhere, the county officials who were previously appointed by this party secretary would have a weaker political connection with the new party secretary vis-à-vis other county officials appointed by the new party secretary.<sup>24</sup>

Measuring the mobilization capacity of a politician is another challenge. We borrow insights from Keefer (2007), who argues that the inability of making credible promises to voters is the key factor

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<sup>24</sup> One could argue that if the prefectural party secretary were promoted, then the political connection of county officials appointed by him would be strengthened; however, county officials would still be under the direct control of the current prefectural party secretary, and his or her relative political connection would be weaker than those appointed by the current prefectural party secretary.



explaining the performance difference between younger and older democracies. For the same reason, we argue that the tenure length of local politicians is a proxy for local politicians' mobilization capacity of local political actors. Specifically, local politicians' tenure provides time and knowledge to allow them to understand local political dynamics in order to identify the best mobilization strategy of regime insiders in a locality. In addition, longer tenure also provides ample opportunities to allow them to build their own local machine. Finally, local politicians with longer tenure enjoy greater credibility in their promises to local political actors.

## **Empirical Results**

In this section, we detail model specifications and empirical evidence to test our theoretical arguments in three steps. Our three model specifications allow us to understand the effects of the interaction between two sources of power possessed by both local politicians.

### **The Baseline Model**

Our theoretical argument, as illustrated in the first node in Figure 1, hypothesizes a negative correlation between party secretaries' strong political connections and education spending. Our baseline model is specified as follows:<sup>25</sup>

$$\text{Log}(y_{it}) = \beta_1 \text{SEC\_PC}_{it} + \beta_2 \text{SEC\_YIO}_{it} + \beta_3 \text{SEC\_YIO}_{it}^2 + \rho X_{it} + \mu_t + \delta_i + \varepsilon_{it} \quad (1)$$

In this county fixed-effects model,  $\text{Log}(y_{it})$  is the natural log of education spending for county  $i$  in year  $t$ . Based on our theoretical framework, we have two main outcome variables. The first is total

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<sup>25</sup> We explore models with lagged dependent variables, and the results are consistent with the main results (Table A3 in the online appendix). Note that models with lagged dependent variables and county fixed effects may produce inconsistent and biased estimates (Wawro 2002). We prefer the models specified in the main text without the lagged dependent variables.

education spending per student.<sup>26</sup> To investigate the distribution of education spending to achieve a patronage strategy, our second key outcome variable is spending on education personnel per student.

The first key independent variable is  $SEC\_PC_{it}$ , which is an indicator of political connections for the party secretary. It was coded one if both the county party secretary and the prefectural party secretary who appointed him or her were both concurrently holding office in year  $t$ , and zero otherwise. The second key independent variable is the party secretaries' tenure length ( $SEC\_YIO_{it}$ ) and its squared term ( $SEC\_YIO_{it}^2$ ), which model their mobilization capacity during different points of their tenure in county  $i$  in year  $t$ .<sup>27</sup> We include the quadratic term of tenure length because at the early stage of a politician's tenure, they do not have strong mobilization capacity, thus they have incentives to use public spending to garner local political support. As the politicians' tenure increases, they accumulate greater mobilization capacity, thus they may have fewer incentives to use public spending to garner local political support.<sup>28</sup>

$X_{it}$  is a vector of control variables that correlate with local education spending: logged total government revenue per capita, logged population, logged GDP per capita, and the share of intergovernmental transfers in total government revenues.<sup>29</sup> We include time dummies  $\mu_t$  to capture the common economic and policy shocks to local education spending from the central government. We also include county dummies  $\delta_i$  to capture the unobserved political and cultural characteristics of

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<sup>26</sup> Alternatively, we could use the share of education spending in the overall budget as our dependent variable; however, we cannot use this measure for this paper because our education spending includes both budgetary and extra-budgetary spending, but we observe only the budgetary spending for the overall county budget.

<sup>27</sup> Including ( $SEC\_YIO_{it}$ ) and its squared term ( $SEC\_YIO_{it}^2$ ) may introduce multicollinearity. We also employ mean-centered models in robustness checks (Table A7-A8 in online appendix), and the substantive interpretation of our main model remains intact.

<sup>28</sup> Guo (2009) also uses the tenure length and its squared term to measure politicians' incentives in public spending at different points of their tenure.

<sup>29</sup> We did not include the age of the politicians as a control variable in the main model. Because of the challenges in data collection, we are only able to collect around 75% of county politicians' age information. Including the age variable would result in missing too many observations in the analysis. To remedy the missing age information, we provide two solutions. First, we have replicated the main results using individual fixed effects models, which help control for unobserved personal characteristics of the politicians (Tables A4-A6 in online appendix). Second, we include the age variable in the model for robustness checks. Despite the missing data problem, the results in the models with age information remain consistent with the main results reported here (Table A9-A10 in online appendix).

the county that influence local education spending, such as general local preference for education and attractiveness of the localities for hiring and retaining teachers. We report clustered standard errors at the county level to control for serial correlation.

Table 1 reports the baseline estimation results.<sup>30</sup> We find that strong political connections are negatively correlated with total education spending and the estimates are statistically significant, which is consistent with our hypothesis. The model in Column (1) suggests that when a county party secretary has a strong political connection, the total government education spending decreases by 1.5 percent. Meanwhile, we do not find any strong independent effects of the party secretaries' mobilization capacity on total education spending,

Furthermore, we find that the negative correlation between political connections and education spending mainly originates from spending on education personnel. Substantively, if the county party secretary has strong political connections, the spending on education personnel decreases by 2.1 percent. Furthermore, we find that the longer the party secretary's tenure in the county, they are less incentivized in spending on education. Each year in office is associated with a 1 percent decrease in spending on education personnel. In other words, party secretaries do not seek political support from education personnel once they have accumulated strong mobilization capacity.

[Table 1 about here]

### **The Extended Model: The Effects of Intra-elite Rivalry**

The analysis above focuses primarily on the characteristics of party secretaries. We then evaluate party secretaries' behaviors when they face another local political rival with various degrees of de facto power. We follow three steps to evaluate the effects of county heads' de facto political power on party secretaries' preferences in education spending. First, we consider only the interaction

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<sup>30</sup> We have excluded 189 county-year observations due to unusually high shares of intergovernmental transfers (more than 100% of local revenue), and the exclusion does not change the substantive interpretation of our main results.

between party secretaries' and county head's political connections. Second, we consider only the interaction between party secretaries' and county head's mobilization capacity of local political actors. Third, we evaluate the joint effects of both sources of de facto power.

The first extended model is specified as follows:

$$\text{Log}(y_{it}) = \alpha_1 \text{SEC\_PC}_{it} + \alpha_2 \text{CH\_PC}_{it} + \alpha_3 \text{SEC\_PC}_{it} \times \text{CH\_PC}_{it} + \rho X_{it} + \mu_t + \delta_i + \varepsilon_{it} \quad (2)$$

$\text{SEC\_PC}_{it}$  is the party secretary's political connections in county  $i$  in year  $t$ .  $\text{CH\_PC}_{it}$  is the county head's political connection in county  $i$  in year  $t$ . The interaction of these two terms,  $\text{SEC\_PC}_{it} \times \text{CH\_PC}_{it}$ , allows us to capture the conditional effect of political connection as a function of the other politician's political connection.  $X_{it}$  is a vector of control variables as specified in Equation (1). Again, we include county-level economic indicators as well as year and county fixed effects to capture unobserved variances across time and space.

Table 2 reports the results based on this specification. Again, we find that party secretaries are not incentivized in education spending when they have political connections, even if the county heads have strong de facto power through political connection. Moreover, when party secretaries have no strong political connections, the presence of county heads with strong political connections does not incentivize them to education spending either. One possible explanation is that mobilizing key local political actors is not an effective strategy to counter a rival who has strong political connections with higher-ranking officials. In addition, Table 2 provide some indication that when party secretary has strong political connections, the county head's strong mobilization capacity (measured by tenure length) has no effects on education spending.

[Table 2 about here]

Next, we investigate the interaction between the party secretary's and county head's mobilization capacity. Our model specification is as follows:

$$\text{Log}(y_{it}) = \gamma_1 \text{SEC\_YIO}_{it} + \gamma_2 \text{CH\_YIO}_{it} + \gamma_3 \text{SEC\_YIO}_{it} \times \text{CH\_YIO}_{it} + \rho X_{it} + \mu_t + \delta_i + \varepsilon_{it} \quad (3)$$

$\text{SEC\_YIO}_{it}$  is the party secretary's tenure length in county  $i$  in year  $t$ .  $\text{CH\_YIO}_{it}$  is the county head's tenure length in county  $i$  in year  $t$ . The interaction of these two terms,  $\text{SEC\_YIO}_{it} \times \text{CH\_YIO}_{it}$ , allows us to capture the conditional effect of mobilization capacity as a function of the other politician's mobilization capacity.  $X_{it}$  is a vector of control variables as specified in Equation (1). Again, we include county-level economic indicators as well as year and county fixed effects to capture unobserved variances across time and space.

Table 3 reports the results based on Equation (3). First, the estimate of party secretaries' tenure length is negative and statistically significant in Column (1), thus indicating that the greater the mobilization capacity of the party secretaries, the less likely they are to invest in education in order to garner local political support. Second, the estimate of the interaction term is positive and statistically significant, suggesting that as a county head's tenure length increases, indicating greater mobilization capacity, the marginal effect of a party secretary's tenure on education spending increases and becomes positive when the county head has served in a county for more than four years. This result offers supporting evidence that a party secretary's disincentives for education spending can be curtailed as a county head's capacity to mobilize regime insiders increases. In particular, the incentives mainly come from investment in personnel (Columns 2), indicating that the incentives for education investment are primarily aimed at building broader political support within local bureaucracies.

One could argue that a county head's longer tenure does not necessarily lead to greater mobilization capacity than that of the party secretaries. Such a case occurs when the party secretary has previously served as the county head in the same county. This type of "home-grown" party

secretary has better control of local bureaucracies largely because they have served a longer time than the county head in the locality; thus they have developed a better understanding of local political dynamics and established a patronage strategy to mobilize regime insiders. To evaluate this claim, we split our observations into two groups. In the first group, we restrict the analysis to party secretaries who had previously served as county heads in the same county; Columns 3–4 show the estimation result based on this sample. As expected, the length of a county head’s tenure has no impact on the “home-grown” party secretary for education spending because the estimate for the interaction term is small and not statistically significant. In the second group, the analysis is restricted to the observations in which party secretaries were outsiders who have not served as the county head, and a different pattern emerges (Columns 5–6). The estimate for the interaction is statistically significant. Substantively, county heads can effectively constrain party secretaries only when the latter are not “home-grown” and have no strong local political network to control local bureaucracies.

[Table 3 about here]

One limitation of the analysis above is that it does not account for both sources of de facto power of the county party secretaries and county heads at the same time. To address this concern, we consider the joint effects of political connections and mobilization capacity by these two politicians. We consider four different scenarios involving the relative strength of the political connections of county party secretaries and county heads and evaluate the effects of their mobilization capacity of key local political actors: 1) Both the county party secretary and county head were appointed by the current prefectural party secretary; 2) the county party secretary but not the county head was appointed by the current prefectural party secretary; 3) the county head but not the county party secretary was appointed by the current prefectural party secretary; 4) neither was appointed by the current prefectural party secretary.

Of these four cases, the county heads have the strongest relative political connections in Case (3) largely because county heads are likely to be in the political circle of the current prefectural party secretary, but county party secretaries are not. Conversely, the county heads have the weakest relative political connections compared with party secretaries in Case (2), using the same logic. The relative strength of the political connection between the two officials in Cases (1) and (4) are somewhat ambiguous. We argue, however, that the relative strength of the political connections of the county head is weaker in Case (1) than in Case (4) largely for the following reason: When both are appointed by the current prefectural party secretaries, the person with weaker political connections would not be appointed as the county party secretary, who is the de facto most powerful official in a county. In summary, the relative strength of the county head's political connections over the county party secretary occurs in the following order: (3) > (4) > (1) > (2).

We divided our data into the four categories noted above and reanalyzed them based on Equation (3).<sup>31</sup> Table 4 shows the results in the order of county heads' relative political connections from the strongest to the weakest. As shown, we find supporting evidence that when the county heads have the strongest de factor power, he or she is more effective in inducing the party secretary to increase education spending. Specifically, the estimates of the interaction terms are positive and statistically significant in the case where county heads have the strongest relative political connections (Columns 1–2). Columns 3–4 shows that when neither county head nor party secretary has a strong political connection, party secretary's strong mobilization capacity (i.e., longer tenure) has a negative effect on education spending, unless the county head also has strong mobilization capacity (i.e., longer tenure). Finally, Columns 5–8 shows that when party secretary possesses strong political connections,

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<sup>31</sup> An alternative specification requires a four-way interaction between both sources of power by these two politicians, which introduce a severe multicollinearity problem in the estimation. Instead, we decided to break down the analysis by different scenarios of county head and party secretary's political connection, and evaluate under which scenario the effect of mobilization capacity becomes important to local education spending.

there is consistent evidence that neither county head's political connection nor county head's mobilization capacity has positive effect on education spending.<sup>32</sup>

[Table 4 about here]

### **Robustness Checks**

In this section, we evaluate a number of alternative explanations that could potentially generate observational equivalent results to those reported in our analysis. Our robustness checks show that our empirical results are mainly driven by our arguments instead of these alternative explanations.

First, preference matching could be driving our results. For example, the unconnected party secretaries could be incentivized to spend more on education in order to signal good performance to higher-level governments and obtain citizen satisfaction in a polity where performance matters for local politicians' political careers. Although signaling performance is important for local politicians who have weak political connections, signaling performance in education spending is not a good strategy to signal good performance in the Chinese political system. O'Brien and Li (1999) point out that performance-based evaluation induces politicians to selectively pursue policies that yield more observable outcomes. In China, for example, the observable indicators for performance often center on areas such as economic output and tax revenues (Jia et al. 2015; Landry, Lü, and Duan forthcoming), but not education and environmental politics (Eaton and Kostka 2014). Persson and Zhuravskaya (2015) provide strong evidence that greater social and education spending does not increase the promotion probabilities of provincial party secretaries in China, but infrastructure spending is associated with greater probabilities of promotion.

Meanwhile, party secretaries with weak political connections could use greater education spending to satisfy local citizens. To evaluate this alternative argument, we follow Faguet and

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<sup>32</sup> The number of observations varies across groups, which could challenge the comparability of the results; however, we are confident about the overall patterns, because our robustness checks below also present similar substantive interpretations of these results.



Sánchez (2008) by using illiteracy rate as a proxy for a county's need for more education investment, and a higher rate of illiteracy indicates a greater desire from local residents for education spending.<sup>33</sup> Table A11 in the online appendix replicates the main results reported in Table 1. As shown, a higher rate of illiteracy has a negative and statistically significant correlation with local education spending, thus providing evidence that party secretaries generally do not respond to a county's need for more education investment. Does facing local political rivals incentivize party secretaries to invest in education because of preference matching with local residents? We further replicate the subset analysis reported in Table 3 by the quartile of illiteracy rate in our data. Table A12-A15 in the online appendix shows little evidence that party secretaries facing strong political rivals are more likely to respond to local needs for education investment—the estimate of the interaction terms of party secretaries' and county heads' tenure length are not statistically significant in the counties with higher rates of illiteracy (i.e., the models of the third and fourth quartiles of illiteracy rate). Hence, our additional analysis does not provide empirical support to the preference matching argument.

Another concern of our main results is that the newly appointed party secretaries could build their patronage networks by replacing existing teaching staff with new hires, or increase education spending through corruption and collusion by awarding out contracts to expensive services providers. To evaluate this concern of administrative and turnover costs, we investigate more detailed personnel spending data, and our additional analysis shows that the impact of political connection on personnel spending largely comes in the form of salaries and benefits for existing teachers instead of hiring new teachers (See Table A16 in online appendix more details). In addition, we find the same patterns in the model where we investigate the interaction of the joint effects of political connection and local

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<sup>33</sup> We use the county-level illiterate rate from the 2000 Chinese census, which preceded our education spending data between 2001 and 2006, in order to avoid reversed causality.

mobilization capacity of these two politicians. As shown in Table A16 in online appendix, the relative mobilization capacity of county head has no impact on the number of education employees.

## **Qualitative Evidence**

To corroborate our statistical evidence, we present qualitative evidence from our fieldwork research in seven provinces from 2005 to 2014.<sup>34</sup> Several findings emerged from our open-ended interviews that are consistent with our theoretical framework. In what follows, we highlight some insights drawn from our fieldwork interviews to illustrate how political connection and mobilization capacity shape party secretaries' incentives in education spending in China.

### **a. Political Connection and Party Secretary's Incentives in Education Spending**

Our theoretical framework suggests political connections undermine local politicians' incentives in education spending, and we have found consistent evidence in our interviews across different regions. Many of our interviewees emphasized the importance of the local party secretary's political will in local education provision. With regard to those party secretaries who have no strong political will in local education, our interviewees often indicated that they have strong political connections with high-level officials. When we probed deeper about party secretaries' preferences in public spending, our interviewees frequently mentioned infrastructure spending. Finding many brand-new buildings among various local high schools we visited was no surprise. Spending on infrastructure inevitably comes at the expense of personnel spending as told by a county government official [Interviewee 1] in County S in Henan province:

When Party Secretary Liu was first appointed in 2004, he adopted several radical policies for new construction projects at local high schools. Party Secretary Liu famously said that he prefers “visible things”

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<sup>34</sup> These provinces are Gansu, Hubei, Hunan, Henan, Zhejiang, Jiangsu, and Fujian. Within each province, we focus on counties with the best and worst performance on the national college entrance exams, which is a good indicator of the quality of local education systems. Among them, we pay particular attention to the counties in which local education personnel are key actors in petitions and protests. In total, our team has conducted over 300 open-ended interviews with officials at the provincial, prefectural and county education bureaus, and with county and township government agencies and party organizations, as well as many school principals, teachers, and parents of current students.

for the education sector. In order to pay for the infrastructure construction, he refused to recruit new teachers and constrained the personnel expenditure. This policy arrangement eventually induced a heavy debt burden and shortage of teachers for local high schools.

### **b. Mobilization Capacity and Party Secretaries' Incentives in Education Spending**

Another key insight from our theoretical framework is that local politicians could be incentivized to increase education spending to garner local political support under the condition that they have no strong political connections and they face strong local rivals. Our interviews consistently show that when the party secretary and the county head become political rivals, they often try to appeal to the local education sector for political support.

The importance of garnering political support from the local education sector is exemplified in our fieldwork in County GG in Gansu province. We found that the political struggle between the party secretary and county head led to rapid salary increases in both the education and government sectors by these two local leaders in County GG in Gansu province. The director of the county education bureau [Interviewees 2] revealed the following interesting incidence:

The conflict between the party secretary and the county head often led to the mobilization of teachers to voice their discontent toward each other during the CCP's Organization Department annual evaluations. For example, the party secretary and the county head successfully mobilized local teachers to write grievance letters to the higher-level governments to undermine the other side's reputation. More dramatically, the county head was able to convince the local people's congress deputy from the education sector to openly challenge the candidates for the position of local bureau chiefs nominated by the party secretary. Because teachers are easily mobilized by the potential rivals, party secretaries rarely ignore their interests when they face challenges from other local politicians with strong de facto power.

We also find evidence that spending on personnel is the most important way to garner support from the local education sector in a different county. In County SX in Zhejiang province, for example, an official of the county education bureau [Interviewee 4] told us the following incident:

Newly appointed Party Secretary Xu attempted to reduce the education budget and funneled the government's budget into an economic development plan. Party Secretary Xu's proposed policy met with strong resistance in the county largely because of County Head Feng's strong support from the local education sector by using various measures to improve local teachers' salaries. In the end, County Head Feng's education policy preference largely prevailed.

## **Conclusion**

How does decentralization affect public services delivery given the accountability problem highlighted in the second-generation literature of fiscal decentralization? The evidence in existing debates of the consequences of decentralization is primarily based on data in democracies, but few studies provide evidence in non-democracies. The evidence from our study sheds new light on this debate of decentralization and public services delivery in two important ways.

First, the lack of electoral accountability in non-democratic regimes means that decentralization is unable to improve governance by merely bringing the decision-making to the local level. Local politicians in autocracies generally do not have strong incentives to use public spending to garner political support from ordinary citizens because their political careers are determined by their superiors in higher-level governments. The nature of authoritarian politics suggests that building political connections with patrons at the higher-level government is critical for local politicians. As a result, decentralization will not address the political accountability problem in non-democratic regimes. Specifically, our paper has identified a strong negative correlation between a politician's strong political connections and local education spending.

Second, we show that the intensity of political competition is an important driver behind public spending. However, spending on public services could be distorted, similar to the elite capture problem in democratic regimes, because local politicians seek to allocate spending to the targeted population in order to garner political support. In our paper, we demonstrate that inter-elite rivalry, a form of political competition, has led to greater education spending. However, the increase of

spending was used to target public employees because local politicians use a patronage strategy to increase local political support. One interpretation of our results is that decentralization could exacerbate the accountability in public services delivery in non-democratic regimes. Nonetheless, given the under-provision of public goods in developing countries, the increase of spending in education personnel could have a spillover effect to benefit the general population. Hence, one could argue that that local political competition, even in a non-democracy, could be conducive to greater provision of public goods and services.

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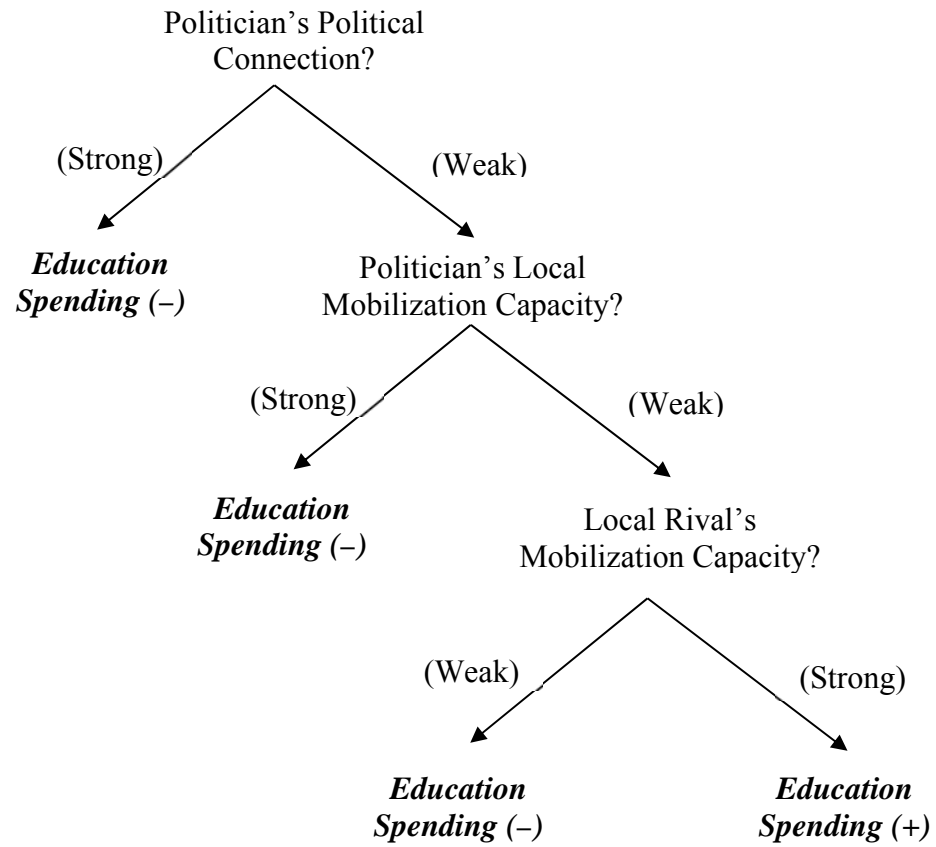
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**Figure 1: The Sources of De Facto Power and Preference for Education Spending**



**Table 1: Education Spending Preferences of Party Secretaries**

	Total Spending	Spending on Public Employee
	(1)	(2)
County Party Secretary Political Connection	-0.015** (0.007)	-0.021*** (0.007)
Year in Office	-0.001 (0.006)	-0.010* (0.006)
Year in Office <sup>2</sup>	-0.000 (0.001)	0.001 (0.001)
Log(Total Gov. Rev. Per Capita)	0.189*** (0.036)	0.144*** (0.035)
Log (Population)	0.043 (0.029)	0.003 (0.030)
Log(GDP Per Capita)	-0.001 (0.011)	-0.011 (0.012)
Share of Intergovernmental Transfers in Total Gov. Revenue	-0.000 (0.000)	-0.001 (0.001)
County FE	Yes	Yes
Year FE	Yes	Yes
Observations	4,318	4,318

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of the constant as well as county and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 2: The Effects of County Head with Strong Political Connection**

	Total Spending	Spending on Public Employee
	(1)	(2)
County Party Secretary Political Connection	-0.026** (0.013)	-0.032** (0.014)
County Head Political Connection	-0.002 (0.010)	-0.001 (0.011)
County Party Secretary Political Connection × County Head Political Connection	0.015 (0.015)	0.014 (0.014)
Year in Office (Party Secretary)	-0.005* (0.003)	-0.007*** (0.003)
Year in Office (County Head)	0.003 (0.003)	0.003 (0.003)
Control Variables	Yes	Yes
County FE	Yes	Yes
Year FE	Yes	Yes
Observations	4,315	4,315

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of control variables (logged total government revenue per capita, log population, log GDP per capita, and share of intergovernmental transfers in total gov. revenue), constant as well as county and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1



**Table 3: The Effects of County Head with Strong Mobilization Capacity**

	<b>All</b>		<b>Home-Grown Party Secretaries</b>		<b>Non-Home-Grown Party Secretaries</b>	
	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee
	(1)	(2)	(3)	(4)	(5)	(6)
Year in Office (Party Secretary)	-0.008** (0.003)	-0.010*** (0.003)	-0.002 (0.005)	-0.003 (0.005)	-0.009** (0.005)	-0.015*** (0.005)
Year in Office (County Head)	-0.004 (0.004)	-0.005 (0.004)	0.007 (0.006)	-0.004 (0.006)	-0.010 (0.006)	-0.010 (0.007)
Year in Office (Party Secretary) × Year in Office (County Head)	0.002** (0.001)	0.002** (0.001)	-0.001 (0.002)	0.001 (0.002)	0.003** (0.002)	0.004** (0.002)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,339	4,339	2,229	2,229	2,110	2,110

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of control variables (*logged total government revenue per capita*, *log population*, *log GDP per capita*, and *share of intergovernmental transfers in total gov. revenue*), constant as well as county and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 4: The Interaction of De Factor Power of Party Secretary and County Head**

	Appointed by Current Prefectural Party Secretaries?							
	County Head (Yes) Party Secretary (No)		County Head (No) Party Secretary (No)		County Head(Yes) Party Secretary (Yes)		County Head (No) Party Secretary (Yes)	
	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Year in Office (Party Secretary)	-0.016 (0.013)	-0.020 (0.012)	-0.021*** (0.008)	-0.022*** (0.008)	-0.004 (0.006)	-0.010 (0.007)	0.032 (0.049)	-0.039 (0.041)
Year in Office (County Head)	-0.045 (0.030)	-0.027 (0.028)	-0.015* (0.008)	-0.011 (0.008)	0.003 (0.007)	-0.008 (0.008)	0.002 (0.033)	-0.030 (0.023)
Year in Office (Party Secretary) × Year in Office (County Head)	0.013*** (0.005)	0.011** (0.004)	0.005** (0.002)	0.005** (0.002)	0.002 (0.002)	0.004* (0.002)	-0.004 (0.009)	0.009 (0.008)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	401	401	1,990	1,990	1,699	1,699	225	225

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of control variables (*logged total government revenue per capita*, *log population*, *log GDP per capita*, and *share of intergovernmental transfers in total gov. revenue*), constant as well as county and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Online Appendix – 1: Extended Analysis Results

**Table A1: County Summary Statistics**

		All	Zhejiang	Shandong	Henan	Hunan	Gansu	Guizhou
Party Secretary appointed by Current Prefecture Party Secretary	<i>Mean</i>	0.45	0.52	0.43	0.31	0.51	0.41	0.58
	<i>Std. Dev.</i>	0.50	0.50	0.50	0.46	0.50	0.49	0.49
County heads appointed by Current Prefecture Party Secretary	<i>Mean</i>	0.49	0.55	0.50	0.36	0.56	0.43	0.58
	<i>Std. Dev.</i>	0.50	0.50	0.50	0.48	0.50	0.50	0.49
Total Edu. Spending Per Student	<i>Mean</i>	2138.83	4785.51	2370.44	1357.73	2017.02	1857.88	1239.56
	<i>Std. Dev.</i>	1621.51	2082.08	1442.65	788.93	1067.42	1106.58	692.83
Total Edu. Spending In Personnel Per Student	<i>Mean</i>	1457.70	3091.47	1586.83	964.34	1373.67	1335.38	921.45
	<i>Std. Dev.</i>	1088.23	1389.61	1064.86	582.01	719.07	871.26	508.07
Total Edu. Spending In New Infrastructure Per Student	<i>Mean</i>	101.32	372.70	122.27	37.57	49.38	71.91	39.03
	<i>Std. Dev.</i>	248.15	547.29	189.99	94.94	105.28	157.05	63.07
Total Government Revenue Per Capita	<i>Mean</i>	1114.76	2614.59	1072.75	704.28	826.72	1392.21	806.24
	<i>Std. Dev.</i>	1291.56	2326.98	864.98	521.96	608.56	1914.56	442.72
Share of Transfers in Total Gov. Revenue	<i>Mean</i>	54.30	40.59	40.02	55.96	58.44	75.93	65.04
	<i>Std. Dev.</i>	19.64	15.97	14.15	18.16	14.87	16.26	15.96
Total Population	<i>Mean</i>	550433	516099	658997	637428	549866	286428	437354
	<i>Std. Dev.</i>	331412	280466	285105	401514	310271	195546	252579
GDP Per Capita	<i>Mean</i>	12056.21	23701.04	17239.25	8929.97	8926.44	9318.41	5058.99
	<i>Std. Dev.</i>	13576.76	19118.96	15357.61	8911.53	9708.43	12058.22	5221.31

Source: Authors' database

**Table A2: The Distribution of County Politicians' Length of Tenure (2001 - 2007)**

<b>Party Secretary</b>														
Year in Office	Pool Sample		Eastern Region				Central Region				Western Region			
	Percent	Cum. Percent	Zhejiang		Shandong		Henan		Hunan		Gansu		Guizhou	
			Percent	Cum. Percent	Percent	Cum. Percent	Percent	Cum. Percent	Percent	Cum. Percent	Percent	Cum. Percent	Percent	Cum. Percent
1	5.96	5.96	3.95	3.95	5.68	5.68	6.57	6.57	4.78	4.78	10.93	10.93	3.16	3.16
2	28.76	34.72	27.63	31.58	29.02	34.70	22.99	29.55	28.67	33.45	33.60	44.53	33.68	36.84
3	19.57	54.29	21.05	52.63	16.40	51.10	20.90	50.45	19.45	52.90	22.67	67.21	16.84	53.68
4	19.32	73.60	23.25	75.88	16.09	67.19	21.79	72.24	22.87	75.77	19.43	86.64	10.53	64.21
5	15.53	89.13	19.30	95.18	17.03	84.23	14.63	86.87	14.33	90.10	8.91	95.55	20.00	84.21
6	7.45	96.58	3.51	98.68	12.62	96.85	7.16	94.03	7.51	97.61	4.05	99.60	8.42	92.63
7	2.61	99.19	0.88	99.56	1.89	98.74	5.67	99.70	2.05	99.66	0.00	99.60	4.74	97.37
8	0.62	99.81	0.44	100.00	0.32	99.05	0.30	100.00	0.34	100.00	0.40	100.00	2.63	100.00
9	0.12	99.94			0.63	99.68								
10	0.06	100.00			0.32	100.00								

<b>County Head</b>														
1	9.39	9.39	5.15	5.15	11.80	11.80	11.80	11.80	7.74	7.74	10.00	10.00	7.35	7.35
2	32.21	41.60	31.33	36.48	33.99	45.79	28.42	40.21	32.58	40.32	34.80	44.80	33.82	41.18
3	22.07	63.67	22.32	58.80	21.07	66.85	24.40	64.61	21.94	62.26	24.80	69.60	15.69	56.86
4	17.15	80.82	19.74	78.54	14.89	81.74	18.77	83.38	19.35	81.61	18.40	88.00	10.78	67.65
5	11.99	92.82	16.31	94.85	10.39	92.13	9.92	93.30	11.29	92.90	7.60	95.60	19.61	87.25
6	5.62	98.44	4.29	99.14	7.30	99.44	4.02	97.32	6.45	99.35	3.60	99.20	8.33	95.59
7	1.16	99.59	0.43	99.57	0.28	99.72	1.88	99.20	0.65	100.00	0.80	100.00	3.43	99.02
8	0.17	99.77	0.00	99.57	0.00	99.72	0.80	100.00					0.00	99.02
9	0.17	99.94	0.43	100.00	0.28	100.00							0.49	99.51
10	0.06	100.00											0.49	100.00

Source: Author's database

**Table A3: Education Spending Preferences of Party Secretaries (With Lagged Dependent Variable)**

	Total Spending	Spending on Public Employee
	(1)	(2)
Lagged Dependent Variable	0.172*** (0.033)	0.260*** (0.032)
Appointed by Current Prefecture Party Secretary	-0.010* (0.006)	-0.020*** (0.007)
Year in Office	-0.001 (0.006)	-0.011* (0.006)
Year in Office <sup>2</sup>	-0.000 (0.001)	0.001 (0.001)
Control Variables	Yes	Yes
County FE	Yes	Yes
Year FE	Yes	Yes
Observations	3,710	3,710

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of control variables (*logged total government revenue per capita*, *log population*, *log GDP per capita*, and *share of intergovernmental transfers in total gov. revenue*), constant as well as county and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A4: Education Spending Preferences of Party Secretaries (with Politician FE)**

	Total Spending (1)	Spending on Public Employee (2)
Appointed by Current Prefecture Party Secretary	-0.009 (0.011)	-0.005 (0.013)
Year in Office	-0.026** (0.011)	-0.035*** (0.011)
Year in Office <sup>2</sup>	-0.000 (0.001)	0.001 (0.001)
Control Variables	Yes	Yes
County FE	Yes	Yes
Politician FE	Yes	Yes
Year FE	Yes	Yes
Observations	4,318	4,318

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of control variables (*logged total government revenue per capita*, *log population*, *log GDP per capita*, and *share of intergovernmental transfers in total gov. revenue*), constant as well as county, politician, and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A5: The Effects of County Head with Strong Political Connection (with Politician FE)**

	Total Spending	Spending on Public Employee
	(1)	(2)
County Party Secretary Political Connection	0.033 (0.030)	0.027 (0.049)
County Head Political Connection	0.069* (0.040)	0.055 (0.045)
County Party Secretary Political Connection × County Head Political Connection	-0.100** (0.050)	-0.078 (0.066)
Year in Office (Party Secretary)	0.011 (0.022)	0.001 (0.022)
Year in Office (County Head)	-0.011 (0.015)	0.015 (0.019)
Control Variables	Yes	Yes
County FE	Yes	Yes
Politician FE	Yes	Yes
Year FE	Yes	Yes
Observations	4,315	4,315

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of control variables (logged total government revenue per capita, log population, log GDP per capita, and share of intergovernmental transfers in total gov. revenue), constant as well as politician, county, and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A6: The Effects of County Head with Strong Mobilization Capacity (with Politician FE)**

	All		Home-Grown Party Secretaries		Non-Home-Grown Party Secretaries	
	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee
	(1)	(2)	(3)	(4)	(5)	(6)
Year in Office (Party Secretary)	(0.002) (0.020)	(-0.012) (0.019)	-0.019 (0.013)	-0.018 (0.014)	-0.047** (0.013)	-0.026* (0.014)
Year in Office (County Head)	-0.017 (0.004)	0.001 (0.018)	0.011 (0.014)	0.028** (0.014)	0.256*** (0.029)	0.107*** (0.032)
Year in Office (Party Secretary) × Year in Office (County Head)	(0.003) (0.002)	0.005** (0.002)	-0.000 (0.003)	0.002 (0.003)	0.005** (0.003)	0.007** (0.003)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Politician FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,339	4,339	2,229	2,229	2,110	2,110

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of control variables (*logged total government revenue per capita*, *log population*, *log GDP per capita*, and *share of intergovernmental transfers in total gov. revenue*), constant as well as politician, county, and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1



**Table A7: Education Spending Preferences of Party Secretaries  
(Mean - centered Year in Office Measures)**

	Total Spending	Spending on Public Employee
	(1)	(2)
County Party Secretary Political Connection	-0.015** (0.007)	-0.021*** (0.007)
Mean Centered Year in Office	-0.003 (0.002)	-0.007*** (0.002)
Mean Centered Year in Office <sup>2</sup>	-0.000 (0.001)	0.001 (0.001)
Log(Total Gov. Rev. Per Capita)	0.189*** (0.036)	0.144*** (0.035)
Log (Population)	0.043 (0.029)	0.003 (0.030)
Log(GDP Per Capita)	-0.001 (0.011)	-0.011 (0.012)
Share of Intergovernmental Transfers in Total Gov. Revenue	-0.000 (0.000)	-0.001 (0.001)
County FE	Yes	Yes
Year FE	Yes	Yes
Observations	4,318	4,318

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of the constant as well as county and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A8: The Effects of County Head with Strong Mobilization Capacity (Mean - centered Year in Office Measures)**

	All		Home-Grown Party Secretaries		Non-Home-Grown Party Secretaries	
	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee
	(1)	(2)	(3)	(4)	(5)	(6)
Mean Centered Year in Office (Party Secretary)	-0.003 (0.002)	-0.004** (0.002)	-0.003 (0.003)	0.001 (0.003)	-0.002 (0.003)	-0.004 (0.003)
Mean Centered Year in Office (County Head)	0.002 (0.002)	0.001 (0.002)	0.005 (0.003)	-0.000 (0.003)	-0.001 (0.003)	0.001 (0.003)
Mean Centered Year in Office (Party Secretary) × Mean Centered Year in Office (County Head)	0.002** (0.001)	0.002** (0.001)	-0.001 (0.002)	0.001 (0.002)	0.003** (0.002)	0.004** (0.002)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,339	4,339	2,229	2,229	2,110	2,110

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of control variables (*logged total government revenue per capita*, *log population*, *log GDP per capita*, and *share of intergovernmental transfers in total gov. revenue*), constant as well as county and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A9: Education Spending Preferences of Party Secretaries (Controlling for Age)**

	Total Spending	Spending on Public Employee
	(1)	(2)
County Party Secretary Political Connection	-0.020*** (0.007)	-0.025*** (0.008)
Year in Office	-0.006 (0.006)	-0.018*** (0.007)
Year in Office <sup>2</sup>	0.000 (0.001)	0.002* (0.001)
Age	0.026 (0.019)	0.013 (0.020)
Age <sup>2</sup>	-0.000 (0.000)	-0.000 (0.000)
Log(Total Gov. Rev. Per Capita)	0.238*** (0.031)	0.180*** (0.033)
Log (Population)	-0.034 (0.132)	-0.037 (0.127)
Log(GDP Per Capita)	-0.006 (0.012)	-0.014 (0.013)
Share of Intergovernmental Transfers in Total Gov. Revenue	0.000 (0.000)	0.000 (0.001)
County FE	Yes	Yes
Year FE	Yes	Yes
Observations	3,573	3,573

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of the constant as well as county and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A10: The Effects of County Head with Strong Mobilization Capacity (Controlling for Age)**

	All		Home-Grown Party Secretaries		Non-Home-Grown Party Secretaries	
	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee
	(1)	(2)	(3)	(4)	(5)	(6)
Year in Office (Party Secretary)	-0.007** (0.003)	-0.011*** (0.004)	-0.002 (0.006)	-0.007 (0.006)	-0.007 (0.005)	-0.010 (0.006)
Year in Office (County Head)	-0.001 (0.004)	-0.007* (0.004)	0.001 (0.006)	-0.010 (0.006)	-0.003 (0.007)	-0.009 (0.006)
Year in Office (Party Secretary) × Year in Office (County Head)	0.001 (0.001)	0.003** (0.001)	0.000 (0.002)	0.002 (0.002)	0.002 (0.002)	0.004** (0.002)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,914	2,914	1,526	1,526	1,388	1,388

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of control variables (*logged total government revenue per capita, log population, log GDP per capita, share of intergovernmental transfers in total gov. revenue, party secretary's age and its squared term, county head's age and its squared term*), constant as well as county and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A11: Education Spending Preferences of Party Secretaries (Controlling for illiterate rate)**

	Total Spending	Spending on Public Employee
	(1)	(2)
County Party Secretary Political Connection	-0.015* (0.008)	-0.021** (0.009)
Year in Office	0.004 (0.008)	-0.006 (0.008)
Year in Office <sup>2</sup>	-0.001 (0.001)	-0.000 (0.001)
Log(Total Gov. Rev. Per Capita)	0.246*** (0.026)	0.204*** (0.030)
Log (Population)	-0.098*** (0.014)	-0.124*** (0.015)
Log(GDP Per Capita)	-0.017 (0.014)	-0.034** (0.014)
Share of Intergovernmental Transfers in Total Gov. Revenue	-0.006*** (0.001)	-0.007*** (0.001)
Illiterate Rate (Aged 15+)	-0.010*** (0.002)	-0.012*** (0.002)
Prefecture FE	Yes	Yes
Year FE	Yes	Yes
Observations	4,301	4,301

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of the constant as well as county and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A12: The Effects of County Head with Strong Mobilization Capacity (Illiterate rate 15+ ≤ 5.99%)**

	All		Home-Grown Party Secretaries		Non-Home-Grown Party Secretaries	
	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee
	(1)	(2)	(3)	(4)	(5)	(6)
Year in Office (Party Secretary)	0.003 (0.006)	-0.000 (0.006)	0.006 (0.008)	0.004 (0.009)	0.002 (0.010)	-0.005 (0.010)
Year in Office (County Head)	0.003 (0.009)	-0.000 (0.009)	0.004 (0.010)	0.001 (0.011)	-0.007 (0.016)	-0.013 (0.014)
Year in Office (Party Secretary) × Year in Office (County Head)	-0.001 (0.002)	0.001 (0.002)	-0.003 (0.003)	-0.001 (0.004)	0.002 (0.003)	0.005 (0.003)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,075	1,075	568	568	507	507

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of control variables (*logged total government revenue per capita, log population, log GDP per capita, share of intergovernmental transfers in total gov. revenue*), constant as well as county and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A13: The Effects of County Head with Strong Mobilization Capacity (Illiterate rate 15+ > 5.99% and Illiterate rate 15+ ≤ 9.28%)**

	All		Home-Grown Party Secretaries		Non-Home-Grown Party Secretaries	
	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee
	(1)	(2)	(3)	(4)	(5)	(6)
Year in Office (Party Secretary)	-0.022*** (0.005)	-0.021*** (0.006)	-0.006 (0.009)	-0.006 (0.009)	-0.036*** (0.008)	-0.037*** (0.009)
Year in Office (County Head)	-0.019*** (0.006)	-0.018*** (0.007)	0.011 (0.012)	-0.001 (0.012)	-0.038*** (0.009)	-0.030*** (0.010)
Year in Office (Party Secretary) × Year in Office (County Head)	0.006*** (0.002)	0.006*** (0.002)	0.000 (0.004)	0.002 (0.003)	0.010*** (0.002)	0.009*** (0.003)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,138	1,138	615	615	523	523

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of control variables (*logged total government revenue per capita, log population, log GDP per capita, share of intergovernmental transfers in total gov. revenue*), constant as well as county and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A14: The Effects of County Head with Strong Mobilization Capacity (Illiterate rate 15+ > 9.28% and Illiterate rate 15+ ≤ 13.44%)**

	All		Home-Grown Party Secretaries		Non-Home-Grown Party Secretaries	
	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee
	(1)	(2)	(3)	(4)	(5)	(6)
Year in Office (Party Secretary)	-0.001 (0.005)	-0.002 (0.005)	0.007 (0.008)	0.008 (0.010)	-0.001 (0.008)	-0.009 (0.008)
Year in Office (County Head)	0.004 (0.006)	-0.003 (0.006)	0.002 (0.011)	-0.013 (0.012)	0.004 (0.010)	-0.005 (0.010)
Year in Office (Party Secretary) × Year in Office (County Head)	-0.001 (0.002)	0.000 (0.002)	-0.002 (0.003)	0.001 (0.003)	0.001 (0.003)	0.003 (0.003)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,142	1,142	592	592	515	515

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of control variables (*logged total government revenue per capita*, *log population*, *log GDP per capita*, *share of intergovernmental transfers in total gov. revenue*), constant as well as county and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1



**Table A15: The Effects of County Head with Strong Mobilization Capacity (Illiterate rate 15+ > 13.44%)**

	All		Home-Grown Party Secretaries		Non-Home-Grown Party Secretaries	
	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee	Total Spending	Spending on Public Employee
	(1)	(2)	(3)	(4)	(5)	(6)
Year in Office (Party Secretary)	-0.003 (0.007)	-0.011 (0.007)	0.007 (0.008)	-0.024** (0.011)	-0.001 (0.008)	-0.006 (0.011)
Year in Office (County Head)	-0.002 (0.007)	0.000 (0.009)	0.002 (0.011)	-0.012 (0.011)	0.004 (0.010)	0.001 (0.013)
Year in Office (Party Secretary) × Year in Office (County Head)	0.002 (0.002)	0.002 (0.002)	-0.002 (0.003)	0.008** (0.003)	0.001 (0.003)	0.001 (0.003)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,019	1,019	592	454	515	565

Note: Dependent variables are per student spending with log transformation. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of control variables (*logged total government revenue per capita, log population, log GDP per capita, share of intergovernmental transfers in total gov. revenue, and illiterate rate (aged 15+)*), constant as well as county and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A16: The Strategies of Spending on Education Personnel**

	Basic Wage	Supplemental Wage	Other Wage	Benefits	Social Security Contribution	Edu. Employee
	(1)	(2)	(3)	(4)	(5)	(6)
Appointed by Current Prefecture Party Secretary = 1	-0.008 (0.009)	-0.058** (0.023)	-0.139** (0.050)	-0.040 (0.035)	-0.048 (0.050)	-0.004 (0.005)
Year in Office	-0.007 (0.008)	-0.088*** (0.022)	-0.031 (0.044)	-0.043 (0.033)	-0.046 (0.043)	0.007 (0.005)
Year in Office <sup>2</sup>	0.002 (0.001)	0.012 (0.004)	0.003 (0.007)	0.007 (0.005)	0.004 (0.007)	-0.001 (0.001)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,507	3,830	3,522	3,665	4,242	4,507

Note: Dependent variables are per student spending with log transformation, except for education employees, which is not scaled by the number of students. Clustered standard errors at the county level are reported in the parentheses. We do not report the coefficient estimates of control variables (*logged total government revenue per capita, log population, log GDP per capita, and share of intergovernmental transfers in total gov. revenue*), constant as well as county, prefecture, provincial, and year dummies. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A17: County Socioeconomic Indicator Comparison with National Sample**

		<b>National Sample</b>	<b>Selected Provinces</b>
Total Revenue Per Capita	<i>Mean</i>	1086.86	1114.76
	<i>Std. Dev.</i>	1266.94	1291.56
Total Spending Per Capita	<i>Mean</i>	960.29	820.63
	<i>Std. Dev.</i>	1094.88	810.10
Local Budgetary Education Spending Per Capita	<i>Mean</i>	220.82	195.12
	<i>Std. Dev.</i>	151.42	115.40
GDP Per Capita	<i>Mean</i>	10021.12	12056.21
	<i>Std. Dev.</i>	21425.68	13576.76
Total Population	<i>Mean</i>	444870.00	550433
	<i>Std. Dev.</i>	342087.10	331412

Source: Authors' database

## **Online Appendix – 2: An Outline of the Interviews on Local Governance System of Education**

As part of the bureaucratic system, the educational system is very hierarchical in China, and the distribution of local education spending and the motivation of local education bureaus are shaped by pressures and incentives embedded in a wider top-down governance system. The fieldwork conducted in past ten years tried to understand the key political determinants of local policies concerning education finance, the power distribution of appointing and allocating educational staff, and the use of incentives in teacher management. The findings from our fieldwork are very helpful for us to understand the variation of educational outcomes in areas with the similar fiscal and economic conditions.

### ***1. Decision-Making Power in Educational Governance***

In our interviews, we identified three key areas of decision-making that pertain to the education governance system.

#### **1) The appointment and allocation of educational staff**

- At what level the decision on hiring and dismissal of school district managers and high school principals is taken?
- At what level the decision on hiring and dismissal of township center / village school principals is taken?
- How strictly does the county education bureau hire teachers?
- Which body approves the assignment of new teachers and the transfer of teachers between rural and urban schools within the county?
- How much autonomy do the local school district managers have regarding the assignment the teachers and promotion or demotion the school principal within the district?

#### **2) Managerial Autonomy of School Finance**

- How the decisions for fiscal budgeting on school infrastructure, teacher's salary, and public expense in education sector are made?
- To what extent are local school district manager or school principals endowed with fiscal autonomy to determine the public expense of school as well as the allowance and bonus of teachers?
- What is the impact of the fiscal centralization reform on the allocation of decision-making power in education sector?

### 3) Teacher Incentive Scheme

- What kind of quality evaluations are enforced at school district/school level?
- Does the evaluation of teacher accompany with the incentive scheme made by county education bureaus or school principals?
- How is the incentive scheme linked to teachers' long term salary (through their professional grade) and their short term income (through reward and bonus)?

### ***2. Case Studies on Educational Governance Reform***

Under a centralized political system, local politicians often have the incentives to use social spending for personal gains. During the interviews, we paid special attention to the potential constraints to the local politicians when the local governments responded to distorted priorities by diverting funds away from schools.

- How do the political elites in education sector resist against the power abuse by higher-level politicians in the political system?
- Why do some counties promote the decentralized reform on local education governance system? Who has the incentive to promote the reform? Who benefit from the reform?
- What are the strategies and sequences of the decentralization reform? How is managerial power distributed before and after the reform?
- If there are serious political conflicts among local political elites, who usually are de facto policy makers and how do they resolve the conflicts?