

Local Political Chief Turnover and Economic Growth: Evidence from China

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Abstract

It is widely believed that the rotation and promotion system of local political chiefs plays an important role in China's economic miracle. In this paper, however, we focus on the potential cost of the inherent frequent turnovers of local chiefs. Based on a new manually-collected dataset on prefectural-level local chiefs between 1983 and 2012, our empirical results suggest that Chinese Communist Party (CCP) chief turnover would lead to a 0.35 percentage points decrease of local GDP growth rate in the current year, and 0.23 percentage points decrease in the following year. This effect especially concentrates on government-controlled fields, such as investment, fiscal revenue and expenditure. We also provide evidences that the organization friction, especially the successor CCP chiefs' unfamiliarity with the city and the colleagues, is a major reason of such negative turnover effect.

Keywords: local official turnover; economic growth; organization friction; China.

JEL classification: J63, O43, R50

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1. Introduction

Governance structure at the local government level plays a key role in China's economic development, especially during the reforming era (Xu, 2011). Two essential institutional arrangements in this system are highlighted in the literature. Firstly, with the stylized “*M-form*” regionally decentralized authoritarian system, each regional government has a high degree of autonomy in economic development (Jin, Qian, & Weingast, 2005; Maskin, Qian, & Xu, 2000). Meanwhile, the centralized political governance still enables the central government to retain personnel control in relation to local officers' political careers (Edin, 2003; Tsui & Wang, 2004; Xu, 2011). Local officers are evaluated by their superior level of governments in accordance with the tasks and targets, where the performance in local economic growth would dominate in most cases (Chen, Li, & Zhou, 2005; Li & Zhou, 2005). Therefore, local officers have both the necessary resources and strong incentives to devote to boosting local economic growth, which is widely believed to have greatly contributed to China's economic miracle during the past four decades (Blanchard & Shleifer, 2001; Breznitz & Murphree, 2011; Chen, 2004).

In this paper, however, we focus on the potential cost of this incentive system, based on a new manually-collected turnover dataset on prefectural-level local chiefs. As an inherent precondition for the effectiveness of the personnel control and incentive system, local chiefs have been rotated at a high frequency (Xu, 2011). Legally, one term for prefectural-level local chiefs, either the secretary of the Chinese Communist Party (CCP) municipal committee (*shi wei shu ji*) or the mayor (*shi zhang*), lasts for 5 years, and each officer is allowed to take the position for two consecutive terms at most (i.e., 10 years). However, as will be depicted in detail later, between 1983 and 2012, the local CCP chiefs and mayors in 283 prefectures were only in position for 3.7 years and 3.3 years, respectively, on average. Only 24.6% of local CCP chiefs and 16.7% of mayors finished one full term (i.e., 5 years), while only 10 out of the 2,172 CCP chiefs and 8 out of the 2,387 mayors reached the ceiling of 10 years. By contrast, 20.8% of local

CCP chiefs and 26.4% of mayors left their positions within 24 months. Considering the key role of local chiefs, such a frequent turnover naturally leads to the question of whether it would impact local economic development negatively.

A large body of corporate finance literature has concluded that there is a so-called “succession effect”, whereby turnovers of companies’ senior executives (e.g., CEO or CFO) would have negative effects on corporate performance, both in the short- and long-run (Curtis, Loy, & Hillen, 1986; Grusky, 1963; Schepker, Kim, Patel, Thatcher, & Campion, 2017). Several recent studies also reveal similar effects associated with political leader turnovers. McGillivray and Smith (2004) found that the leadership turnover would negatively impact on trading relationship between states, especially in autocratic states. Jones and Olken (2005) found that exogenous national leadership transitions, represented by the deaths of leaders, are associated with decreases in GDP growth rates. Bobick and Smith (2013) pointed out that countries are more likely to involve in WTO disputes after national leader turnovers. Based on a cross-country dataset, Aisen and Veiga (2013) provided further empirical evidence of political instability associated with a lower economic growth rate. The empirical analysis by Smith (2014) based on voting in the UN General Assembly revealed that leader turnover would increase the likelihood of policy realignment. However, no such empirical evidence has yet been provided for the subnational level local officers, especially in the context of China.

The empirical analysis in this paper suggests a statistically and economically significant loss in economic growth associated with local officer turnovers, especially for the prefectural-level CCP chiefs. Controlling for other factors, the real GDP growth rate would be approximately 0.35 percentage points lower in the city if there was a CCP chief turnover in the course of a year, and a halving negative effect would persist in the following year. Taking 2012 as an example, such an effect would translate as a GDP loss of more than 100 billion yuan RMB. Further investigations suggest that such a negative effect mainly results from economic sectors with higher exposures to

government impacts, such as investment, fiscal revenue, and fiscal expenditure. These results remain consistent in various robustness checks, including when potential biases, such as reverse causality, are considered.

We also shed some light on the potential reasons for such loss. In corporate finance literature, organization friction has been suggested to be a key reason for the succession effect. More specifically, the negative succession effect either only exists, or is, at least, enhanced, if the successor had no previous working experience in the firm (Barron, Chulkov, & Waddell, 2011; Hill, 2005), in the industry (Karaevli, 2007), or as a senior executive (Büttner, Schäffer, Strauss, & Zander, 2013; Graffin, Carpenter, & Boivie, 2011). Our analysis reaches a similar conclusion. According to our heterogeneity analysis, the negative effect would either be mitigated or even disappear if the successor were more familiar with the city and/or other core cadres in the city. Meanwhile, we also provide some preliminary evidence that the policy instability resulting from CCP chief turnover might also partly explains the loss in economic growth.

The contribution of this paper is twofold. Firstly, this paper contributes to a more comprehensive understanding of both the role and the impact of the local cadre system in China. Most existing literature in this field has concentrated on the linkage between local chiefs' performance and their political careers, in addition to how such a criterion affects the behavior of local chiefs (Jia, 2017; Piotroski, Wong, & Zhang, 2015; Piotroski & Zhang, 2014; Yao & Zhang, 2015). Some recent studies have started to emphasize the potential "political cycles", but they have mainly focused on how local officers' behaviors change with their length of time in the position (Alt, Bueno de Mesquita, & Rose, 2011; Guo, 2009; Smart & Sturm, 2013; Ru, 2018). In this paper, we provide one of the first direct empirical evidences on the effect of turnovers of local officers. Second, we also contribute to the growing body of literature on political stability and organization friction by providing new empirical evidence on the local government level.

The rest of this paper proceeds as follows. Section 2 reviews both the design of political

systems in China and the related literature. The dataset and the identification strategy are described in Section 3. Section 4 presents our main empirical evidence and robustness checks. Section 5 discusses the potential reasons for the effect of turnovers of local officers. The final section concludes the paper.

2. Institutional Backgrounds

The bureaucratic hierarchy of Chinese government consists of five layers, namely, central, provinces, prefectures (or municipals), counties, and townships; the latter four levels are defined as the local/subnational governments.¹ In this paper, we focus on the prefectural-level city governments, which play a key role in local economic affairs for the following three reasons. Firstly, prefectural-level governments are the lowest hierarchy that has the right to make local decrees and rules,² which are valid within the jurisdiction of the corresponding prefectural-level city and have a substantial impact on local economic development; by contrast, lower level governments (i.e., county- and township-level) are not endowed with such a right. Secondly, prefectural-level governments are also the highest hierarchy that has direct impacts on local economic affairs, such as urban infrastructure development, attracting foreign direct investment (FDI), and urban land supply. Finally, in most cases, prefectural-level cities are also empowered to supervise subordinate county and county-level city governments. Therefore, we focus on the turnover of prefectural-level city chiefs in this paper. During the sample period of 1983–2012, the number of prefectural-level cities in China increased from 128 to 283.³

In each prefectural government, just as with other levels of subnational governments, there are two leading cadres: the secretary of the CCP municipal committee (hereafter, CCP chief) and the mayor. According to the principle of “The Party exercises overall leadership over all areas of endeavor in every part of the country”, as described in the

¹ See Xu (2011), for example, for more details and statistics on Chinese government structure.

² Source: Article 82 of Legislation Law of the People’s Republic of China. The full text is available at http://english1.english.gov.cn/laws/2005-08/20/content_29724.htm.

³ The number had increased to 294 by the end of 2017.

Constitution of the Communist Party of China, the CCP chief essentially serves as the top leader of the city. As the leader of the local bureaucratic system, he/she is not only in charge of local economic, political, cultural, and ecological affairs,⁴ but also has powerful rights over the political careers of the personnel of local cadres.⁵ The mayor, who is also the deputy secretary of the CCP municipal committee, would concentrate more on daily affairs and implementing policies. Therefore, it is reasonable to expect that the turnovers of CCP chiefs are more likely to affect local development.

In 1982, the Central Committee of the CCP issued *The Decision to Establish the Retirement System of Veteran Cadres*, which abolished the previous life-long tenure arrangements and established the current cadre turnover system. That is also why we chose 1983 as the beginning of our sample period. In the current system, in theory, the turnover of the local chief could occur due to either election or appointment. If we take the prefectural-level leaders as an example: The Municipal CCP Congress, which is held every 5 years, elects the committee members, including the committee secretary (i.e., the CCP chief defined in this paper). Similarly, the Municipal People's Congress also elects the mayor every 5 years. Accordingly, in theory, one term for a local chief would last for 5 years, while each officer is allowed to take the position for a maximum of two consecutive terms (i.e., 10 years). However, few turnovers of local chiefs occur via such elections; by contrast, the turnovers are dominated by appointments from governments of upper level. The Municipal CCP chiefs can be appointed directly by the provincial-level CCP committee. The procedures for appointing mayors are a bit more complicated.⁶ Firstly, the provincial CCP committee dismisses the deputy secretary position of the previous mayor and appoints the proposed successor mayor as the new deputy secretary. Then, the previous mayor resigns the mayoral position to the Standing Committee of the Municipal People's Congress, and the latter appoints the

⁴ Source: The Regulations on the Work of CCP Local Committees. The full text is available at <http://cpc.people.com.cn/GB/64162/71380/71387/71589/5526691.html>.

⁵ Source: The Rules for the Selection and Appointment of Party and Government Leaders. The full text is available at <http://news.12371.cn/2014/01/15/ART11389784871616867.shtml>.

⁶ Source: Organic Law of the Local People's Congresses and Local People's Governments of the People's Republic of China. The full text is available at http://english.court.gov.cn/2016-04/13/content_24509784_3.htm.

proposed successor mayor as the acting mayor. As a final step, the appointment will be confirmed in a single-candidate election in the Municipal People's Congress held in the following year. Similar arrangements also apply to all other subnational-level local chiefs.

These institutional arrangements enable the upper CCP leaders to retain personnel controls on subordinate local officers by evaluating their performance and rotating, promoting, or even terminating these subordinate local officers accordingly. This provides local officers with strong incentives to serve upper government's policy agendas, such as economic development. Chen et al. (2005), Li and Zhou (2005), and Sheng (2010) conducted empirical analysis based on provincial cadre turnover data and found that the probability of promotion is positively related to their performance as regards GDP growth within their tenure. Wu et al. (2014) and Guo (2007) revealed a similar phenomenon based on prefectural- and county-level data, respectively. This finding was then challenged by Opper and Brehm (2007), who argued that political connection is more important in provincial leaders' promotion. However, more recent studies have confirmed that, even considering the potential impacts of political connection, economic performance still significantly affects the probability of promotion of local officers, especially in lower-layers of government (Chen & Kung, 2016; Jia, Kudamatsu, & Seim, 2015; Landry, Lü, & Duan, 2017).

While most of the above literature emphasizes that such a personnel control and incentive system has greatly contributed to the rapid economic development in China, it has also led to an unintended consequence—potential political instability in the local governments. To ensure the effectiveness of the personnel control and incentive system, especially to make the promise of promotion convincing, the turnover rate of local chiefs has been kept at a high level (Xu, 2011; Yao & Zhang, 2015). As depicted in panel A of Fig. 1 (more details on the underlying data will be described in the following section), during the sample period of 1983–2012 there were 2,172 CCP chiefs in 283 prefectural-level cities; of these, 1,912 CCP chiefs have finished their tenure with an

average length of 3.7 years (the median value was even lower, 3.5 years), which is significantly lower than either a full term of 5 years or the ceiling of 10 years. Only 24.6% of these CCP chiefs finished one full term, and a negligible number (10 CCP chiefs) finished two terms. By contrast, 20.8% of local CCP chiefs left their positions within 24 months, and 3.4% left without going for a full year. As shown in the second panel of Fig. 1, the turnover frequency was even higher for the mayors. For all 2,387 mayors in the sample (2,126 of these have finished their tenure), the average and median tenure lengths were 3.3 and 3.0 years, respectively. Only 16.7% of mayors finished one full term, and 8 finished two terms, while more than one quarter (26.4%) left within two years, and 5.8% left within one year. The two panels in Fig. 2 then calculate the average tenure lengths of outgoing officers by year. There were substantial fluctuations, but we could not observe any clear trend of either increase or decrease during these three decades. The key task of the following empirical analysis is to investigate whether (and why) such a frequent turnover of local chiefs would have negative impacts on local economic development.

3. Data and Empirical Strategy

3.1 Data

The following empirical analysis covers all 283 prefectural-level cities in mainland China, including 28 province capital cities, 5 cities specifically designated in the state plan (*ji hua dan lie shi*; Dalian, Qingdao, Ningbo, Xiamen, and Shenzhen), and 250 other cities. It is noteworthy that the cities of Beijing, Tianjin, Shanghai, and Chongqing are not included since they are provincial-level municipalities.

As a most important dataset, we manually collected information on all CCP chiefs and mayors of these 283 cities between 1983 and 2012.⁷ The procedures of data collection included two steps. Firstly, we collected the name, starting month, and ending month of each CCP chief/mayor from the official website of local governments and local

⁷ 155 of the 283 prefectural-level cities were founded after 1983. For these cities, we traced their leader information from when they were founded.

yearbooks. There were 2,172 CCP chiefs and 2,387 mayors in the sample. Secondly, we tried collecting detailed biographic information for these cadres from official websites, newspapers, and local chronicles; the information includes gender, birth year and place, ethnic group, education level, and previous working experience. Finally, we were able to get access to such information for approximately 95% of these officers. To the best of our knowledge, this is the first academic dataset on prefectural-level city officers that dates back to 1983. Table A1 in the appendix provides summary statistics on key personal attributes of these CCP chiefs and mayors.

Based on this novel dataset, we are most interested in the features of turnovers of local leaders, especially the CCP chiefs. There were 1,674 CCP chief turnovers in the 6,705 city-years in the sample. There were 14 city-years with two CCP chief turnovers (i.e., 28 turnovers) within a single calendar year, and 1,646 city-years with one CCP chief turnover. The upper panel of Table 1 sheds more light on the turnovers of CCP chiefs. Consistent with following empirical analysis, we only concentrate on those samples with a single turnover event in a year. Among those 1,646 city-years, 33 (or approximately 2%) turnovers could be grouped as “irregular” turnovers; that is, the corresponding provincial-leader had to appoint a successor because the predecessor had either died, resigned, or been arrested for corruption. The other 1,613 turnovers could be defined as “regular” turnovers that were intentionally designated by provincial leaders. Moreover, there was no gap between two consecutive CCP chiefs in 1,514 turnovers (92%), and the successors were appointed at the same time as when the predecessors left the position. However, in the other 132 turnovers (8%), there were gaps ranging from 1 months to 11 months, with an average of 1.92 months.

We can also distinguish these CCP chief turnovers by features of the predecessors/successors. For the predecessors, 1,001 (60.8%) were promoted after they left the CCP chief positions,⁸ 589 (35.8%) CCP chiefs were rotated to another position

⁸ Following Wu et al. (2014), a cadre is defined as being promoted, if either: (1) the next job is a province-level or higher position; (2) a city-level mayor's next job is as a city-level CCP Secretary (either in the same or another city); (3) a cadre in other than a provincial capital is moved to the same position in a provincial capital; or (4) the cadre's new position is similar to the previous one but also entails selection as the member of the provincial CCP

of the same rank, while another 27 (1.6%) were retired.⁹ 718 (43.6%) of these predecessors had finished a full term, which equals 5 years, according to the related regulation as stated before. For the successors, 843 (51.2%) came from the same prefectural city, 766 (46.5%) came either from other cities, or from provincial-level bureaus, or from state-owned enterprises (SOEs), in the same provinces, while the other 19 (1.2%) came from either the central government or other provinces.¹⁰ Of these successors, 510 (31%) had previous experiences as chief leaders (either CCP chief or mayor) of prefectural-level cities.

The second panel of Table 1 provides the corresponding statistics on mayor turnovers. One most important finding here is that many mayor turnovers were actually the “by-products” of CCP turnovers—of the 1,882 mayor turnovers, 678 (36%) occurred because the predecessor mayors were promoted to be CCP chiefs of the current cities. This provides a second reason why we choose to focus on the CCP chief turnovers in the following empirical analysis.

Next, we further introduce variables on the economic performances of these prefectural-level cities based on official statistics. The key variable is annual GDP growth rate. One challenge here is that China only formally started to monitor GDP in 1991, and we choose to extend the time series to 1984 in one robustness check by adopting the statistics on the growth rates of the total output of the primary and secondary industries in the 1980s. In addition, we introduce other city-level variables, including investment, fiscal revenue, fiscal expenditure, consumption, FDI, and export. Table 2 provides the definition and major summary statistics of these city-level data. All the monetary variables are in real term. The variables are winsorized at 1% to avoid potential outliers.

3.2 Empirical strategy

standing committee (*sheng wei chang wei*). In all other cases, except for retirements, we say that the cadre stays at the same rank.

⁹ There are 29 (1.8%) missing values.

¹⁰ There are 17 (1.1%) missing values.

We adopt a straightforward empirical strategy to investigate the potential effect of chief turnovers on local economic growth:

$$D.\log(GDP)_{i,j,t} = \alpha + \beta TURNOVER_{i,j,t} + \delta_{i,t} + \kappa_{j,t} + \chi_i + \eta_t + \varepsilon_{i,j,t} \quad (1)$$

where the dependent variable measures the GDP growth in city i , province j , and year t ; the key dummy variable of $TURNOVER_{i,j,t}$ equals 1 if a CCP chief turnover occurred—thus, the coefficient of β measures the turnover effect and is our main interest; the set of $\delta_{i,t}$ refers to the city-level control variables, such as lagged GDP level, while the set of $\kappa_{j,t}$ refers to the province-level control variables, such as provincial leader attributes; χ_i and η_t refer to city and year fixed effects, respectively; and the error term $\varepsilon_{i,j,t}$ is clustered at the city level. One might worry about some biases associated with β , such as the potential reverse causality. In section 4.2, we will discuss such biases in detail and rule out their effects.

4. Empirical Results

4.1 Baseline findings

Table 3 presents the baseline findings following eq.(1). The control variables are introduced step by step, while the coefficient of the CCP chief turnover dummy is always statistically significant and remains qualitatively unchanged. According to our preferred specification, in column (5), where we have controlled for lagged GDP level, city and year fixed effects, mayor turnover (excluding concurrent CCP chief turnover), provincial-level CCP chief turnover, CCP chiefs' personal characteristics, and linear year trends for each city, the coefficient of the local CCP chief turnover dummy suggests that, controlling for other factors, the GDP growth rate would be approximately 0.35 percentage points lower if a CCP chief turnover occurred in this city-year. It is also noteworthy that, in general, most control variables have no significant effect on economic growth; in particular, the mayor turnovers alone (i.e., mayor turnovers without concurrent CCP chief turnovers) have no significant effect on GDP growth. In column (6) we extend the growth rates of GDP to 1983, with growth

rates of total output of the primary and secondary industries. The coefficient of the local CCP chief turnover dummy remains significantly negative, while the magnitude is a bit larger. Therefore, the results are consistent over the whole period, although we choose column (5) as our baseline results since the GDP measure is more reliable.

We also try replacing the CCP chief turnover dummy with its various orders of lagged terms to investigate the temporal pattern of such negative effects. As depicted in Fig. 3 (the estimation results are listed in Table A2), the negative effect not only exists in the turnover year but also exists significantly in the following year, with almost half the magnitude (0.23 percentage points). The coefficient is still negative two years later, but it becomes statistically insignificant.

While a decrease of 0.35 percentage points in GDP growth rate seems to be trivial in the current context of China, the overall effect is still remarkable. Assuming that one third of the prefectural-level cities experience CCP chief turnovers each year, the aggregated loss in total output would reach 104.5 billion yuan RMB (or 16.5 billion US dollars) around the country in 2012, the last year of our sample period. The overall loss in all three decades will be as high as 2,732 billion yuan RMB (or 431.7 billion US dollars). By contrast, the overall loss will be reduced by either 39.4%, if the average tenure length could increase to 5 years (i.e., one full term), or 69.5%, with an average tenure length of 10 years (i.e., two full terms).

We also test the potential channels of such negative effects by replacing GDP growth rates with other dependent variables. As listed in Table 4, the negative effect only exists in economic fields with higher exposures to government affects, such as investment (including government investment and private investment), fiscal revenue, and fiscal expenditure. Holding other factors constant, in a city-year with CCP chief turnover, the real annual growth rate would be 1.4 percentage points lower for investment, 1 percentage points lower for fiscal revenue, and 0.7 percentage points lower for fiscal expenditures. By contrast, the negative effect is insignificant in more market-oriented fields, such as consumption, FDI, and export.

Furthermore, we test the stability of this negative effect across time and space by introducing various interaction terms. As listed in Table 5, in the first two columns, we introduce the interaction terms with period and region dummies, respectively, and the results show a stable pattern with time and regions. In column (3) we introduce the interaction term with a continuous variable on provincial-level marketization level (Fan, Wang, & Zhu, 2011). The result indicates that the negative effect becomes weaker in provinces with a higher marketization level, which is consistent with the previous finding that the negative effect mainly comes from areas with more exposure to government effects.

4.2 Robustness checks

A major potential problem in the above results is the potential endogeneity, or more precisely, the potential reverse causality—if a CCP chief was removed due to his/her bad performance in boosting local economic growth in the current year, this might also lead to a negative β in the previous results. Although this explanation itself is inconsistent with the findings of Li and Zhou (2005) that local leaders are evaluated based on their overall performance over the whole tenure, rather than in any specific year, we rule it out in three ways.

First, we follow the empirical strategy of Jones and Olken (2005), who adopted events of country leader deaths in their analysis of political instability. Similarly, in the first column of Table 6, we introduce an interaction term between the CCP chief turnover dummy and a dummy for “irregular” turnovers, as defined in the previous section. The results suggest that the negative effect is almost indifferent between the “regular” and “irregular” turnovers. Secondly, in the second column, we introduce the interaction term with a dummy for predecessors who had been in position for at least 5 years. It is reasonable to expect that these turnovers are more likely to be “exogenous”, but the interaction term is insignificant. Finally, in the last column, we introduce the interaction term with a dummy for predecessors who were promoted. Obviously, it is impossible that these turnovers occurred due to the incompetence of the predecessors; again, the

interaction term is insignificant. Therefore, it is clear that the negative turnover effect does not result from reverse causality.

Another potential concern comes from measurement error. It is widely believed that manipulation of GDP statistics data is a problem in current China that cannot be neglected (Koch-Weser, 2013; Wallace, 2016). If local leaders always over-report the GDP growth rate but have fewer incentives for manipulation in turnover years, this would also lead to a negative β in the previous results. This explanation is inconsistent with the existing literature. Wallace (2016) pointed out that local officers prefer to over-report the GDP growth rate in turnover years to attract more positive attention from upper officers in a period of political sensitivity. That said, we still introduce the micro-level firm data from the National Tax Survey as our robustness check. This (imbalance) panel dataset, which is collected by the State Taxation Administration in China, includes 1,823,647 firm-year observations from 820,775 firms from 2007 to 2011.¹¹ As listed in Table 7, CCP chief turnover has a significant negative influence on firms' operation (normalized net cash flow of operating activities), employment (number of new employees), and investment (fixed asset increment on equipment). These results provide not only more insights into the micro-level mechanism of the above macro-level findings but also evidence that such negative effects are less likely to be driven by manipulation of GDP statistical data.

5. Possible explanations of the turnover effect

The empirical analysis above provides strong evidence for the existence of a significant negative effect on local economic growth associated with turnovers of CCP chiefs. The final question concerns why such a turnover effect exists.

As reviewed in the existing corporate finance literature, organization friction plays a key role in the so-called “succession effect” in the corporate sector. We are curious

¹¹ Table A3 provides major summary statistics. We focus on the net cash flow of operating activities, number of new employees, and fixed asset increment on equipment. All variables are normalized by total assets at the beginning of the year and winsorized at 2% by year.

about whether such organization friction also works in the turnovers of local leaders in China. In particular, we focus on three types of potential frictions following the corporate finance literature; these are frictions due to the successor's unfamiliarity with the new job, unfamiliarity with the new city, and unfamiliarity with the new colleagues. For these purposes, we divide the CCP chief turnovers into several groups based on the characteristics of successors and replace the turnover dummy in eq.(1) with multiple corresponding dummies. Table 8 summarizes the coefficients of these dummies, while the control variables are consistent with Table 3.

Firstly, to test the potential frictions due to successors' unfamiliarity with the new job, we divide the turnovers into two groups according to whether the successors had previous working experiences as prefectural-level city leaders (CCP chief or mayor). As shown in Panel A, the negative turnover effect exists significantly in both groups, while a t-test also indicates that there is no significant difference between them. Thus, the negative turnover effect is less likely to be driven by successors' unfamiliarity with their new obligations as CCP chiefs. In the second panel, we turn to the familiarity with the city. The successors are grouped into three categories according to their previous positions immediately before taking the CCP chief position. These categories are: from the current city, from other cities in the same province, and from either the central or other provinces. The results suggest that, although the negative turnover effect significantly exists in all three groups, the magnitude still increases with the degree of successors' unfamiliarity with the city. The magnitudes of the three coefficients become larger in turn, and the t-test shows that there is significant difference among the three groups.¹² Finally, we investigate whether familiarity with the new colleagues matters. Here, we focus on the most important member in the group, the mayor. We carefully check the resumes and identify whether each successor CCP chief and his/her partner mayor had any degree of overlap in their previous positions, and we group the successors into two categories accordingly. The results suggest that the negative

¹² We also try grouping the successors by whether they had ever worked in the city, including but not limited to the last position before CCP chief. The results conclude in very similar patterns.

turnover effect totally disappears if the successor CCP chief and the corresponding mayor had co-working experiences before. In summary, these results suggest that the organization friction mechanism also works in explaining the negative turnover effect in Chinese local governments. In particular, the negative effect would not exist if a successor CCP chief was very familiar with either the city or his/her new colleagues.

Besides organization friction, there are many anecdotes on the policy discontinuity associated with CCP chief turnovers,¹³ which might also explain the negative turnover effect. We find some *indirect* evidence of this mechanism. As listed in Table A4, the negative turnover effect would either be mitigated or even disappear if: (1) the predecessor was promoted into a position from which he/she could at least partly control the political career of the successor (e.g., member of the provincial CCP standing committee), and, thus, it is reasonable to infer that the successor had to show sufficient respect for the predecessor's policies; or (2) the successor was over 55 when he/she took the CCP chief position, and, thus, was less aggressive due to a much lower probability of being promoted. However, we could not find *direct* evidence of the policy discontinuity associated with CCP chief turnovers, either by text mining CCP chiefs' speeches or by investigating the behavior of local governments in relation to land supply,¹⁴ leaving an interesting topic for future research.

6. Conclusions

In this paper, we investigate the effect of prefectural-level CCP chief turnover on local economic growth, as well as the underlying mechanism involved. Based on a new manually-collected turnover dataset on prefectural-level local chiefs, we find that turnover of CCP chiefs will lead to a 0.35 percentage point decrease in the GDP growth rate in the current year, and a 0.23 percentage point decrease in the following year. This effect mainly comes from government-controlled fields, such as investment, fiscal

¹³ As a most recent example, Premier Keqiang Li, on his press conference on March 20, 2018, admitted that the phenomenon "New officials disavow obligations undertaken by their predecessors" was pervasive in China. The full text is available at <http://www.chinadaily.com.cn/a/201803/21/WS5ab1b621a3106e7dcc1440e9.html>.

¹⁴ The results are available on request.

revenue, and expenditure, instead of more market-oriented fields, such as consumption, foreign direct investment, and exportation. Furthermore, we provide evidence that organization friction, especially the successor CCP chiefs' unfamiliarity with the city and their colleagues, is a major reason for such a negative turnover effect.

It is noteworthy that, our results do not necessarily suggest that the current cadre rotation system in China is ineffective in boosting urban developments, but we highlight the importance of investigating the potential costs associated with this system. There are several topics on the future research agenda. Firstly, and perhaps most importantly, a comprehensive evaluation of the effect of the rotation and promotion cadre system, including both the benefits revealed in the literature and the costs concluded in this paper, is of paramount importance from the policy perspective. In addition, more investigations of the turnover effect from the perspective of the behavior of local chiefs, such as the policy discontinuity and the officers' networks, are also interesting topics.

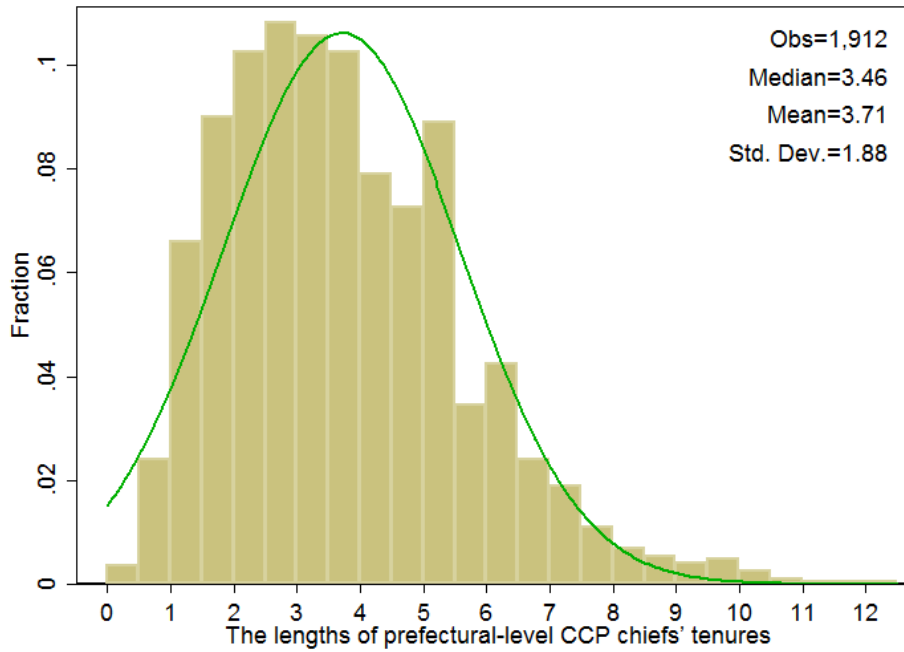
References

- Aisen, A., & Veiga, F. J. (2013). How does political instability affect economic growth? *European Journal of Political Economy*, 29, 151-167. doi:10.1016/j.ejpoleco.2012.11.001
- Alt, J., Bueno de Mesquita, E., & Rose, S. (2011). Disentangling Accountability and Competence in Elections: Evidence from U.S. Term Limits. *The Journal of Politics*, 73(1), 171-186. doi:10.1017/s0022381610000940
- Barron, J. M., Chulkov, D. V., & Waddell, G. R. (2011). Top management team turnover, CEO succession type, and strategic change. *Journal of Business Research*, 64(8), 904-910. doi:10.1016/j.jbusres.2010.09.004
- Blanchard, O., & Shleifer, A. (2001). Federalism with and without political centralization: China versus Russia. *IMF Staff Papers*, 48(1), 171-179. doi:10.2307/4621694
- Bobick, T., & Smith, A. (2013). The impact of leader turnover on the onset and the resolution of WTO disputes. *The Review of International Organizations*, 8(4), 423-445. doi:10.1007/s11558-013-9171-3
- Breznitz, D., & Murphree, M. (2011). *The Run of the Red Queen: Government, Innovation, Globalization, and Economic Growth in China*: Yale University Press.
- Büttner, V., Schäffer, U., Strauß, E., & Zander, K. (2013). A Role-Specific Perspective on Managerial Succession: The Case of New CFO Origin. *Schmalenbach Business Review*, 65(4), 378-408. doi:10.1007/bf03396863
- Chen, C. H. (2004). Fiscal decentralization, collusion and government size in China's transitional economy. *Applied Economics Letters*, 11(11), 699-705. doi:10.1080/1350485042000236557
- Chen, T., & Kung, J. K. S. (2016). Do land revenue windfalls create a political resource curse? Evidence from China. *Journal of Development Economics*, 123, 86-106. doi: 10.1016/j.jdeveco.2016.08.005
- Chen, Y., Li, H., & Zhou, L.-A. (2005). Relative performance evaluation and the turnover of provincial leaders in China. *Economics Letters*, 88(3), 421-425. doi: 10.1016/j.econlet.2005.05.003
- Curtis, J. E., Loy, J. W., & Hillen, J. M. (1986). Managerial Succession and Team Effectiveness: A Case Study of Japanese Professional Baseball. *International Review for the Sociology of Sport*, 21(4), 339-351. doi:10.1177/101269028602100406
- Edin, M. (2003). State capacity and local agent control in China: CCP cadre management from a township perspective. *China Quarterly*, 173(173), 35-52. doi:10.1017/S0009443903000044
- Fan, G., Wang, X., & Zhu, H. (2011). *NERI INDEX of Marketization of China's Provinces 2011 Report*: Economic Science Press.
- Graffin, S. D., Carpenter, M. A., & Boivie, S. (2011). What's all that (strategic) noise? anticipatory

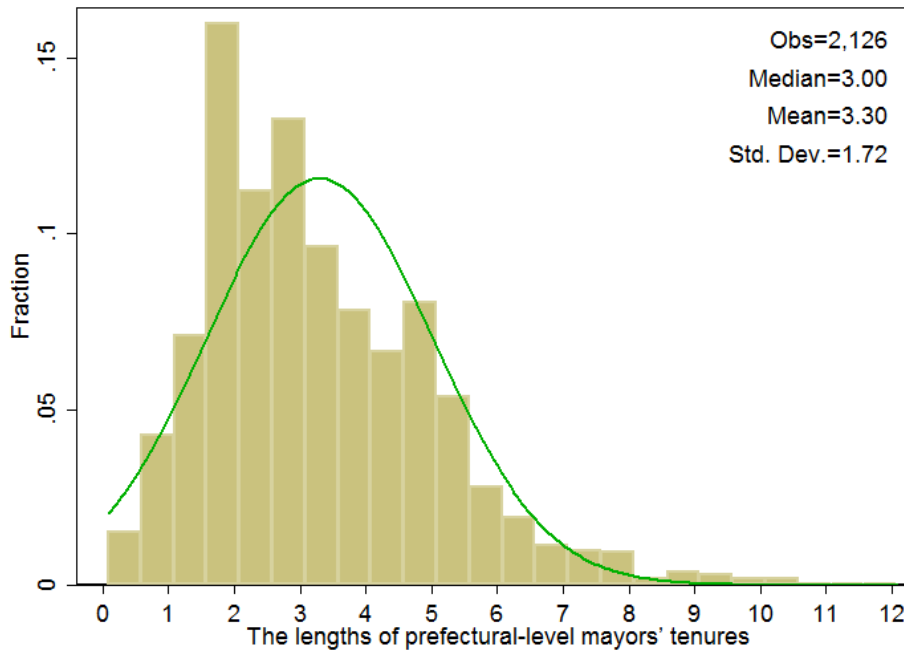
- impression management in CEO succession. *Strategic Management Journal*, 32(7), 748-770. doi:doi:10.1002/smj.906
- Grusky, O. (1963). Managerial Succession and Organizational Effectiveness. *American Journal of Sociology*, 69(1), 21-31. doi:10.1086/223507
- Guo, G. (2007). Retrospective Economic Accountability under Authoritarianism:Evidence from China. *Political Research Quarterly*, 60(3), 378-390. doi:10.1177/1065912907304501
- Guo, G. (2009). China's Local Political Budget Cycles. *American Journal of Political Science*, 53(3), 621-632. doi:DOI 10.1111/j.1540-5907.2009.00390.x
- Hill, G. C. (2005). The effects of managerial succession on organizational performance. *Journal of Public Administration Research and Theory*, 15(4), 585-597. doi:10.1093/jopart/mui034
- McGillivray, F., & Smith, A. (2004). The impact of leadership turnover on trading relations between states. *International Organization*, 58(3), 567-600. doi: 10.1017/S0020818304583054
- Jia, R. X. (2017). Pollution for Promotion. *21st Century China Center Research Paper*, No. 2017-2005. doi: 10.2139/ssrn.3029046
- Jia, R. X., Kudamatsu, M., & Seim, D. (2015). Political Selection in China: The Complementary Roles of Connections and Performance. *Journal of the European Economic Association*, 13(4), 631-668. doi:10.1111/jeea.12124
- Jin, H. H., Qian, Y. Y., & Weingast, B. R. (2005). Regional decentralization and fiscal incentives: Federalism, Chinese style. *Journal of public economics*, 89(9-10), 1719-1742. doi:10.1016/j.jpubeco.2004.11.008
- Jones, B. F., & Olken, B. A. (2005). Do Leaders Matter? National Leadership and Growth Since World War II. *The Quarterly Journal of Economics*, 120(3), 835-864. doi:10.1093/qje/120.3.835
- Karaevli, A. (2007). Performance consequences of new CEO 'Outsiderness' : Moderating effects of pre - and post - succession contexts. *Strategic Management Journal*, 28(7), 681-706. doi:doi:10.1002/smj.589
- Koch-Weser, I. N. (2013). The reliability of China's economic data: An analysis of national output. *US-China Economic and Security Review Commission Staff Research Project*, 4. Retrieved from <https://www.uscc.gov/sites/default/files/Research/TheReliabilityofChina'sEconomicData.pdf>
- Landry, P. F., Lü, X., & Duan, H. (2017). Does Performance Matter? Evaluating Political Selection Along the Chinese Administrative Ladder. *Comparative Political Studies*, 0(0), 0010414017730078. doi:10.1177/0010414017730078
- Li, H. B., & Zhou, L. A. (2005). Political turnover and economic performance: the incentive role of personnel control in China. *Journal of public economics*, 89(9-10), 1743-1762. doi:10.1016/j.jpubeco.2004.06.009

- Maskin, E., Qian, Y. Y., & Xu, C. G. (2000). Incentives, information, and organizational form. *Review of Economic Studies*, 67(2), 359-378. doi:10.1111/1467-937x.00135
- Opper, S., & Brehm, S. (2007). Networks versus performance: Political leadership promotion in China. *Department of Economics, Lund University*.
- Piotroski, J. D., Wong, T. J., & Zhang, T. Y. (2015). Political Incentives to Suppress Negative Information: Evidence from Chinese Listed Firms. *Journal of Accounting Research*, 53(2), 405-459. doi:10.1111/1475-679x.12071
- Piotroski, J. D., & Zhang, T. Y. (2014). Politicians and the IPO decision: The impact of impending political promotions on IPO activity in China. *Journal of Financial Economics*, 111(1), 111-136. doi:10.1016/j.jfineco.2013.10.012
- Ru, H. (2018). Government Credit, a Double-Edged Sword: Evidence from the China Development Bank. *The Journal of Finance*, 73(1), 275-316. doi:10.1111/jofi.12585
- Schepker, D. J., Kim, Y., Patel, P. C., Thatcher, S. M. S., & Campion, M. C. (2017). CEO succession, strategic change, and post-succession performance: A meta-analysis. *Leadership Quarterly*, 28(6), 701-720. doi:10.1016/j.leaqua.2017.03.001
- Sheng, Y. (2010). *Economic openness and territorial politics in China*: Cambridge University Press.
- Smart, M., & Sturm, D. M. (2013). Term limits and electoral accountability. *Journal of public economics*, 107, 93-102. doi:10.1016/j.jpubeco.2013.08.011
- Smith, A. (2016). Leader turnover, institutions, and voting at the UN General Assembly. *Journal of Conflict Resolution*, 60(1), 143-163. doi: 10.1177/0022002714532689
- Tsui, K., & Wang, Y. Q. (2004). Between separate stoves and a single menu: Fiscal decentralization in China. *China Quarterly*, 177(177), 71-90. doi:10.1017/S0305741004000050
- Wallace, J. L. (2016). Juking the Stats? Authoritarian Information Problems in China. *British Journal of Political Science*, 46(1), 11-29. doi:10.1017/S0007123414000106
- Wu, J., Deng, Y., Huang, J., Morck, R., & Yeung, B. (2014). Incentives and Outcomes China's Environmental Policy. *Capitalism and Society*, 9(1). Retrieved from <https://ssrn.com/abstract=2399048>
- Xu, C. (2011). The Fundamental Institutions of China's Reforms and Development. *Journal of Economic Literature*, 49(4), 1076-1151. doi:10.1257/jel.49.4.1076
- Yao, Y., & Zhang, M. Y. (2015). Subnational leaders and economic growth: evidence from Chinese cities. *Journal of Economic Growth*, 20(4), 405-436. doi:10.1007/s10887-015-9116-1

Fig. 1. Distribution of lengths of prefectural-level city chiefs' tenures (1983–2012, in years).

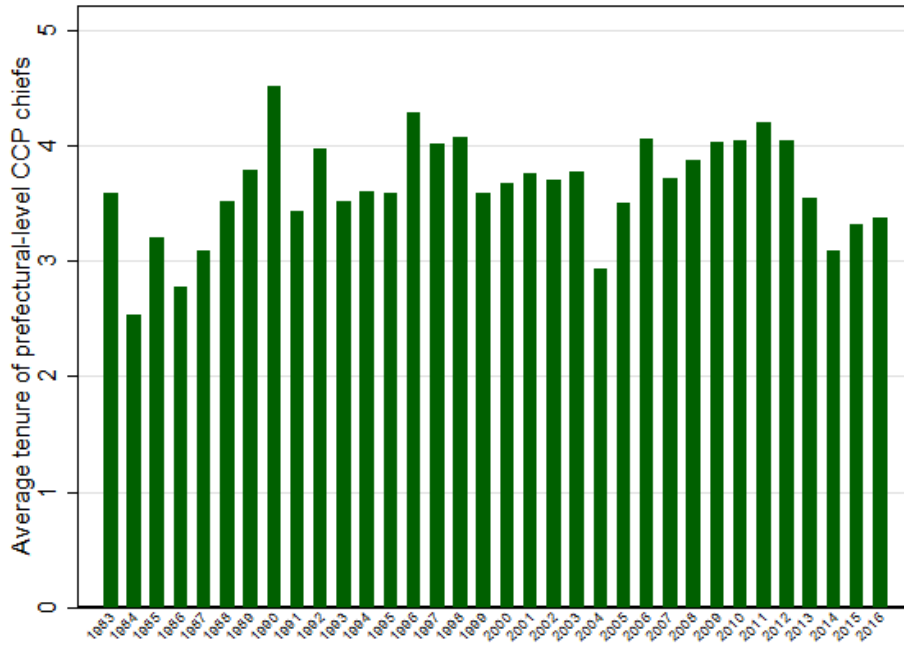


(A) CCP Chiefs

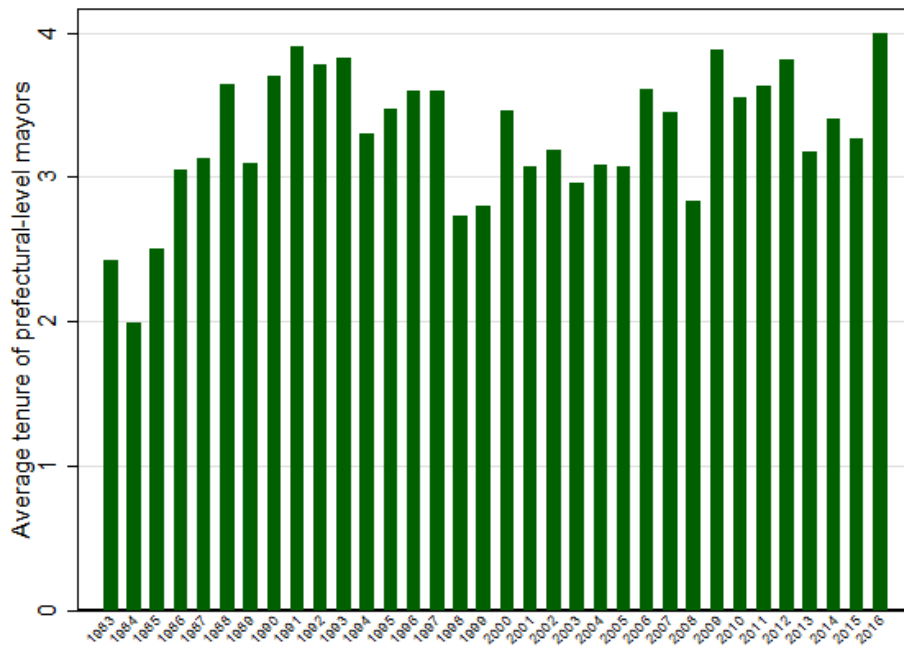


(B) Mayors

Fig. 2. Average tenure of outgoing prefectural-level city chiefs (1983–2012, in years).



(A) CCP chiefs



(B) Mayors

Fig. 3. The turnover effect with lagged terms.

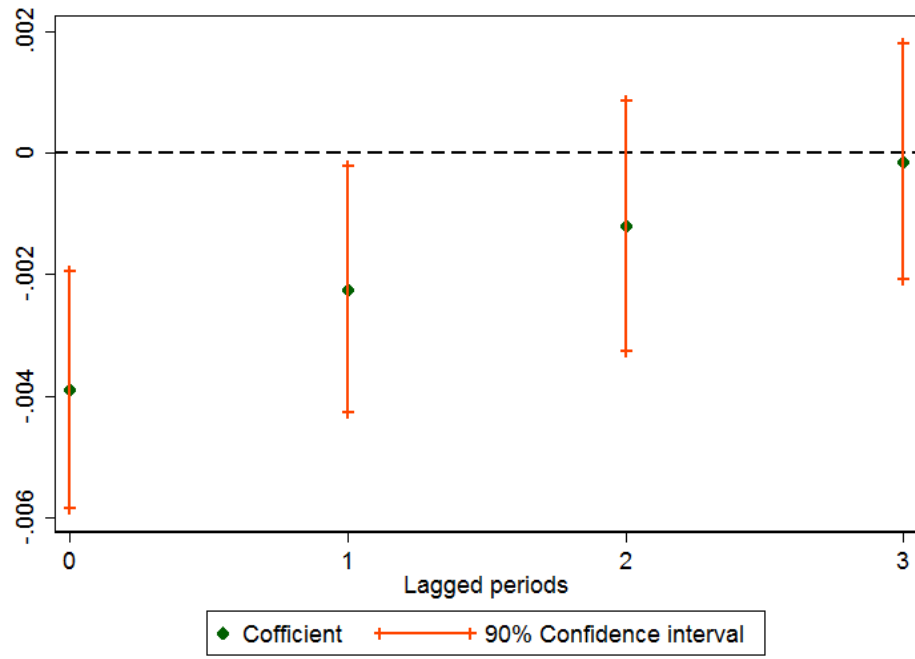


Table 1 Summary statistics of local chief turnovers.

| Grouping standards | Variables | Mean |
|----------------------------------|--|-------|
| A: CCP Chief turnover | | |
| <i>Turnover times</i> | One turnover in a single year | 24.5% |
| | Two turnovers in a single year | 0.2% |
| <i>Turnover reason</i> | Regular turnover | 2.0% |
| | Irregular turnover | 98.0% |
| <i>Turnover gap</i> | Continuous succession | 92.0% |
| | Discontinuous succession | 8.0% |
| <i>Predecessors' destination</i> | Getting promotion | 60.8% |
| | Staying at same rank | 35.8% |
| | Becoming retired | 1.6% |
| <i>Predecessors' tenure</i> | Finishing a full term | 43.6% |
| | Less than a full term | 56.4% |
| <i>Successors' source</i> | From the current city | 51.2% |
| | From other cities in the same province | 46.5% |
| | From other provinces or central government | 1.2% |
| <i>Successors' experience</i> | With previous experience as city chiefs | 31.0% |
| | Without previous experience as city chiefs | 69.0% |
| B: Mayor turnover | | |
| <i>Turnover times</i> | One turnover in a single year | 27.0% |
| | Two turnovers in a single year | 0.6% |
| <i>Successor destination</i> | Promotion to CCP chief of current city | 36.0% |
| | Other positions | 64.0% |

Table 2 Summary statistics of city statistics.

| Variables | Explanation | Period | Obs | Mean | Std. Dev. | Min | Max |
|-------------------------------|--|-----------|-------|-------|-----------|--------|--------|
| D.log(GDP) | D.log(gross regional product) | 1992-2012 | 5,142 | 0.122 | 0.042 | -0.061 | 0.508 |
| D.log(GDP) (Extended to 1983) | This indicator is obtained through combining d.log(GDP) in 1992–2012 and the growth rate of the total output of the primary and secondary industries in 1984–1991. | 1985-2012 | 6,224 | 0.121 | 0.070 | -0.110 | 1.016 |
| D.log(investment) | D.log(fixed asset investment in urban area) | 1993-2012 | 4,956 | 0.224 | 0.238 | -1.871 | 2.881 |
| D.log(fiscal revenue) | D.log(public finance income in total city) | 2000-2012 | 3,551 | 0.181 | 0.134 | -0.962 | 1.484 |
| D.log(fiscal expense) | D.log(public finance expenditure in total city) | 2000-2012 | 3,551 | 0.206 | 0.109 | -1.192 | 1.886 |
| D.log(consumption) | D.log(total retail sales of consumer goods) | 1993-2012 | 4,957 | 0.150 | 0.146 | -2.149 | 2.608 |
| D.log(FDI) | D.log(amount of foreign capital actually utilized+0.1) | 1993-2012 | 4,965 | 0.127 | 0.458 | -2.802 | 3.761 |
| D.log(exportation) | D.log(total export of goods+0.1) | 1993-2012 | 4,518 | 0.213 | 0.652 | -9.353 | 12.132 |

Table 3 Effect of CCP chief turnover on economic development.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------------------|
| Variables | D.log(GDP) | D.log(GDP) | D.log(GDP) | D.log(GDP) | D.log(GDP) | D.log(GDP) (Extended to 1983) |
| CCP chief turnover | -0.00363*** (0.000913) | -0.00371*** (0.000950) | -0.00372*** (0.000953) | -0.00363*** (0.000955) | -0.00346*** (0.000949) | -0.00407*** (0.00144) |
| L.log(GDP) | -0.132*** (0.0117) | -0.132*** (0.0117) | -0.132*** (0.0117) | -0.131*** (0.0118) | -0.130*** (0.0119) | -0.110*** (0.00752) |
| Mayor turnover alone | | -0.000402 (0.00127) | -0.000411 (0.00127) | -0.000602 (0.00126) | -0.000478 (0.00125) | -0.00231 (0.00156) |
| Provincial CCP chief turnover | | | -0.000559 (0.000860) | -0.000441 (0.000850) | -0.000481 (0.000849) | -0.000889 (0.00155) |
| CCP chiefs' personal characteristics | No | No | No | Yes | Yes | Yes |
| City specific time trend | No | No | No | No | Yes | Yes |
| City Fixed Effect | Yes | Yes | Yes | Yes | Yes | Yes |
| Year Fixed Effect | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 5,130 | 5,130 | 5,130 | 5,100 | 5,075 | 5,860 |
| R ² | 0.517 | 0.517 | 0.517 | 0.516 | 0.521 | 0.434 |

Notes: Significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively. The standard errors are clustered at the city level.

Table 4 Effect of CCP chief turnover on economic development: different fields.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--------------------|-------------------|-----------------------|-----------------------|--------------------|------------|---------------|
| Variables | D.log(investment) | D.log(fiscal revenue) | D.log(fiscal expense) | D.log(consumption) | D.log(FDI) | D.log(export) |
| CCP chief turnover | -0.0142* | -0.0104** | -0.00694* | -0.00727 | -0.0138 | -0.0168 |
| | (0.00735) | (0.00496) | (0.00395) | (0.00462) | (0.0139) | (0.0177) |
| Control variables | Yes | Yes | Yes | Yes | Yes | Yes |
| City fixed effect | Yes | Yes | Yes | Yes | Yes | Yes |
| Year fixed effect | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 4,904 | 3,530 | 3,530 | 4,905 | 4,913 | 4,472 |
| R ² | 0.286 | 0.425 | 0.313 | 0.367 | 0.235 | 0.349 |

Notes: Significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively. The standard errors are clustered at the city level. Control variables here are the same as in column (5) of Table 3.

Table 5 Effect of CCP chief turnover on economic development: time and space variations.

| | (1) | (2) | (3) |
|--|------------|------------|------------|
| Variables | D.log(GDP) | D.log(GDP) | D.log(GDP) |
| CCP chief turnover | -0.00307* | -0.00330** | -0.0104*** |
| | (0.00167) | (0.00160) | (0.00352) |
| CCP chief turnover*Years after 2003 | -0.000731 | | |
| | (0.00189) | | |
| CCP chief turnover*In Eastern area | | 0.00142 | |
| | | (0.00217) | |
| CCP chief turnover*In Middle area | | -0.00193 | |
| | | (0.00210) | |
| CCP chief turnover*Provincial market index | | | 0.000958* |
| | | | (0.000510) |
| Control variables | Yes | Yes | Yes |
| City fixed effect | Yes | Yes | Yes |
| Year fixed effect | Yes | Yes | Yes |
| N | 5,075 | 5,075 | 3,339 |
| R ² | 0.521 | 0.521 | 0.565 |

Notes: Significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively. The standard errors are clustered at the city level. Control variables here are the same as in column (5) of Table 3.

Table 6 Effect of CCP chief turnover on economic development: robustness check of reverse causality.

| | (1) | (2) | (3) |
|---|---------------------------|--------------------------|-------------------------|
| Variables | D.log(GDP) | D.log(GDP) | D.log(GDP) |
| CCP chief turnover | -0.00334*** (0.000954) | -0.00468*** (0.00141) | -0.00264** (0.00117) |
| CCP chief turnover*Irregular turnover | -0.00556 (0.00700) | | |
| CCP chief turnover*Predecessors finish a full term(5 years) | | 0.00262 (0.00185) | |
| CCP chief turnover* Predecessors get promotion | | | -0.00239 (0.00188) |
| Control variables | Yes | Yes | Yes |
| City fixed effect | Yes | Yes | Yes |
| Year fixed effect | Yes | Yes | Yes |
| N | 5,075 | 5,075 | 5,075 |
| R ² | 0.521 | 0.521 | 0.521 |

Notes: Significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively. The standard errors are clustered at the city level. Control variables here are the same as in column (5) of Table 3.

Table 7 Effect of CCP chief turnover on economic development: evidence from firm-level data.

| | (1) | (2) | (3) |
|-----------------------------|---------------------------------------|-------------------------|------------------------------------|
| Variables | Net cash flow of operating activities | Number of new employees | Fixed asset increment on equipment |
| CCP chief turnover | -0.516*** (0.0994) | -0.00394** (0.00184) | -0.00676*** (0.000845) |
| L. log(total asset) | Yes | Yes | Yes |
| L. total debt / total asset | Yes | Yes | Yes |
| ROA | Yes | Yes | Yes |
| Control variables | Yes | Yes | Yes |
| Firm fixed effect | Yes | Yes | Yes |
| Year fixed effect | Yes | Yes | Yes |
| N | 1,085,537 | 603,970 | 809,833 |
| R ² | 0.581 | 0.450 | 0.439 |

Notes: Significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively. The standard errors are clustered at the city level. Control variables here are the same as in column (5) of Table 3.

Table 8 Effect of CCP chief turnover on economic development: mechanism of organization frictions.

| Influencing channels | Coefficients | T-test |
|--|--------------|---------------|
| <i>A: Unfamiliar with new job</i> | | |
| Successors with previous experience as prefectural-level city chiefs. | -0.00289*** | Prob>F=0.3242 |
| Successors without previous experience as prefectural-level city chiefs. | -0.00501*** | |
| <i>B: Unfamiliar with new city</i> | | |
| Successors from the current city. | -0.00236* | Prob>F=0.0881 |
| Successors from other cities in the same province. | -0.00430*** | |
| Successors from other provinces or the central government. | -0.0171** | |
| <i>C: Unfamiliar with new colleagues</i> | | |
| Successors with experience of co-working with the partner mayor. | -0.00212 | -- |
| Successors without experience of co-working with the partner mayor. | -0.00399*** | |

Notes: Significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively. The standard errors are clustered at the city level. Control variables here are the same as in column (5) of Table 3.

Table A1 Summary statistics (append): Chinese prefectural city main officers' turnover dataset.

| Variable | Definition | CCP Secretary | | | Mayor | | |
|---|---|---------------|--------|-----------|-------|--------|-----------|
| | | Obs. | Mean | Std. Dev. | Obs. | Mean | Std. Dev. |
| Gender | Gender of the officer in city-term; 1=female, 0=male. | 2,055 | 0.028 | 0.164 | 2,282 | 0.043 | 0.204 |
| Age | Age of the officer in the city-term when he/she firstly occupied current position. | 2,045 | 50.662 | 4.425 | 2,275 | 48.463 | 4.241 |
| Ethnic Group | Whether the officer in the city-term is a member of a minority ethnic group; 1=yes, 0=o/w. | 2,055 | 0.055 | 0.229 | 2,282 | 0.063 | 0.242 |
| Home Town | Whether the officer in the city-term was born in this city; 1=yes, 0= o/w. | 2,049 | 0.088 | 0.283 | 2,269 | 0.117 | 0.322 |
| Education Level above Bachelor | Whether the officer in the city-term is with a bachelor or higher degree; 1=yes, 0= o/w. | 1,770 | 0.886 | 0.318 | 2,078 | 0.882 | 0.323 |
| Education Level above Master | Whether the officer in the city-term is with a master or higher degree; 1=yes, 0= o/w. | 1,770 | 0.564 | 0.496 | 2,078 | 0.566 | 0.496 |
| Working Experience in Central Government | Whether the officer in the city-term has worked as a senior officer in the central government; 1=yes, 0= o/w. | 2,086 | 0.070 | 0.254 | 2,298 | 0.073 | 0.260 |
| Working Experience in Provincial Government | Whether the officer in the city-term has worked as a senior officer in a provincial government; 1=yes, 0= o/w. | 2,086 | 0.544 | 0.498 | 2,298 | 0.455 | 0.498 |
| Working Experience in Universities | Whether the officer in the city-term has worked as a senior officer in a university or research institute; 1=yes, 0= o/w. | 2,086 | 0.074 | 0.262 | 2,298 | 0.070 | 0.255 |
| Working Experience in SOEs | Whether the officer in the city-term has worked as a senior officer in a state-owned enterprise; 1=yes, 0= o/w. | 2,086 | 0.233 | 0.423 | 2,298 | 0.260 | 0.439 |
| Working Experience in | Whether the officer in the city-term has worked as a senior | 2,040 | 0.188 | 0.391 | 2,266 | 0.171 | 0.376 |

| | | | | | | | |
|--------------------------------------|--|-------|-------|-------|-------|-------|-------|
| Chinese Communist Youth League | officer in the Chinese Communist Youth League; 1=yes, 0= o/w. | | | | | | |
| Working Experience in Other Province | Whether the officer in the city-term has worked as a senior officer in other provinces; 1=yes, 0= o/w. | 2,040 | 0.138 | 0.345 | 2,266 | 0.127 | 0.333 |
| Working/Study Experience Abroad | Whether the officer in the city-term has worked or studied outside mainland China; 1=yes, 0= o/w. | 2,040 | 0.936 | 4.661 | 2,266 | 1.183 | 6.028 |
| Working Experience as City Officer | Whether this is the first time for the officer in the city-term to be the top officer in a prefectural level city; 1=yes, 0=o/w. | 2,041 | 0.287 | 0.452 | 2,266 | 0.878 | 0.327 |

Table A2 Effect of CCP chief turnover on economic development: with lagged terms.

| Variables | (1) D.log(GDP) |
|------------------------|--------------------------|
| CCP chief turnover | -0.00390*** (0.00118) |
| L1. CCP chief turnover | -0.00225* (0.00123) |
| L2. CCP chief turnover | -0.00120 (0.00125) |
| L3. CCP chief turnover | -0.000143 (0.00118) |
| Control variables | Yes |
| Firm fixed effect | Yes |
| Year fixed effect | Yes |
| N | 4,845 |
| R ² | 0.524 |

Notes: Significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively. The standard errors are clustered at the city level. Control variables here are the same as in column (5) of Table 3.

Table A3 Summary statistics of the National Tax Survey dataset.

| Variables | Obs | Mean | Std. Dev. | Min | Max |
|---|-----------|--------|-----------|---------|---------|
| Net cash flow of operating activities / l. total asset (in %) | 1,218,323 | 6.821 | 34.206 | -95.238 | 211.407 |
| Number of new employees / l. total asset (in %) | 676,930 | -0.016 | 0.461 | -1.987 | 1.869 |
| Fixed asset increment on equipment / l. total asset (in %) | 909,367 | 0.008 | 0.158 | 0.000 | 4.396 |
| Log(total asset) (in thousand yuan) | 1,295,178 | 9.338 | 2.161 | 5.118 | 15.084 |
| Total debt / total asset (in %) | 1,159,189 | 55.928 | 30.657 | 0.000 | 100.000 |
| ROA (in %) | 1,286,132 | 12.185 | 38.172 | -46.667 | 314.600 |

Table A4 Effect of CCP chief turnover on economic development: mechanism of policy discontinuity.

| Policy discontinuity | Coefficients |
|--|--------------|
| <i>(1) Predecessors' direct management of successors.</i> | |
| Predecessors promoted to corresponding provincial leaders. | -0.000295 |
| Predecessors not promoted to corresponding provincial leaders. | -0.00449*** |
| <i>(2) Successors' possibility of promotion.</i> | |
| Successors older than 55 | -0.0000143 |
| Successors not older than 55 | -0.00377*** |