

The Political Cycle of Corporate Investments: New Evidence from Chinese Manufacturing Firms*

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Abstract

Using a comprehensive dataset of industrial firms and government official turnovers at the prefecture level in China, we show that firms significantly increase their investments right before expected turnovers of prefecture governors. More importantly, we find that the increase in investment mainly comes from privately owned firms, especially for politically connected firms and firms affiliated with governments below the prefecture level. The effect is stronger among officials with stronger career incentive and in provinces with weaker institutions. Our results suggest that the career incentive of local government officials and political connections play an important role in generating the political cycle of corporate investment in China.

JEL Classification: G30, G31, G32, G38

Keywords: Political turnover; Corporate investment; Career incentive; Political connection

1. Introduction

The real effects of political or economic uncertainty have recently attracted a lot of public and academic attention. Uncertainty about *central* government actions after a crisis often has a spillover effect not only on global financial markets but also on real economy around the world, as evidenced by the 1997 Asian financial crisis, the 2008 U.S. subprime crisis, the 2016 Britons' vote to leave EU (i.e., Brexit), and the most recent 2016 U.S. voters voting Donald Trump for president. Models of political or economic uncertainty suggest that policy or political uncertainty such as political turnovers generate uncertainty, which, in turn, lead to the delay of corporate investment. For example, Bernanke (1983), Bloom, Bond, and Van Reenen (2007), and Bloom (2009) model the relation between uncertainty in general and real investment. Bloom, Floetotto, Jaimovich, Saporta-Eksten, and Terry (2014) develop a business cycle model with uncertainty shocks. These models analytically show that significant increases in uncertainty after major shocks such as the 2008 U.S. subprime crisis have a significantly negative impact on investment, output, and employment.

Most empirical studies appear to support the predictions of these models. For instance, Barro (1991) and Alesina and Perotti (1996) document that a country's investment rate is negatively related to political instability and violence. Gulen and Ion (2016) employ the policy uncertainty index constructed by Baker, Bloom, and Davis (2016) and find that in the U.S. policy uncertainty indeed decreases corporate investment, especially for firms with irreversible investment. More related to our study, Julio and Yook (2012) show that corporate investment is lower in national election years than in non-election years in 48 countries, especially for close elections.

The above uncertainty models focus mainly on uncertainty about *central* government policy. However, the predictions of the real effect in the above models may not apply to political turnovers at the local government level, especially in countries with a central government controlled promotion system and planned economy such as China. China has maintained high growth for near four decades since the economic reform in 1978. It has been widely argued that the decentralization of the decision-making process and the performance-based political promotion system have played an important role for China's economic success (e.g., Maskin, Qian, and Xu, 2000; Chen, Li, and Zhou, 2005; Li and Zhou, 2005). Under the performance-based promotion system, local government officials have strong incentives to encourage corporate investment for firms under their jurisdiction controls right before their expected turnovers to increase the chance of promotion. However, empirical studies on the link between political cycles and firm-level investment in China are scarce and the evidence is mixed. Cao, Julio, Leng, and Zhou (2015) study corporate investment of exchange-listed firms during provincial officer turnovers and find that state-owned enterprises (SOEs) increase investment one year *after* the turnover. In contrast, also using exchange-listed firms, An, Chen, Luo, and Zhang (2016) find that political turnovers at the prefecture level leads marked decreases in corporate investment.

To reconcile the above mixed findings, in this study, we test the above political uncertainty hypothesis versus the career incentive hypothesis using a comprehensive dataset of Chinese manufacturing firms, which are mainly unlisted firms and at the plant level. Unlike previous studies that mainly focus on listed firms in China, the dataset we use covers all SOEs regardless of size, and all private, collective, foreign, and Hong Kong/Macau/Taiwan (HMT) firms with

annual revenue exceeding five million *yuan* in the manufacturing sector.¹ This rich dataset enables us to draw a more complete picture of the investment decisions of the universe of Chinese industrial firms. Another uniqueness of our study is that we focus on local government official turnovers at the prefecture level rather than at the provincial level as in most previous studies. Since more than 90% of the manufacturing firms are affiliated with governments at or below the prefecture level, our study is able to identify the impact of direct government leadership on its affiliated firms.

We first present the macro-level evidence showing that fixed investment and the relative GDP rank of prefectures significantly increase before expected turnovers of prefecture governors (i.e., in the 4th and 5th years of their tenure). We then perform firm-level analysis based on the dataset of Chinese industrial firms. We show that the increase in corporate investment before expected turnovers mainly comes from private-owned enterprises (POEs) and foreign enterprises. Moreover, the positive effect concentrates in firms affiliated with local governments below the prefecture level. Our results suggest that governors at the prefecture level achieve higher growth before their expected turnovers mainly through the private sectors and government hierarchy under their political control.

We provide further evidence that the increase in investment before expected turnovers is closely related to local government officials' career incentives. Firms invest significantly more before mayor expected turnovers, when the mayor is below 55 years old, when the mayor is born in the same province, and when the mayor is in his first term with the city. Additionally, we show that local government officials are more likely to affect local economic activities according to their own political agenda in regions with weak institutions. All these results support the career incentive hypothesis that local government officers at the prefecture level have strong

¹ One U.S. dollar is equivalent to 6.49 yuan at the end of 2015.

incentives to promote corporate investment right before their expected turnovers through their influences on local firms under their jurisdiction controls and their economic policies that promote corporate investment.

To substantiate our evidence, we also conduct our main analysis on listed firms. Although the sample size reduces substantially, our main results remain unchanged. That is, the positive investment effect near the expected turnovers mainly comes from private firms, especially for those politically connected firms. Overall, our empirical evidence provides strong support for the career incentive hypothesis.

We contribute to the literature in three significant aspects. First, the field of political cycles investigates cycles in macroeconomic variables, such as investment, output, and unemployment that are induced by the electoral cycle. Models since Nordhaus (1975) have shown that incumbents manipulate fiscal and monetary policies to influence the level of economic activities prior to election in order to increase their chance of getting re-elected. However, the empirical evidence for the influence of political cycle on economic outcomes is mixed. Most studies find little support in developed countries, as summarized in Alesina, Roubini, and Cohen (1997) and Drazen (2001). We provide fresh evidence on the link between the political cycle of local governments and corporate investment in the world second largest economy.

Second, the conventional wisdom is that the political cycle generates uncertainty and therefore leads to lower corporate investment around the turnover time. Theoretical models and empirical results appear to support that policy or political uncertainty such as national elections is associated with lower corporate investment. In contrast, we show that the career incentive of local government officials under the performance-based promotion system may induce increases in corporate investment before their expected political turnovers in China.

Third, our study also contributes to the understanding of China's fast growing economy in the past several decades. The "jurisdictional yardstick competition" (Maskin, Qian, and Xu, 2000) view argues that the performance-based political selection system emphasizes the fact that economic growth is an important criterion for promotion. Consistent with this view, Li and Zhou (2005) document a strong link between GDP growth and the promotion of top leaders at the province level. Chen, Li, and Zhou (2005) extend the study to show that a politician's promotion is not only related to his own performance, but is also related to the relative performance of their immediate predecessors. Our study helps understand the relation between the decentralization of decision-making and the recent economic development in China. In this sense, our study complements their studies and shows that local government officials use their influences to induce corporate investment near their expected turnovers to enhance their performance, which, in turn, to increase the chance of promotion.

The rest of the paper is organized as follows. Section 2 provides the institutional background. Section 3 presents our hypothesis development. Section 4 describes the data. Section 5 presents the empirical results. Section 6 reports additional tests. Finally, Section 7 concludes.

2. Institutional Background: The Political Cycle and Promotion System in China

China's political hierarchy is composed of five levels of administration: the central government, provinces, prefectures, counties, and townships (Lieberthal, 1995; Li and Zhou, 2005). At the end of 2014, China has 31 provinces (excluding Hong Kong, Macao, and Taiwan), 333 prefectures, 2,854 counties, and 40,381 townships.² In this paper, we study political turnovers at the prefecture level. Each prefecture has two leaders: the prefecture party secretary

² The information is from China Statistical Yearbook 2015 (www.stats.gov.cn/tjsj/ndsj/2015/indexeh.htm).

is the top leader and followed by the prefecture governor or mayor. The dual presence of a Communist Party leader and a governor is a standard government structure in China's political administration. The Organization Department of the Provincial Party Committee controls the official turnovers at the prefecture level. A prefecture official typically serves a five-year term, which is relatively stable, and may not serve in the same position for more than two terms.³

Since China's economic reform in 1978, the promotion of local government officials is not only determined by political conformity as in the early days but also depends on a number of other important factors, such as age, education, and more crucially local economic performance. The career concern of local government officials may provide them strong incentives to influence local economic and market development in a way that benefits their political career.

Local government officials can influence local economic and market development and firm corporate policies through a number of ways, such as regulation, administration, and soft channels. As a result, firms, in particular privately owned enterprises, may seek to establish political connections with local government officials. The political connection may be even more valuable if the mayor the firm already connected got promoted. Therefore, firms may behave opportunistically before anticipated government official turnovers in order to maximize benefits from their current political connections.

3. Hypothesis Development

Political cycle can be closely related to corporate investment. The political uncertainty models of Pástor and Veronesi (2012; 2013) show that political or policy uncertainty causes asset

³ According to the "Provisional Regulations on Terms of Cadres of the Party and Government" issued by the Organization Department of the Central Committee of the Communist Party of China issued in 2006.

prices to drop and asset return volatility to rise.⁴ Real option theories suggest that investment and uncertainty in general are negatively related (e.g., Bloom, Bond, and Van Reenen (2007), Bloom (2009), and Baker, Bloom, and Davis (2016)). As a result, firms should postpone investment during political turnovers when uncertainty is high due to policy uncertainty after turnovers, especially for firms in countries with the democratic election system such as the United States. We call this the political uncertainty hypothesis.

However, this prediction may not apply to political turnovers at the local government levels in China. As discussed in the previous section, the official turnover at the prefecture level in China is controlled by the Organization Department of the Provincial Party Committee. The Committee adopts a performance-based political promotion system in which performance is an important determinant for promotion. Therefore, the career incentive of local government officials may induce increases in corporate investment before their expected political turnovers to boost up their economic performance. We label this as the career incentive hypothesis. The above discussions lead to our first two hypotheses as follows.

Hypothesis 1 (The political uncertainty hypothesis): *The political uncertainty hypothesis suggests that firms would decrease investment before expected turnovers due to the option value of waiting when facing uncertainty.*

Hypothesis 2 (The career incentive hypothesis): *The career incentive hypothesis suggests that firms would increase investment before the expected turnovers of local government officials.*

⁴ Using the policy uncertainty index in the U.S. constructed by Baker, Bloom, and Davis (2016)) Pástor and Veronesi (2013) document that policy uncertainty has caused stock price to fall and return volatility to rise. However, there is an endogeneity issue between political uncertainty and economic uncertainty and it is very difficult to separate political uncertainty from economic uncertainty. To overcome this endogeneity issue, Kelly, Pástor, and Veronesi (2016) use the expected events, national elections and global summits, and equity option markets to confirm that political uncertainty cause return volatility to increase. Liu, Shu, and Wei (2016) use the Bo Xilai political scandal in 2012 in China as an unexpected event to study the impact of political uncertainty on asset prices and return volatility. They find that the Bo scandal caused equity price to fall and return volatility to increase, especially for policy-sensitive firms.

Firms operated in China are managed by different levels of government in terms of tax collection, resources allocation, information collection and distribution, economic development policies, etc. Therefore, local government officials have direct influences on corporate investment only for firms under their jurisdiction controls. That is, corporate investment decisions for firms affiliated with governments above a certain level should be less likely to be affected by the political turnovers of the lower levels of government. We formally state this prediction in our third hypothesis.

***Hypothesis 3 (jurisdictional control):** The career incentive hypothesis further predicts that the impact of expected turnovers at the prefecture level on corporate investment is more pronounced for firms affiliated with government below the prefecture level.*

If government officers can influence corporate investments under their jurisdiction controls, the political cycle of firm investment should become stronger when the career incentives of local government officials are strengthened. For example, mayors or governors have a better promotion prospect when they are young and when they have better political connections (i.e., if they are born in the same province). In addition, the expected turnover of mayors is more certain during their first term. We summarize these predictions in the following hypothesis.

***Hypothesis 4 (mayor characteristics):** The career incentive hypothesis predicts that firms would invest significantly more before expected turnovers when the career incentives of mayors are stronger, that is, when the mayor is below 55 years old, when the mayor is born in the same province, and when the mayor is in his first term.*

Finally, the ability of local government officials to manipulate local economic activities should also depend on the institution quality. It is easier for them to achieve their own political

agenda when the market and legal system is weak but government power is stronger. Such argument leads to our last hypothesis.

***Hypothesis 5 (Institutional quality):** The career incentive hypothesis predicts that the impact of expected turnovers at the prefecture level on corporate investment is stronger for firms in regions with weak institutions, such as institutions with more government intervention, less legal protection, and lower government integrity.*

4. Data Description

4.1 Data sources

We hand-collected resumes of officials at the prefecture level from various sources such as Baidu.com, Sougou.com, Wikipedia, and local government websites. These resumes usually contain detailed personnel information regarding each governor's age, education, birth place, previous working experience, and the timing and nature of the appointment.

Our datasets at the firm level are obtained from two sources. The dataset on unlisted firms is from the Census of Manufacturers in China compiled annually by the National Bureau of Statistics of the People's Republic of China (PRC) from 1998 to 2007. The census includes all SOEs engaged in manufacturing regardless of size and all private, collective, foreign, and Hong Kong/Macau/Taiwan (HMT) firms engaged in manufacturing with annual revenues exceeding RMB five millions. This dataset has been widely used by many prior studies (e.g., Song, Kjetil, and Fabrizio, 2011). The other dataset on listed firms is obtained from the Chinese Stock Market Accounting Research (CSMAR). Macroeconomic data are also obtained from CSMAR.

To minimize the impact of data errors and outliers, we winsorize all firm characteristics at the 1st and 99th percentiles. Appendix A lists the definitions of all variables that we use in our analysis, including dependent variables and control variables.

4.2 Summary statistics

Table 1 reports the number of turnovers at the prefecture level by year in mainland China for the sample period from 1991 to 2013. There are 2,136 mayor turnovers and 1,898 party secretary turnovers at the prefecture level during the whole sample period.

[Insert Table 1 here]

Table 2 presents the summary statistics of variables for three samples used in this study. The sample for the macro-level study spans the full sample period from 1991 to 2013. Due to data availability, the sample covering Chinese manufacturing firms is only from 1998 to 2007 with 1,107,208 observations in total. The average investment rate is 10.6%, while it is 19.5% for firm-years classified as the 4th and 5th years of a mayor's term. The average natural logarithm of mayor age, party secretary age, and firm age is 3.898 ($e^{3.898} = 49.30$ years old), 3.932 ($e^{3.932} = 51.01$ years old), and 2.012 ($e^{2.012} = 7.48$ years old), respectively. Average sales growth is 38.3% per year and the average cash flow-to-asset ratio is 15.4%. We perform additional tests using Chinese listed firms, the sample of which is from 1998 to 2013.

[Insert Table 2 here]

5. Empirical Analyses

5.1 Macro-level evidence

We first provide the macro-level evidence on the political cycles of investment at the prefecture level. As we discussed before, local economic development is a crucial factor determining local government officials' career. In order to increase their promotion prospect,

local government officials may have strong incentive to boost local economic performance, such as to increase fixed investment and to attract more foreign direct investment.

Since in the Chinese political system, the mayor is in charge of and is responsible for local economic development, we first focus on the turnover of mayors. In order to test the career incentive explanation of local economic activities, we examine whether we can observe the peak of local economic activity in the pre-expected turnover period of mayors by running the following regressions:

$$Y_{i,t} = \alpha_i + \alpha_t + \beta \times \text{Keyyears_Mayor}_{i,t} + \gamma \times \text{Population Growth}_{i,t} + \varepsilon_{i,t}, \quad (1)$$

$$Y_{i,t} = \alpha_i + \alpha_t + \beta \times \text{Tenure_Mayor_Year}_J_{i,t} + \gamma \times \text{Population Growth}_{i,t} + \varepsilon_{i,t}, \quad (2)$$

where i and t index for prefecture and year, respectively. Y represents one of our four measures of local economic activities: the aggregated fixed investment-to-GDP ratio (FixInv/GDP), the foreign direct investment-to-GDP ratio (FDI/GDP), the change in GDP rank of the prefecture within the province, and the GDP improvement.

We also control for year and prefecture fixed effects to mitigate year and prefecture heterogeneity. The main independent variable of interest is *Keyyears_Mayor*, which is a dummy variable that equals one for the 4th and 5th years since a mayor takes office and zero otherwise. It represents the pre-expected turnover period of city mayors. In order to better observe the political cycle over a mayor's full term, we also define a number of dummy variables, *Tenure_Mayor_Year J* (where, $J = 2, 3, 4, 5,$ and 6), which represents the J 's year of a mayor's tenure in the same city. *Tenure_Mayor_Year6* represents all tenure years equal or above six years.

Panel A in Table 3 reports the regression estimates of equation (1). In columns (1) and (2), we investigate the aggregated fixed investment and foreign direct investment. As expected, the

coefficients on *Keyyears_Mayor* are significantly positive, which indicates that aggregated fixed investment and foreign direct investment increase significantly during the pre-expected turnover period. The coefficient on *FixInv/GDP* is 0.015 (t -stat = 3.09), which means that during the pre-expected turnover period, *FixInv/GDP* is 1.5 percentage points higher than the average of any other years. The coefficient on *FDI/GDP* is 0.002 (t -stat = 1.69), meaning that during the pre-expected turnover period, *FDI/GDP* is 0.2 percentage point higher than the average of any other years.

[Insert Table 3 here]

Under the Chinese political hierarchy, prefectures in the same province are led by the same provincial government. Therefore, the relative rank of GDP growth rate within the same province is particularly important for the evaluation and promotion of local government officials at the prefecture level. We thus construct a variable to measure the change in the relative rank of GDP growth rate since an official took the office. Specifically, we rank the GDP growth rate of all prefectures within the same province in descending order in a given year. Δ GDPRank is defined as the difference between the rank of GDP growth rate in a given year and the rank in the first year when the incumbent official was in the office. To some extent, Δ GDPRank thus captures an official's achievement in local economic development. A higher Δ GDPRank means better economic achievements. Column (3) of Panel A in Table 3 presents the regression estimates. The coefficient on Δ GDPRank is significantly positive at the 10% level (t -stat = 1.82) with a coefficient of 0.324, which means that the average increase in the GDP rank is 0.324 higher during the pre-expected turnover period than any other years.

A government official may also be evaluated by his achievement relative to his predecessor. We thus construct another variable *GDPIImprovement*, which is defined as the percentage of

increase in GDP growth in a given year relative to the GDP growth in the first year when the incumbent mayor was in the office. The results are reported in the last column of Panel A in Table 3. The estimates indicate that GDP growth improves significantly more during the pre-expected turnover period than any other years by 59.0%.

We report the results from equation (2) in Panel B of Table 3. It is evident that all our economic indicators increase significantly more in the 4th and 5th years of a mayor's tenure, confirming our results based on the *Keyyears_Mayor* dummy in Panel A of Table 3. The results based on tenure years also clearly suggest that, the magnitude of all economic indicators drops right after the 5th year, supporting the idea that the boost of economic activities is strongly associated with the promotion incentive of local government officials before their expected turnover but vanishes after the turnover. The above results clearly support the career incentive hypothesis stated in Hypothesis 2 and not the political uncertainty hypothesis stated in Hypothesis 1.

5.2 Firm-level evidence from Chinese manufacturing firms

5.2.1 *The political cycle of firm investment*

In this section, we investigate whether firms invest more in the pre-expected turnover period based on a comprehensive dataset of Chinese manufacturing firms. More accurately, our firm-level data can be considered as plant-level data given that more than 96% of the observations only have one plant. As displayed in Table 1, expected turnover years usually are different for different prefectures. Using the plant-level data is thus important in detecting the effect of local government official turnovers on firm investment. We apply the following model specification to examine the relation between firm investment and expected political turnover:

$$Investment_{i,t} = \alpha_i + \alpha_t + \beta \times Keyyears_Mayor_{i,t} + \gamma \times Controls_{i,t} + \varepsilon_{i,t}, \quad (3)$$

$$Investment_{i,t} = \alpha_i + \alpha_t + \beta \times Tenure_Mayor_Year_{i,t} + \gamma \times Controls_{i,t} + \varepsilon_{i,t}, \quad (4)$$

where i and t index for firm and year, respectively. The dependent variable is *Investment*, which is defined as capital expenditures divided by total assets at the beginning of the year. Following previous studies (e.g., Julio and Yook, 2012), we control for sales growth (SalesGrowth), cash flow-to-asset ratios (CashFlow), firm age (FirmAge), mayor age, and prefecture-level GDP growth rates. Since the majority of the firms are unlisted firms, we use sales growth to capture firm investment opportunities. We also control for year and prefecture fixed effects to mitigate year and prefecture heterogeneity.

Table 4 displays the regression estimates. Columns (1) and (2) report the results from equation (3) with *Keyyears_Mayor* as the independent variable of interest. Column (1) includes year fixed effects, while Column (2) further controls for firm fixed effects. The coefficient on *Keyyears_Mayor* is significantly positive in both model specifications, suggesting that firms indeed invest more during the pre-expected period. The magnitude is also economically significant. On average, firms invest 0.5 percentage point more in the pre-expected period than any other years as shown in column (3), which is close to 5% of the average firm investment rate.

[Insert Table 4 here]

Columns (3) and (4) in Table 4 report the results from equation (4) with tenure year dummies of the mayor. It is evident that firm investment peaks at the 4th and 5th years of a mayor's tenure and drops after expected turnovers in all specifications. Our firm-level analysis provides further consistent evidence that Chinese manufacturing firms significantly increase their investments before local government expected turnovers at the prefecture level.

In order to give a clearer picture of the investment cycle associated with political turnovers, we plot the average investment rate of all manufacturing firms around the turnover years in Figure 1. We distinguish expected turnovers from unexpected turnovers. An expected turnover is defined as turnovers when the mayor serves a full five-year term. An unexpected turnover is defined as turnovers that the mayor serves less than four years in his current position. We define year 0 as the last year the mayor is in office (i.e., the turnover year).

[Insert Figure 1 here]

As discussed earlier, a mayor is expected to be evaluated at the end of his five-year term based on his merits in several aspects, one of which is local economic performance. For this reason, a mayor has incentives to boost up economic performance before reaching his expected turnover year no matter whether he finally gets promoted or reappointed to another position, or even sits at the same position after the current term. Figure 1 (the red solid line) clearly shows that the average investment rate peaks in the last two years before the expected turnover, supporting the career incentive explanation for the corporate investment cycle around political turnovers.

In contrast, mayors are not prepared for unexpected turnovers and the career incentive story should not apply in this case. Consistent with this prediction, Figure 1 (the black dash line) shows that the investment rate does not reach the peak before unexpected turnover years. Interestingly, the investment rate in fact reaches the bottom before unexpected turnovers. In sum, our results from the macro-level and firm-level analyses suggest that corporate investments significantly increase before expected turnovers but show no such a pattern before unexpected turnovers. The results support the career incentive hypothesis stated in Hypothesis 2 and reject the political uncertainty hypothesis stated in Hypothesis 1.

5.2.2 *The investment cycle by firm ownership*

The next question we want to ask is: what are the channels through which local government officers boost up corporate investment? One potential channel is to directly influence SEO firms under their direct jurisdiction controls to take on more investment. Another possibility is to provide investment incentives to the private sector and foreign firms, such as better regulatory terms and more friendly investment environments (e.g., tax exemption or reduction).

In order to distinguish these two alternative possibilities, we split firms by ownership to investigate whether the investment pattern is different across ownership. We run the investment regression of equation (3) in four ownership subsamples: state-owned enterprises (SOE), collective-owned enterprises (Collective), privately owned enterprises (POE), and foreign enterprises (Foreign). The results are reported in Table 5. We find that the coefficient on *Keyyears_Mayor* is not significant for SOEs (coeff. = -0.000; *t*-stat = -0.20), but it is significantly positive POEs (coeff. = 0.009; *t*-stat = 6.33) and foreign enterprises (coeff. = 0.006; *t*-stat = 4.19). We also notice that for Collectives, the positive effect is marginally significant (coeff. = 0.004; *t*-stat = 1.65),

[Insert Table 5 here]

Our results suggest that local government officials at the prefecture level mainly boost local economic activities before their expected turnovers by stimulating the private sectors and attracting more foreign investments rather than relying on state-owned enterprises. One potential explanation for the results is that investment policies of SOEs are more likely to be affected by the decisions from government at the province or central level. First, the majority (more than

60%) of SOEs are affiliated with government at or above the prefecture level.⁵ Second, even for SOEs affiliated with government below the prefecture level, their economic activities are still substantially affected by policies from governments at or above the province level due to the nature of their state ownership. Therefore, it is easier and more feasible for government officers at the prefecture level to induce corporate investments of POEs and foreign firms to accommodate their own political agenda.

5.2.3 *The investment cycle by their affiliation levels*

To better manage the economy, firms operated in China are usually assigned to different levels of government to manage, such as tax collection, resources allocation, information collection and distribution, economic development policies, and so on.⁶ As a result, only firms affiliated with government at or below the prefecture level are more likely to be affected by the turnovers of prefecture-level government officials.

To test this prediction, we run the investment regression in sub-samples split by the level of government affiliation. Table 6 reports the estimates. As expected, firm investments do not increase significantly during the pre-expected turnover period than any other years for firms affiliated with the central and provincial governments. However, firms affiliated with government lower than the prefecture levels significantly invest more in the pre-expected turnover period. Interestingly, there is no significant effect for firms affiliated with prefecture government, which may be due to the fact that prefecture-level firms are substantially affected by their direct leadership from the provincial governments. Overall, our results suggest that only firms affiliated with government under the jurisdiction of the prefecture governments

⁵ Unlike SOEs, more than 90% of POEs are affiliated with government below the prefecture level.

⁶ See <http://doc.mbalib.com/view/872476092cc17544c99106e1f88b1e5a.html>.

significantly increase investment before expected turnovers at the prefecture level. The result supports the view that such investment behavior is potentially driven by the career incentive of prefecture-level government officials as stated in Hypothesis 3.

[Insert Table 6 here]

5.2.4 *The investment cycle by mayor characteristics*

In this sub-section, we provide further evidence on the link between firm investment cycles and government officials' career incentives more directly. First, age is a crucial factor for the promotion of government officials in China. Since the economic and personnel control reform in the 1980s, government officials at or below the province level are subject to a retirement age of 65. If the mayor is older than 55 years old, his political prospect is substantially reduced.⁷ We thus use mayor age below 55 years old as a measure of a strong career incentive and study the firm investment behavior separately for expected turnovers with the mayor below or above 55 years old.

Second, birthplace is important for the mayor to build up political networks. If the mayor is in charge of a city in the same province as her/his birthplace, she/he is more likely to have better social connections with both upper-level government and local firms. In this case, she/he may have both strong incentive as well as more resource to stimulate local economy in order to achieve her/his political agenda. We thus study firm investment behavior separately in prefectures where the mayor was born in the same province or in a different province.

Third, local government officials may not serve more than two terms in one place. In fact, city mayors usually serve only one term and they are subject to movement at any year if they

⁷ We do not use 60 as the cutoff age since we will have a much smaller sample. For city mayors with age above 55 years old, they are at best promoted to the position of party secretary. It is very hard for them to reach the provincial level and therefore their political incentives are significantly reduced.

continue to serve their second term in the same city. Since in the second term their expected turnover may not be another five years, they have less incentive to stimulate the local economy in the last two years of their term but rather prefer to achieve high investment earlier. In this case, the phenomenon of increases in investment before the pre-expected turnover period should become weaker when mayors are in their second term. We thus perform the investment regressions in subsamples split by the mayor term.

The subsample analysis based on mayor characteristics related to their career incentives is reported in Table 7. Consistent with our predictions, firms only significantly increase investments before expected turnover in cities where the mayor is below 55 years old (coeff. = 0.007; t -stat = 7.20), where the mayor is born in the same province (coeff. = 0.006; t -stat = 5.71), and where the mayor serves their first term in the city (coeff. = 0.007; t -stat = 7.01). Overall, our results provide strong evidence that firm investment cycles associated with expected turnovers at the prefecture level is closely related to the career incentives of local government officials. The results are consistent with the career incentive hypothesis stated in Hypothesis 4.

[Insert Table 7 here]

5.2.5 *The investment cycles by institution quality*

The power of mayors on local economic activities also depends on market and legal institutional environments. In the environments of strong market institution and strong legal protection, local economic development is less likely to be affected by the mayor according to her/his own political agenda. In contrast, in the environments of weak institutions, local government officials are more likely to exert the impact on local firms at their own will.

We obtained the government intervention index, legal system development index, and government integrity index at the province level from National Economic Research Institute,

China Reform Foundation. A province is defined to have a strong market and legal institution when the government intervention index is low, the legal system development index is high, and the government integrity index is high. We split firms into subsamples with strong and weak institutions based on these three institution-quality measures and report the results from the investment regression in these subsamples in Table 8. The results show that the magnitude of the coefficient on the *Keyyears_Mayor* is significantly higher for subsamples with weak institutions (the coefficient ranges from 0.008 to 0.012 with *t*-statistic ranging from 6.16 to 7.87) than strong institutions (the coefficient ranges from 0.000 to 0.002 with *t*-statistic ranging from 0.34 to 2.07), confirming our prediction that the political agenda of local government officials have a stronger impact on firm investment behavior in cities with weak market and legal institutional environments. The results are consistent with the career incentive hypothesis stated in Hypothesis 5.

[Insert Table 8 here]

6 Additional Tests

6.1 The political cycle of investment: Mayor or party secretary?

So far, we have focused our attention on city mayors. This is because city mayor in general is in charge of local economic development. In this section, we also test the effect of party secretary, who is supposed to be the “*first hand*” of the city. We include an additional variable, *Keyyears_PS*, which is a dummy variable that equals one for the 4th and 5th years since a party secretary takes office and zero otherwise. We report the investment regression for the full sample as well as subsamples split by firm ownership in Table 9. Column (1) presents the results for the full sample. The coefficient on *Keyyears_PS* is 0.001 and is significantly positive at the 10% level (*t*-stat = 1.79) but its magnitude is smaller than the coefficient on *Keyyears_Mayor* (coeff.

= 0.006; t -stat = 6.76). Columns (2) to (5) present the results for the ownership subsamples. The results suggest that while both POEs and foreign firms significantly increase their investments before expected turnover of mayor, only foreign firms increase investments before expected turnover of party secretary.

[Insert Table 9 here]

6.2 Firm-level evidence from listed firms

So far, we have documented that firms tend to invest more in the pre-expected turnover period based on Chinese manufacturing firms, more than 96% of which are unlisted firms. In this section, we provide robustness checks using the sample of listed firms. Since listed firms tend to operate across a number of prefectures due to their larger size, their fixed investments are less likely to be affected by the expected turnover of a certain prefecture government and the results are expected to be weaker. But an advantage of using listed firms is that we are able to identify their political connections with the government and therefore further explore the role of political connection on firm investment decisions.

We report the results of the investment regression for listed firms in Table 10. Columns (1) to (3) present the estimates for the full sample, the SOEs, and the POEs subsamples, respectively. We do not consider other types of ownership because either we cannot identify such a type of ownership (e.g., collective firms) or the number of firms is really small (e.g., HMT and foreign firms). To further control for investment opportunity, Tobin's Q is introduced as an additional explanatory variable. Consistently with previous findings, we find that only POEs invest significantly more in the pre-expected turnover period. The coefficient on *Keyyears_Mayor* is 0.006 with a t -statistic of 1.74, which suggests that the investment rate of POEs is 0.6 percentage points higher during pre-expected turnover years than any other years. The magnitude of the

increase is economically significant, which is nearly 10% of the average investment rate of listed firms (6.8%).

[Insert Table 10 here]

We further split the POEs sample into firms with political connection (POEs_PC) and without political connections (POEs_NPC) and report the results in columns (4) and (5). If the investment cycle is due to the career incentive of local government officials, investment should increase more for firms with political connections due to two reasons. On one hand, government officials can easily reach out to connected firms and encourage their investment at the right time according to their own political agenda. On the other hand, connected firms can better take advantage of friendly investment policies due to their connections with government policy-makers. Consistent with our prediction, only POEs with political connections experience a significant increase in investment in the pre-expected turnover period. The coefficient on *Keyyears_Mayor* is 0.020 with a *t*-statistic of 2.76, which suggests that politically connected POEs increase their investment by 2.0%, nearly 30% of the average investment rate of all listed firms, during the pre-expected turnover period.

7 Conclusion

In this paper, we show that political turnovers at the prefecture level are associated with substantial investment cycles. Using a comprehensive dataset of Chinese manufacturing firms, we show that privately owned enterprises significantly increase their investment before local government official turnovers at the prefecture level and this effect mainly concentrates in firms affiliated with government at or below the county level.

We provide further evidence that firms only increase investments before expected turnovers when mayors have strong career incentives. That is, when mayors are below age 55, when mayors are born in the same province, and when mayors are in their first term with the city. We also show that institution quality impacts the ability of local government officials to design local economic activities according to their own political agenda. We show that the link between investment cycles and turnovers is stronger for prefectures with weak institutions. Our results suggest that the career incentive of local government officials at the prefecture level could potentially drive investment cycles of local firms, in particular, through the private sector.

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Appendix A:

Variables	Definitions
Keyyears_Mayor	A dummy variable that equals one for the 4 th and 5 th years that a mayor takes office and zero otherwise
FixInv/GDP	The ratio of aggregated fixed investment to GDP at the prefecture level
FDI/GDP	The ratio of foreign direct investment (FDI) to GDP at the prefecture level
GDPGrowth	GDP growth rate at the prefecture level.
Δ GDPRank	The difference between the rank of GDP growth rate of a prefecture within the province in a given year and that in the first year when the incumbent mayor was in the office
GDPImprovement	The increase in GDP growth in a given year relative to that in the first year when the incumbent mayor was in the office
PopGrowth	Population growth rate at the prefecture level
Investment	The ratio of capital expenditure to the beginning-of-year total assets. The capital expenditure is defined as the net increase in fixed assets plus depreciation.
Age_Mayor	The natural logarithm of the incumbent mayor's age
SalesGrowth	Sales growth rate
CashFlow	The ratio of cash flow to beginning-of-year total assets. Cash flow is defined as net profit plus depreciation.
Keyyears_PS	A dummy variable that equals one for the 4 th and 5 th year a party secretary takes office and zero otherwise
Age_PS	The natural logarithm of the incumbent party secretary's age
FirmAge	The natural logarithm of one plus firm age
TobinQ	The ratio of the sum of market value of equity and liability to total assets measured at the beginning of the year
PC	Political connection, a dummy variable that equals one if the CEO or chair of a firm was or is an official of the central government, a local government, or the military

Table 1. Distribution of government office turnover at the prefecture level by year

This table reports the distribution of political turnover of city mayor and party secretary by year. Our sample consists of 2,136 mayor turnovers and 1,898 party secretary turnovers during the period of 1991 - 2013.

Year	Turnover (Mayor)	Turnover (Party secretary)
1991	59	61
1992	68	63
1993	108	86
1994	75	66
1995	82	79
1996	74	74
1997	75	57
1998	149	125
1999	71	47
2000	81	65
2001	117	108
2002	91	84
2003	145	132
2004	74	60
2005	74	75
2006	90	69
2007	118	86
2008	148	146
2009	35	35
2010	48	39
2011	95	98
2012	138	184
2013	121	59
Total	2,136	1,898

Table 2. Summary statistics

This table reports the number, mean, standard deviation, minimum, 25th percentile, median, 75th percentile, and maximum of acquirer and deal characteristics. See Appendix A for the detailed definition of variables. The sample for the macro-level studies is from 1991 to 2013. Due to data availability, the sample for manufacturing firms is from 1998 to 2007. The sample for listed firms is from 1998 to 2013.

Panel A. Macro Variables (1991-2013)						
	N	Mean	Stddev	P25	P50	P75
FixInv/GDP	5,590	0.435	0.254	0.227	0.387	0.596
FDI/GDP	5,294	0.031	0.051	0.006	0.014	0.034
ΔGDPRank	5,587	0.082	3.884	-1.000	0.000	1.000
GDPImprovement	5,587	0.139	2.267	-0.274	0.000	0.114
Keyyears_Mayor	5,600	0.174	0.379	0.000	0.000	0.000
PopGrowth	5,600	0.017	0.080	0.003	0.007	0.012
GDPGrowth	5,600	0.236	0.677	0.096	0.151	0.214
Panel B. Manufacturing Firm Variables (1998-2007)						
	N	Mean	Stddev	P25	P50	P75
Investment	1,107,208	0.106	0.292	0.000	0.028	0.118
Keyyears_Mayor	1,107,208	0.195	0.397	0.000	0.000	0.000
Age_Mayor	1,107,208	3.898	0.094	3.847	3.909	3.956
FirmAge	1,107,208	2.012	0.767	1.386	1.946	2.485
Age_PS	1,067,580	3.932	0.085	3.890	3.938	3.991
SalesGrowth	1,107,208	0.383	0.938	-0.039	0.165	0.474
CashFlow	1,107,208	0.154	0.242	0.030	0.078	0.178
Panel C. Listed Firm Variables (1998-2013)						
	N	Mean	Stddev	P25	P50	P75
Investment	16,239	0.068	0.109	0.008	0.035	0.092
Keyyears_Mayor	16,239	0.203	0.403	0.000	0.000	0.000
Age_Mayor	16,239	3.921	0.084	3.869	3.922	3.986
FirmAge	16,239	2.406	0.474	2.079	2.485	2.773
TobinQ	16,239	1.412	0.893	0.876	1.132	1.607
CashFlow	16,239	0.052	0.094	0.004	0.049	0.101
SalesGrowth	16,239	0.207	0.488	-0.016	0.135	0.313
SOE	16,239	0.589	0.492	0.000	1.000	1.000
PC	12,399	0.312	0.463	0.000	0.000	1.000

Table 3. The political cycle of investment: Macro-level evidence

This table presents results from the regression of macroeconomic indicators at the prefecture level on Keyyears_Mayor and population growth at the prefecture level (PopGrowth) from 1991 to 2013. The dependent variables include fixed investment-to-GDP ratio (FixInv/GDP), foreign direct investment-to-GDP ratio (FDI/GDP), change in GDP rank (Δ GDPRank), and GDP improvement (GDPImprovement). Variables are defined in Appendix A. All regressions control for year and province fixed effects. The t-statistics reported in parentheses are based on standard errors clustered at the prefecture level. The symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A. Results based on Keyyears_Mayor				
	(1)	(2)	(3)	(4)
	FixInv/GDP	FDI/GDP	Δ GDPRank	GDPImprovement
Keyyears_Mayor	0.015*** (3.09)	0.002* (1.69)	0.324* (1.82)	0.590*** (5.90)
PopGrowth	0.059* (1.85)	-0.008 (-1.10)	1.490 (1.56)	2.682*** (3.03)
Year fixed effects	Yes	Yes	Yes	Yes
Prefecture fixed effects	Yes	Yes	Yes	Yes
N	5,590	5,294	5,587	5,587
Adjusted R ²	0.640	0.198	0.004	0.149
Panel B. Results based on tenure years				
Dep.Var	FixInv/GDP	FDI/GDP	Δ GDPRank	GDPImprovement
Tenure_mayor_year2	0.008*** (2.82)	-0.000 (-0.03)	0.099 (0.91)	0.161*** (2.60)
Tenure_mayor_year3	0.011** (2.46)	0.001 (1.01)	-0.000 (-0.00)	-0.176* (-1.94)
Tenure_mayor_year4	0.019*** (3.05)	0.001 (1.04)	0.403** (2.10)	0.527*** (4.81)
Tenure_mayor_year5	0.027*** (3.55)	0.004** (2.40)	0.341 (1.18)	0.782*** (4.58)
Tenure_mayor_year6	0.014 (1.28)	0.004 (1.48)	0.377 (0.84)	0.283* (1.93)
PopGrowth	0.059* (1.85)	-0.008 (-1.11)	1.485 (1.55)	2.659*** (2.99)
Year fixed effects	Yes	Yes	Yes	Yes
Prefecture fixed effects	Yes	Yes	Yes	Yes
N	5,590	5,294	5,587	5,587
Adjusted R ²	0.640	0.198	0.003	0.152

Table 4. The political cycle of investment: Evidence from manufacturing firms

This table presents results from the regression of firm investment on Keyyears_Mayor and control variables based on the sample of Chinese manufacturing firms from 1998 to 2007. The dependent variable is firm investment, defined as capital expenditure scaled by total asset at the beginning of the year. Variables are defined in Appendix A. All regressions control for year and firm fixed effects. The *t*-statistics reported in parentheses are based on standard errors clustered at the firm level. The symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
Keyyears_Mayor	0.002*** (3.43)	0.005*** (6.72)		
Tenure_mayor_year2			0.002*** (2.98)	0.001 (1.46)
Tenure_mayor_year3			-0.001 (-1.36)	0.003*** (3.78)
Tenure_mayor_year4			0.000 (0.33)	0.004*** (3.78)
Tenure_mayor_year5			0.007*** (5.81)	0.013*** (9.75)
Tenure_mayor_year6			-0.001 (-0.92)	0.001 (0.72)
Age_Mayor	-0.013*** (-4.68)	-0.011*** (-2.64)	-0.012*** (-4.220)	-0.015*** (-3.47)
FirmAge	-0.011*** (-32.77)	-0.043*** (-21.30)	-0.011*** (-32.83)	-0.043*** (-21.23)
SalesGrowth	0.036*** (72.95)	0.023*** (38.02)	0.036*** (72.94)	0.023*** (37.97)
CashFlow	0.377*** (158.37)	0.630*** (155.20)	0.377*** (158.41)	0.630*** (155.24)
GDPGrowth	0.003 (0.77)	0.008 (1.52)	0.003 (0.636)	0.008 (1.391)
Constant	0.098*** (9.24)	0.127*** (7.67)	0.094*** (8.609)	0.140*** (8.275)
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	No	Yes	No	Yes
N	1,107,208	1,107,208	1,107,208	1,107,208
Adjusted R ²	0.134	0.138	0.134	0.138

Table 5. Investment cycles by firm ownership

This table presents results from the regression of firm investment on Keyyears_Mayor and control variables based on the sample of Chinese manufacturing firms from 1998 to 2007. The sample is split into subsamples by firm ownership, including state-owned enterprises (SOEs), collective-owned enterprises (Collectives), privately owned enterprises (POEs), and foreign enterprises (Foreign). The dependent variable is firm investment, defined as capital expenditure scaled by total asset at the beginning of the year. Variables are defined in Appendix A. All regressions control for year and firm fixed effects. The t-statistics reported in parentheses are based on standard errors clustered at the firm level. The symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	SOEs	Collectives	POEs	Foreign
Keyyears_Mayor	-0.000 (-0.20)	0.004* (1.65)	0.009*** (6.33)	0.006*** (4.19)
Age_Mayor	-0.007 (-0.57)	-0.027** (-2.07)	-0.008 (-0.99)	-0.002 (-0.24)
FirmAge	-0.034*** (-5.23)	-0.027*** (-4.09)	-0.042*** (-11.70)	-0.071*** (-12.90)
SalesGrowth	0.020*** (11.10)	0.022*** (11.03)	0.022*** (24.25)	0.021*** (17.97)
CashFlow	0.668*** (30.13)	0.563*** (52.57)	0.699*** (122.85)	0.469*** (50.13)
GDPGrowth	-0.010 (-0.64)	0.005 (0.26)	0.036*** (3.60)	0.003 (0.33)
Constant	0.160*** (3.22)	0.155*** (2.96)	0.097*** (3.00)	0.128*** (4.98)
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
N	106,708	139,728	564,455	213,918
Adjusted R ²	0.082	0.135	0.158	0.106

Table 6. Investment cycles by the affiliation level

This table presents results from the regression of firm investment on Keyyears_Mayor and control variables based on the sample of Chinese manufacturing firms from 1998 to 2007. The sample is split into subsamples by firm affiliation level, including central, province, prefecture, and below prefecture. The dependent variable is firm investment, defined as capital expenditure scaled by total asset at the beginning of the year. Variables are defined in Appendix A. All regressions control for year and firm fixed effects. The *t*-statistics reported in parentheses are based on standard errors clustered at the firm level. The symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	Central	Province	Prefecture	Below prefecture
Keyyears_Mayor	0.000 (0.00)	-0.005 (-1.18)	-0.002 (-0.72)	0.006*** (3.11)
Age_Mayor	-0.007 (-0.24)	0.024 (0.95)	0.020 (1.56)	-0.023*** (-2.83)
FirmAge	-0.038** (-2.21)	-0.033** (-2.30)	-0.012* (-1.96)	-0.022*** (-5.27)
SalesGrowth	0.028*** (4.85)	0.023*** (4.97)	0.021*** (9.52)	0.021*** (16.14)
CashFlow	0.653*** (11.08)	0.592*** (13.40)	0.582*** (23.97)	0.629*** (74.45)
GDPGrowth	-0.043 (-1.05)	-0.043 (-1.29)	-0.016 (-0.94)	-0.007 (-0.65)
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Ownership fixed effects	Yes	Yes	Yes	Yes
N	13,693	19,442	73,514	292,721
Adjusted R ²	0.119	0.075	0.082	0.132

Table 7. Investment cycles by mayor characteristics

This table presents results from the regression of firm investment on Keyyears_Mayor and control variables based on the sample of Chinese manufacturing firms from 1998 to 2007. The sample is split into subsamples by mayor age (whether the age of the mayor is below 55 or not), mayor birthplace (whether mayor's birthplace is in the same province as his position), and mayor term (whether the mayor is in his first or second term). The dependent variable is firm investment, defined as capital expenditure scaled by total asset at the beginning of the year. Variables are defined in Appendix A. All regressions control for year and firm fixed effects. The t-statistics reported in parentheses are based on standard errors clustered at the firm level. The symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	Retirement		Birthplace in the same province		Second term	
	Mayor age \geq 55	Mayor age $<$ 55	No	Yes	Yes	No
Keyyears_Mayor	-0.002 (-0.74)	0.007*** (7.20)	-0.001 (-0.67)	0.006*** (5.71)	-0.002 (-1.03)	0.007*** (7.01)
Age_Mayor	0.276*** (4.02)	-0.002 (-0.43)	-0.002 (-0.19)	-0.022*** (-4.46)	-0.011 (-1.06)	-0.028*** (-4.11)
FirmAge	-0.062*** (-6.40)	-0.042*** (-19.18)	-0.034*** (-8.27)	-0.046*** (-17.44)	-0.051*** (-12.44)	-0.042*** (-15.09)
SalesGrowth	0.022*** (10.26)	0.022*** (34.59)	0.018*** (16.38)	0.023*** (30.84)	0.019*** (18.10)	0.024*** (29.98)
CashFlow	0.694*** (50.94)	0.625*** (140.82)	0.617*** (75.52)	0.650*** (128.74)	0.628*** (88.97)	0.651*** (120.43)
GDPGrowth	-0.028 (-1.49)	0.014** (2.32)	0.014 (1.41)	0.007 (0.95)	-0.026** (-2.38)	0.007 (1.05)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
N	136,637	970,571	331,343	764,188	395,113	712,095
Adjusted R ²	0.167	0.134	0.132	0.142	0.137	0.140

Table 8. Investment cycles by institution quality

This table presents results from the regression of firm investment on Keyyears_Mayor and control variables based on the sample of Chinese manufacturing firms from 1998 to 2007. The sample is split into subsamples by institution quality. We define a strong institution if government intervention is less, legal environment is better, and government integrity is higher. The dependent variable is firm investment, defined as capital expenditure scaled by total asset at the beginning of the year. Variables are defined in Appendix A. All regressions control for year and firm fixed effects. The t-statistics reported in parentheses are based on standard errors clustered at the firm level. The symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	Government Intervention		Legal Environment		Government Integrity	
	Strong	Weak	Strong	Weak	Strong	Weak
Keyyears_Mayor	0.002** (2.07)	0.009*** (7.33)	0.002* (1.77)	0.008*** (6.16)	0.000 (0.34)	0.012*** (7.87)
Age_Mayor	0.004 (0.88)	-0.053*** (-6.68)	0.002 (0.48)	-0.057*** (-6.71)	-0.001 (-0.16)	-0.057*** (-6.71)
FirmAge	-0.035*** (-12.85)	-0.051*** (-16.55)	-0.033*** (-12.29)	-0.054*** (-16.13)	-0.037*** (-14.80)	-0.050*** (-15.11)
SalesGrowth	0.025*** (29.61)	0.020*** (24.69)	0.024*** (29.06)	0.020*** (22.57)	0.023*** (30.51)	0.021*** (23.14)
CashFlow	0.603*** (90.78)	0.651*** (125.71)	0.638*** (95.95)	0.645*** (121.56)	0.627*** (103.74)	0.636*** (115.62)
GDPGrowth	-0.009 (-1.28)	0.045*** (4.77)	-0.005 (-0.70)	0.048*** (4.92)	-0.001 (-0.10)	0.020* (1.94)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
N	585,489	521,719	624,290	482,918	684,531	422,677
Adjusted R ²	0.121	0.151	0.123	0.153	0.127	0.150

Table 9. The political cycle of investment: Mayor versus party secretary

This table presents results from the regression of firm investment on Keyyears_Mayor, Keyyears_PS, and control variables based on the sample of Chinese manufacturing firms from 1998 to 2007. Results are reported for the whole sample and subsamples split by firm ownership. The dependent variable is firm investment, defined as capital expenditure scaled by total asset at the beginning of the year. Variables are defined in Appendix A. All regressions control for year and firm fixed effects. The t-statistics reported in parentheses are based on standard errors clustered at the firm level. The symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(6)
	All	SOEs	Collectives	POEs	Foreign
Keyyears_Mayor	0.006*** (6.76)	-0.001 (-0.32)	0.004 (1.37)	0.008*** (5.87)	0.006*** (4.02)
Keyyears_PS	0.001* (1.79)	-0.001 (-0.30)	0.001 (0.22)	0.002 (1.34)	0.007*** (4.84)
Age_Mayor	-0.019*** (-4.27)	-0.004 (-0.33)	-0.029** (-2.08)	-0.017** (-1.97)	-0.006 (-0.90)
Age_PS	-0.024*** (-5.00)	0.001 (0.05)	0.025* (1.68)	-0.007 (-0.67)	-0.035*** (-4.88)
FirmAge	-0.044*** (-21.08)	-0.033*** (-4.89)	-0.023*** (-3.40)	-0.044*** (-11.71)	-0.070*** (-12.67)
SalesGrowth	0.022*** (36.97)	0.020*** (10.60)	0.022*** (10.57)	0.021*** (23.59)	0.021*** (17.95)
CashFlow	0.628*** (152.70)	0.652*** (28.93)	0.560*** (51.31)	0.697*** (120.86)	0.468*** (49.77)
GDPGrowth	0.005 (0.88)	-0.007 (-0.44)	-0.022 (-1.12)	0.031*** (2.99)	0.000 (0.00)
year fixed effects	Yes	Yes	Yes	Yes	Yes
firm fixed effects	Yes	Yes	Yes	Yes	Yes
N	1,067,580	99,887	131,308	546,775	209,347
Adjusted R ²	0.139	0.080	0.137	0.158	0.107

Table 10. The political cycles of investment: Additional evidence from listed firms

This table presents results from the regression of firm investment on Keyyears_Mayor and control variables based on the sample of Chinese listed firms from 1998 to 2013. Results are reported for the whole sample and subsamples split by firm ownership. The dependent variable is firm investment, defined as capital expenditure scaled by total asset at the beginning of the year. Variables are defined in Appendix A. All regressions control for year and firm fixed effects. The t-statistics reported in parentheses are based on standard errors clustered at the firm level. The symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
	All	SOEs	POEs	POEs_PC	POEs_NPC
Keyyears_Mayor	0.000 (0.10)	-0.002 (-0.90)	0.006* (1.74)	0.020*** (2.76)	0.001 (0.28)
Age_Mayor	-0.010 (-0.78)	-0.016 (-0.92)	0.004 (0.19)	-0.007 (-0.20)	0.028 (0.90)
FirmAge	-0.039*** (-4.75)	-0.039*** (-4.06)	-0.072*** (-4.02)	-0.162*** (-3.43)	-0.074*** (-3.24)
TobinQ_Lag	0.010*** (6.11)	0.010*** (3.78)	0.011*** (5.02)	0.016*** (2.97)	0.013*** (4.46)
CashFlow	0.055*** (15.22)	0.067*** (13.16)	0.040*** (8.45)	0.040*** (4.28)	0.048*** (6.36)
SalesGrowth	0.067*** (4.54)	0.075*** (3.70)	0.039* (1.71)	0.009 (0.19)	0.025 (0.83)
GDPGrowth	-0.004 (-0.66)	-0.004 (-0.40)	-0.006 (-0.70)	-0.044 (-0.77)	0.052 (1.47)
year fixed effects	Yes	Yes	Yes	Yes	Yes
firm fixed effects	Yes	Yes	Yes	Yes	Yes
N	16,239	9,561	6,678	1,850	4,003
Adjusted R ²	0.102	0.118	0.081	0.088	0.092

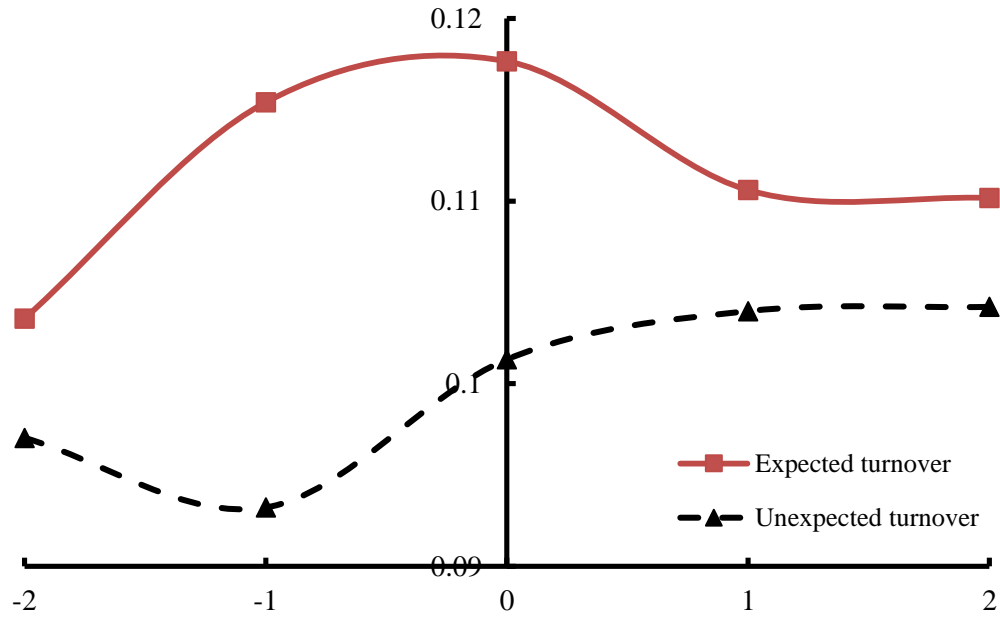


Figure 1. Average Investment Rate around Turnover Years

This figure plots the average investment rate of manufacturing firms around expected (red line) and unexpected (black dashed line) turnover years, respectively. An expected turnover is defined as turnovers when the mayor serves a full five-year term. An unexpected turnover is defined as turnovers that the mayor serves less than four years in his current position. Year 0 is defined as the last year the mayor is in office.