Strategic Choices of Local Politicians in China: The Interplay of Economic, Political Activities, and Promotion Prospects*

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Abstract

Through a unique database on daily activities of municipal party secretaries, we find that they spend a significant part of their work time on political and propaganda activities, including organizing various meetings to promote the central government's spirit ideology. We find that officials engage in these behaviors more often before a government reshuffle, plausibly tend to leave a loyal and obedient impression on the superior government and increase their promotion probability. This is on contrary to economic behaviors, which are more common in the early stages of officials' terms, possibly because investment projects require time. This is more evident among younger, well-educated politicians due to age-based promotion restrictions. Moreover, we find that increased political activities are associated with lower investments of private firms. Our study may shed light on how the Communist Party of China balancing economic development and political loyalty when selecting officials.

Keywords: Local Politician, Promotion, Political Activities, China

JEL Classification: D73, G30, L33

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1. Introduction

Politicians possess substantial impact on economic outcomes worldwide, as underscored by Fisman (2001) and an expanding collection of scholarly works in political economy, which can be traced back to the pioneering research of Nordhaus (1975).[1] China's 30-year development path challenges political economy theories (Acemoglu and Robinson (2012); Rodrik (2011)), as it defies the notion that economic growth and localization of power lead to political liberalization (North (1990)). Despite remarkable growth under a single-party rule, China shows no signs of liberalization, with a possible trend towards power centralization. This paper examines how the Chinese government and Communist Party merge economic growth and ideological control of city-level officials, while exploring how these officials maximize political interests and seek promotion within the system through economic and political endeavors.

Our analysis reveals that city secretaries tend to engage in more economic activities at the outset of their terms, gradually shifting towards political activities in later years. This pattern is particularly pronounced among younger, well-educated politicians and is associated with an increased likelihood of promotion for local officials. In summary, our findings suggest that local politicians strategically select and participate in various types of events throughout their five-year terms to advance their careers. Our study contributes to the existing literature by providing a nuanced understanding of the specific activities politicians undertake throughout their terms, thereby offering valuable insights into the mechanisms driving the politics-economic nexus and the implications for policy outcomes and economic performance.

More specifically, our primary data source is the CNKI online newspaper database, which grants us access to local party newspapers, such as "Beijing Daily", by using the name of a city official as a keyword. Focusing on reports published between 2006 and 2020, we employ a web

[1] This well-established politics-economic nexus has been extensively studied through seminal works such as MacRae (1977), Kornai (1979), Alesina and Sachs (1988), Shleifer and Vishny (1994), Biais and Perotti (2002), Sapienza (2004), Dinc (2005), Khwaja and Mian (2005), Cohen, Coval and Malloy (2011), and Carvalho (2014). Moreover, some research, including Levitt (1996), Dollar, Fisman and Gatti (2001), and Washington (2008), has delved into the impact of politicians' demographics on government policies and economic activities.

crawler to download all relevant reports, including their date, title, abstract, and content. Local party newspapers closely monitor the activities of local officials, providing detailed accounts of their engagements.[2]

Our data is structured as a Year-City-Official-Position panel comprising 6,026 observations from 182 cities between 2006 and 2020. The panel includes 1,292 different officials, with 408 serving in various cities or positions (secretary or mayor). Among these officials, 769 were born in the same province, and 51 in the same city as their position. We focus our analysis on the behavior of secretaries for two reasons: their influential role in local affairs and their appointment by the CCP, which gives them the final say in local decisions.

Utilizing this comprehensive dataset, we investigate how local politicians strategically prioritize specific activities throughout their five-year terms. We conduct a regression analysis of the number of political, economic, and welfare activities, respectively, in relation to city secretaries' years in office. Our findings reveal that as officials approach their term limit, they tend to engage more in political activities while reducing their focus on economic activities. For instance, in the final year of their term, city secretaries increase their political activities by 0.7% compared to the first year, whereas economic activities are 3.8% more prevalent during their initial year in office. In summary, our results demonstrate that local politicians strategically allocate their efforts across various activities depending on their stage in the term.

We further examine heterogeneity among politicians and identify two distinct patterns: 1) younger officials engage more in political activities during later stages of their terms, and 2) officials with higher education participate more in economic activities. In China, strict age limitations govern politicians' promotions (Ru and Zou (2022)), affording younger politicians greater opportunities for advancement. This observation suggests that career concerns primarily drive politicians' strategic choices of activities at different stages of their terms. Moreover, our

[2] To efficiently utilize our report dataset, we apply the cutting-edge BERT model, a deep learning method developed by Google, to extract the activities covered in each report. This process yields 4,900,000 activities that reflect local dynamics. We then employ the NMF model, a robust unsupervised method, to categorize these activities into distinct topics, each representing a specific type of activity local officials participate in.

findings indicate that local politicians connected to top leaders in the Politburo of the CPC are less likely to engage in such strategic activities. This can be attributed to their increased likelihood of promotion, as demonstrated by studies such as Ru and Zou (2022) and Fisman et al. (2018).

To substantiate our findings, we directly assess the impact of different activities on politicians' promotion prospects. Our analysis reveals that: 1) all three types of officials' activities positively influence their subsequent promotion opportunities, with this effect becoming more pronounced as they approach their term limit; and 2) political activities exert the most significant impact on promotion outcomes.

Additionally, we compare two specific types of activities: Topic 4, which reflects officials' responsiveness to provincial government work plans, and Topic 9, which pertains to officials' efforts in organizing learning sessions on central directives. This comparison aims to distinguish between loyalty signaling towards superiors and loyalty signaling towards the central government (the latter being more ideological). Our results indicate that: 1) signaling loyalty towards superiors substantially affects promotion prospects in the year of the term limit, and 2) signaling loyalty towards the central government considerably influences promotion prospects over a longer period.

We further discover that in provinces where the political climate exceeds the 50% threshold, the impact of economic activities on promotion outcomes diminishes considerably. Conversely, the influence of political activities on promotion outcomes grows substantially. Additionally, we observe that for female officials and those with ties to Politburo members, political activities have a considerable positive effect on promotion prospects. However, no differential rewards for political activities are evident based on age or education level. Similarly, for female officials and those connected to Politburo members, economic activities significantly boost promotion prospects, while no differential rewards for economic activities are discernible based on age or education level. In summary, our findings underscore the varying impact of political and economic activities on promotion outcomes, influenced by factors such as gender, connections to Politburo members, and the prevailing political climate in a given province.

Lastly, we evaluate the economic implications associated with the strategic decisions made by local politicians, particularly those involving a choice between political and economic pursuits.

Interestingly, our findings reveal a significant negative correlation between the political activities of officials and the scale of new investments made by firms. This finding underscores the nuanced economic repercussions of strategic decisions made by local politicians. We've identified a crucial and significant negative correlation between the intensity of their political activities and the level of new investments within their jurisdictions. This echoes the established view that an official's excessive engagement in politics, at the expense of economic development, can negatively impact the health and growth of the local economy.

Our research makes two significant contributions to the existing literature. Firstly, we enrich the field of political economics by providing new insights into the specific actions of politicians. While the literature recognizes the substantial influence politicians wield over economic activities, as demonstrated by seminal works such as Acemoglu and Robinson (2006), Besley and Case (1995), North and Weingast (1989), Rodrik (1996), and Persson and Tabellini (2000), there is a scarcity of concrete evidence detailing the precise actions they undertake. Our novel dataset offers granular evidence of politicians' strategic choices, which can impact the political system, economic development, and social welfare. This advancement adds depth and nuance to the existing body of knowledge, helping to bridge the gap between theoretical understanding and empirical observations (e.g., Fisman (2001), Nordhaus (1975), Alesina and Sachs (1988), Shleifer and Vishny (1994), and Biais and Perotti (2002)).

Secondly, we contribute to the literature on politicians' career concerns, particularly in the context of China. Numerous studies have investigated the GDP tournament in China (Li and Zhou (2005), Ru (2018), Chen et al. (2005), Xu (2011), Jia et al. (2015)), primarily focusing on the role of economic performance in promotions. Our findings align with these studies, highlighting that local politicians' economic activities, particularly in the early years of their terms, contribute to their promotion prospects. More importantly, we reveal that political activities are also critical for politicians' advancement, especially towards the end of their term. This novel perspective complements the existing understanding of the GDP tournament and offers fresh insights into the promotion mechanisms within China, the world's second-largest economy.

The rest of this paper is organized as follows. Section 2 describes the institutional backgrounds in China. Section 3 presents the data and summary statistics. Section 4 shows the empirical analysis and results. Section 5 concludes.

2. Background

2.1 China's Hierarchical Governance and Promotion Challenges

The decentralized system of the Communist Party of China (CPC) has its origins in its guerrilla beginnings, which required granting local leaders the autonomy for prompt decision-making (Heilmann, 2018). Post-1978 reforms introduced a five-tier government management system, including central, provincial, municipal, county, and township levels. Each level enjoys considerable authority over a range of matters, such as budgeting, public goods provision, land rights, personnel appointments, and even judicial interventions.

China's hierarchical government structure empowers higher-level authorities to control and influence subordinates primarily through appointment and dismissal powers. For instance, provincial governments appoint municipal officials, who then appoint county officials. Although lower levels possess appointment power within their jurisdiction, higher-level authorities frequently intervene in subordinates' decisions, promoting favored candidates even multiple levels below. Superior governments also retain privileges, such as allocating crucial quotas like land entitlements.

In China, promotions offer officials vital incentives, including elevated social status, broader jurisdiction, increased discretionary power, and more rent-seeking opportunities. However, the assessment system lacks transparency, and top-performing officials may not always have the best promotion prospects, despite central government efforts to improve the system. Implementing clear, quantifiable assessment indicators and a performance-based promotion system could reduce higher-level governments' discretion in promotions, limiting rent-seeking opportunities and control over subordinate officials. However, the fairness of assessment results remains questionable, as superior government organization departments, responsible for cadre assessments, may not have first-hand local performance information. Consequently, higher-level governments

rarely disclose local cadre assessments except in high-priority cases, such as local security and epidemic prevention. Failing to meet superior government requirements can lead to immediate demotion or lost promotion opportunities for local officials.

2.2 Political Allegiance and Media Control in China

Due to ambiguous and flawed regulations, lower-level governments must anticipate higher-level authorities' preferences and adjust their behavior accordingly. Promotion decisions consider various factors, including local economic performance and officials' ideological and political inclinations. For instance, officials with strong communist ideology adherence may receive preferential treatment. This ideology values collectivism and unwavering party loyalty, potentially leading such officials to prioritize these aspects over economic development, possibly due to their lower opportunity cost from limited knowledge and experience. Consequently, they might be more compliant with higher-level directives, even if not beneficial to local populations. Emphasizing ideology could also encourage officials to seek favor with superiors through illicit means.

Lower-level officials often showcase their political loyalty to higher-level authorities by organizing meetings to study speeches delivered by senior or central figures. These events typically feature local party committee leaders giving lengthy speeches, with numerous government staff attending. Anecdotal evidence suggests that local officials eagerly capitalize on these opportunities to display their allegiance. For example, when General Secretary Xi Jinping inspected the Yellow River environment in one city, two other provinces along the river quickly held environmental meetings, demonstrating their commitment to environmental governance.

The Communist Party's control over newspapers in China ensures that local officials' conference efforts receive widespread local media coverage. Propaganda requirements dictate that all Chinese newspapers are either directly or indirectly owned and controlled by the Communist Party. Directly-controlled newspapers prominently feature reports on local leaders' daily activities in essential columns. Local newspapers adhere to strict censorship, using regulated language and images, and maintaining a controlled layout. Municipal party committee secretary office staff review local newspaper content before publication to ensure accuracy. Local leaders, aware of

their media control, use this to highlight their meeting efforts and impress higher-level government officials.

2.3 Local Government Practices and Economic Priorities

Local governments in China have an immense amount of power, and as a result, they often maintain a busy schedule. The most common practice is to hold conferences, which often require the attendance of subordinates from lower-level governments or departments of the same level government. Failure to attend is considered a serious offense. While some meetings require lower-level governments to report, most meetings are large-scale and focused on specific themes, such as economic work, finance, or taxation.

Unfortunately, these meetings typically involve one-way communication and are not designed for two-way dialogue. They frequently become a one-man show for mayors or secretaries, who deliver prepared and lengthy speeches written by their staff. With more than 50 people in attendance, it is nearly impossible to have meaningful interaction. Consequently, these meetings have little practical effect in addressing real problems.

Local governments in China also prioritize certain economic activities to promote local economic growth. One such activity is visiting enterprises. Officials typically visit multiple firms in a single trip, selecting the most successful ones to showcase. They may also meet with other entrepreneurs to encourage investment in the local area. Additionally, some officials visit local residents and public facilities, such as nursing homes, orphanages, and the homes of low-income and retired officials, to show their care and connection to the local people. These activities often occur before holidays, such as the Spring Festival. However, there are few instances where the government visits other cities to learn about their administrative experiences and communicate with local officials.

3 Data Description

3.1 Officials' Tenure

We gathered and compiled a list of municipal party secretaries who have served in every prefecture-level city in China since 2000, using the website HotelAAH.com. This travel booking

site offers extensive information on various Chinese cities, including transportation maps, government websites, postal codes, and essential data on previous officials. It features the names and specific tenure periods of municipal party secretaries and mayors who have served in 330 prefecture-level cities in China since 1949. This data has been utilized in numerous studies on China (Meng et al., 2019).

Our compiled data covers 2000 to 2020 and includes 31 provinces, 329 cities, 2,120 municipal party secretaries, and 2,580 mayors. Over 90% of their tenures range between 2-6 years, with a small number (0.6%) serving for 10 years.

3.2 Official Background

We extracted comprehensive information on Chinese officials from Baidu Baike (baike.baidu.com), a Chinese-language online encyclopedia akin to Wikipedia. By searching officials' names, titles (e.g., party secretary or mayor), and cities they serve, we obtained various details, including gender, birthplace, birth date, and educational background.

We manually cross-checked and filtered officials' resumes against those of central government high-ranking officials to identify political connections. Specifically, we compared job histories of mayors and party secretaries with Politburo members at the time. If an official held a post in the same place and time as a Politburo member, and their rank difference was no greater than three levels, we inferred a political connection. For example, if the Politburo member served as the provincial party secretary, a full minister-level position, any official at the deputy department level or above in that province would be considered connected.

Baidu Baike's politically related content is strictly regulated in China. Officials' profiles are curated by a dedicated team and not editable by ordinary users, ensuring reliability. We collected and processed information from 2,101 party secretaries and 2,300 mayors..

3.3. Official Daily Activities

3.3.1 Data source

In China, each city has a party-run newspaper controlled by the local propaganda department, such as Beijing Daily in Beijing. These newspapers primarily serve a political propaganda function, with one of their main tasks being to report on local leaders' activities, usually appearing on the front pages.

We used officials' names and the cities they serve as keywords to search for all news articles published in local party newspapers. We extracted relevant information, including news headlines, dates, officials mentioned, and specific content, from the full-text newspaper database provided by China National Knowledge Infrastructure (CNKI).

The CNKI newspaper database primarily covers news articles since 2006, when newspaper digitalization began in China. Data before 2005 is scarce and lacks party newspaper data in certain cities. Consequently, we collected news reports from 2006 onwards and removed newspapers with significant data gaps. We gathered a total of 790,000 valid news articles, including 1,308 party secretaries and 1,450 mayors. Most officials had between 200 and 300 related news articles, and on average, at least one article was published about them per working day.

3.3.2 Event extraction based on BERT

For the 700,000 news articles we have extracted and organized, we need to identify the specific behaviors recorded for officials. For example, an article in Chengdu Daily on 20th January 2023 reported that Shi Xiaolin, the Secretary of the Chengdu Municipal Committee, visited retired soldiers, disadvantaged groups, and the fire department before Chinese New Year.

We employ widely-used deep learning and natural language processing methods, such as Bidirectional Encoder Representations from Transformers (BERT). BERT is a deep learning model based on the Transformer's multi-attention mechanism, proposed by Google in 2018. It shares features with ChatGPT, another model based on the Transformer mechanism. BERT is a pre-trained language model that generates deep bidirectional language representations. Its main innovation is the pre-training method, which uses Masked LM and Next Sentence Prediction to capture word and sentence-level representations.

BERT has two primary uses: as a text feature extraction tool, similar to Word2vec, and as a pre-trained model for downstream tasks like text classification, named entity recognition, and question answering. One of BERT's functions in text feature extraction is to extract event features. BERT's advantage over other event extraction methods is its ability to better understand events in text by learning context information. Additionally, BERT can handle various types of events, including complex and multiple events, and automatically extract different aspects of events, such as triggers, types, and parameters.

We used BERT's Event Extraction to break down the news text on officials' activities. In our sample, a typical report usually includes 5-7 specific behaviors. After extracting and processing 700,000 news articles, we obtained 4.9 million pieces of specific behavioral data. For instance, in the aforementioned article about official Shi Xiaolin, we used BERT Event Extraction to process it, as shown in Table 1 below.

3.3.3 Behavior Classification: Based on Non-negative matrix factorization (NMF)

In text classification, the unsupervised learning model Non-negative Matrix Factorization (NMF) can be used to extract topic features of documents. Specifically, we use NMF to decompose the document matrix into two non-negative matrices: one containing topics and the other containing documents. This method, called "topic modeling," has been widely used in text classification. Compared to other methods, NMF is suitable for behavior data text classification because it can extract useful features and reduce dimensionality, making text classification more efficient and accurate.

Using the NMF method, we classified the extracted 4.9 million data points into 19 categories and manually added labels for further analysis. See Table 2 for detailed definitions of each category. Taking the aforementioned report on Shi Xiaolin as an example, visiting the elderly and visiting disadvantaged groups are classified into topic 7, while inspecting the fire department is classified into topic 6.

We then divided the 19 behavior categories into three major categories: economy-related (including activities related to investment promotion, reception of entrepreneurs, and development

of economic development plans), political-related (including holding important meetings to study central government policies and carrying out patriotic education activities), and livelihood-related (visiting and talking to the poor and disadvantaged people, etc.). We categorize topic 3, 4, 5, 6, 7, 12, 13, 17, 19 as economy-related, 2, 6, 8, 9, 15, 16 as political related and 1, 11, 14, 18 as livelihood related. We then integrated them into city-year-official panel data based on their proportions.

4.1 Empirical Design

What we aim to explore first is whether the three types of behaviors exhibited by officials—politically-related, economically-related, and socially-related—change as they approach the end of their term. We hypothesize that officials will adopt different behaviors at various stages of their tenure. For instance, at the beginning of their tenure, officials might engage in more economically-related activities, as economic growth is a long-term process. Conversely, as they near the end of their term, officials may focus on politically-related activities, since these actions could potentially increase their chances of promotion within a shorter time frame.

Based on these assumptions, we can establish the following empirical model:

$$Activities_{ijt} = \alpha + \sum_{k=1}^{4} \beta_k kYeartoLeave_{ijt} + X_{ijt} + \delta_i + \theta_t + \varepsilon_{ijt}$$

In this equation, i refers to city, j refers to official, and t refers to year. $Activities_{ijt}$ means the share of one specific activities among total activities. To capture the dynamics of officials' behavior, $kYeartoLeave_{ijt}$ is a dummy variable which equals one if there is k years left for official j's term in city i in year t. X_{ijt} is a series of control variables both at city level and individual level, including city's GDP scale, population, and official's gender, education and so on. δ_i captures the fixed effect of city. θ_t is the year fixed effect. ε_{ijt} is the unobserved error term. We focus on the interpretation of β_k, which directly shows the dynamics of people's behavior changing.

We then multiply $kYeartoLeave_{ijt}$ with officials' personal features, such as gender, political connection, age, and education, to see whether there would be systematically differences among different groups.

To furtherly investigate the hiding incentive for the changing of official's activities, we regress people's promotion status after the end of current term on their dynamical activities. The specification is:

$$Promotion_{ijt} = \alpha + \sum_{k=1}^{4} \beta_k kYeartoLeave_{ijt} \times Activities_{ijt} + X_{ijt} + \delta_i + \theta_t + \varepsilon_{ijt}$$

In this equation, $Promotion_{ijt}$ is a dummy variable indicating whether the official is promoted or not if there is k years left for official j's term in city i in year t.

Correspondingly, we then multiply $kYeartoLeave_{ijt} \times Activities_{ijt}$ with officials' personal features, such as gender, political connection, age, and education, to see whether there would be systematically differences among different groups.

5. The Empirical Analysis

We categorized officials' behaviors into three groups: political, economic, and livelihood-related. In our sample, the term of office for a city's party secretary typically ranges from 2 to 6 years. Our research indicates that the proportion of officials' three types of behaviors changes significantly at different stages of their term. Specifically, they focus more on economically-related tasks, such as attracting investment during their term, while they engage in a higher proportion of politically-related work, like holding meetings to study central government policies, towards the end of their term. Further research suggests that the incentive for promotion can explain these changes in officials' behaviors: Engaging in economically-related tasks earlier in one's term can improve an official's chances of promotion later on. As the term nears its end, political behavior supersedes economic behavior as the most influential factor affecting the likelihood of promotion.

Simultaneously, there is significant heterogeneity in the effects mentioned above among different groups. In terms of behavioral changes, officials with higher education levels are more

inclined to engage in economically-related activities, while younger officials are more eager to participate in political tasks.

5.1 Baseline Result I: Dynamic changes in behavior

In China, the government plays a significant role in local economic and social development. Our data helps to identify the daily tasks of government officials. In Table 4, the dependent variable represents the three types of behaviors city party secretaries engage in: political-related, economic-related, and livelihood-related. We regress officials' behavior on a series of dummy variables that describe different stages of their term. We expect that officials may engage in more economically-related behavior in the early stages and more politically-related behavior in the later stages. This is likely related to the time horizon of behaviors' output. The output of economically-related behaviors, such as investment, may be revealed over a long period, while the effect of political behaviors is immediate, as it sends signals to higher government levels about the type of officials.

We find that officials' behavior does indeed undergo significant changes throughout their term. The proportion of officials engaging in political behavior gradually increases and peaks in the last year. The coefficient of *1YeartoLeave* is 0.007, indicating that the proportion of political behavior has significantly increased by 0.7% in the last year. Considering that the standard deviation of the proportion of political behavior is only 3.8%, this effect is also economically significant.

We are also concerned about changes in the proportion of economically-related behaviors that city party secretaries engage in. The coefficients of *2YeartoLeave* and *1YeartoLeave* are significantly -0.013 and -0.038, respectively, which means that compared to the beginning of the term, the proportion of officials engaging in economically-related behavior in the last two years of their term has decreased by 1.3% and 3.8%, respectively. This demonstrates that they have indeed reduced the proportion of economically-related behavior. The standard deviation of the proportion of economically-related behavior is 5.8%, indicating its economic significance.

In contrast, the change in livelihood-related behavior is not significant. This result partially aligns with our intuition: the importance of livelihood-related behavior is not as significant

compared to political or economically-related behavior in terms of officials' political achievements or their promotion incentives.

5.2 Heterogeneity Analysis I

Female versus Male: It is believed that female officials may exhibit different behaviors and performance compared to male officials in male-dominated workplaces. As they are outnumbered and may face implicit discrimination in their work, they may have a harder time being appointed to important positions (e.g., no female has ever been appointed to the Politburo Standing Committee of the Communist Party of China). However, due to the need for diversity, female officials may face less competition compared to male officials when it comes to promotion to positions of lesser importance. Therefore, their behavioral dynamics during their tenure may differ.

We conducted analyses on columns (1) and (2) of Table 5. The coefficients of the interaction term between the dummy variable *kYeartoLeave* and the dummy variable *Gender* indicate that there is no significant difference in the pattern of political behavior changes during tenure between female and male officials. Furthermore, female and male officials follow the same behavior pattern that we have revealed in our baseline analysis: at the end of their tenure, they engage in more political behavior. Similarly, there is not much variation in the behavior patterns of female officials and male officials with regard to economic behavior. However, it is interesting to note that female officials reduce their proportion of economic behavior to a greater extent in the year when their tenure ends, although the coefficient of this interaction term is not very large.

With and Without Political Connections: Some scholars believe that whether an official has political connections with high-level officials, rather than their performance during their tenure, is the decisive factor in whether they can obtain promotion opportunities. We manually collected the job histories of city committee secretaries before they took office and the job histories of current members of the Central Political Bureau who served in local provinces. If their job histories intersected in time and place, and the gap between their ranks in the positions they held was within three levels, we considered that the city committee secretary had political connections with the

member of the Central Political Bureau, and the value of the dummy variable Connection was set to 1; otherwise, it was set to 0.

Considering that this factor may also affect the behavior patterns that officials adopt, we investigate the impact of political connections on officials' behavior by regressing the interaction term of the tenure stage dummy variable and the political connection dummy variable, where the core variable of our interest is *kYeartoLeave* × *Connection*. However, the results in columns (3) and (4) of Table 5 also show that regardless of whether there are political connections, officials will engage in more political behavior and less economic behavior at the end of their tenure.

Young versus old: In our sample, city committee secretaries are generally between 52 and 59 years old during their tenure. In China, age is an important factor that affects officials' promotion opportunities, as seen in the so-called "seven up, eight down" system. "Seven up, eight down" means that when an official's previous term ends, if they are 57 or younger, they will be able to start the next term; if they are 58 years old or older at the end of their tenure, they will generally have a difficult time starting the next term and may retire or be assigned to marginalized positions. Therefore, younger officials usually have a greater chance of promotion. Consequently, their behavior patterns may differ from those of older officials. Specifically, we speculate that they may behave more assertively, engaging in more economic work in the early stage of their tenure and more political behavior in the later stage.

Here, we used a dummy variable Young and interacted it with kYeartoLeave. If the age of the official at the beginning of their term is less than 53 years old, Young takes the value of 1. It indicates that even if they complete 5 years in their current position, they will still be eligible to start another term. The coefficients of the interaction term in columns (5) and (6) of Table 5 confirmed our hypothesis. It indicates that, compared to older officials, in the last three years of their term, young officials' political behavior proportion increased significantly by 0.6%, 0.6%, and 0.7%, respectively, on the basis of a general pattern of behavioral change, while their economic behavior proportion decreased significantly by 1%, 0.7%, and 1.1%, respectively. This suggests that they are indeed more proactive.

Higher versus Lower Education: In general, we believe that engaging in more economic activities requires officials to have stronger abilities, and the level of education is often used to characterize ability. In our sample, officials who hold a master's degree or higher accounted for 30% of the total sample. We speculate that these officials with higher education may choose to engage in more economic activities and correspondingly fewer political activities.

We use a dummy variable HigherEducation and interact it with *kYeartoLeave*. When the education level of the municipal party secretary is a master's degree or higher (Ph.D.), the value is 1. The results in columns (7) and (8) of Table 5 indicate that, compared to officials with lower education, officials with higher education, even in the late period of their term, are more likely to engage in economic work and less likely to engage in political work. This confirms our hypothesis that economic behavior requires more capable officials.

5.3 Other factors that may affect officials' behaviors

One potential concern is that certain local social factors may affect the proportion of political, economic, and livelihood behaviors undertaken by the Party Secretary. For example, if a city has high levels of crime, the Party Secretary may spend more time and effort on political activities.

To address this concern, we include crime rates and the number of crimes per resident in Table 6. The results show that the number of crimes is indeed associated with a higher proportion of political behavior. However, even after controlling for city crime rates, other control variables, and adding year and city fixed effects, the dynamic pattern of changes in the proportion of political behavior engaged in by the Party Secretary in the final year of their term still persists. That is, they engage in more political activities in the last year of their tenure.

5.4 Baseline Result II: Officials' Behavior and Promotion

Next, we attempt to explain why the behavior of officials undergoes dynamic changes. For officials, their greatest incentive is usually the opportunity for promotion. Different types of behavior (political, economic, and livelihood-related) may have different effects on promotion probability during different stages of their term (early, middle, or late). Therefore, in Table 7, we multiply political behavior, economic behavior, and livelihood-related behavior with a series of

dummy variables, *kYeartoLeave*, representing the different stages of their term, which is the variable we will focus on in this section.

Firstly, we hypothesize that officials engage in more political work towards the end of their term because this phase is most advantageous for their promotion. Similarly, they engage in more economic-related work in the early stages of their term to maximize their promotion probability. According to the results in Table 7, comparing the effects of the three types of behavior (political, economic, and livelihood-related) on promotion during different stages of the term, we find that if it is the last year of their term, a 1 percentage point increase in political behavior increases promotion probability by 0.54 percentage points, while an equivalent increase in economic behavior only has an effect of 0.39 percentage points in the final year. Therefore, this result explains why officials engage in more political behavior in the later stages: to signal their loyalty to the superior government. As we mentioned earlier, the decision-making power for the promotion of officials lies with higher-level officials. However, for various reasons, higher-level officials may not be able to fully understand the performance of officials at the local level. The political behavior of local officials can send a signal of their loyalty to higher-level officials. If this signal can be captured by higher-level officials when making decisions, it may have a significant impact on their promotion.

At the same time, taking the early year (4 years to leave) as an example, if the proportion of economic behavior increases 1 percentage point in the early stages of the term, the probability of promotion after the end of the term will increase by 0.16 percentage points, while the effect of political behavior on promotion during this stage is not significant. This explains why officials engage in more economic behavior at the beginning of their term (as reflected in the results of Baseline I, where the proportion of economic behavior decreases as the term progresses).

Livelihood-related behavior is used more as a reference point in our study. The results in column (3) of Table 7 show that although livelihood-related behavior may also affect the probability of promotion, the size of its impact is much smaller than that of political and economic behavior based on the regression coefficient. Therefore, officials may not have the motivation to

adjust the proportion of livelihood-related behavior (in the results of Baseline I, the proportion of livelihood-related behavior hardly changes as the term progresses).

5.5 Categorization of Political Behaviors: learning spirit of super or central government?

An interesting question is whether officials, when participating in political activities such as "learning spirits," demonstrate more responsiveness to win the favor of their superiors or to display their political loyalty to the central government. With the help of our unique dataset, we can separate these two types of behavior. Specifically, Topic 4 refers to the proportion of behavior in which officials respond to the superior government's calls by holding meetings, while Topic 9 refers to the proportion of behavior in which officials organize meetings to study the central government's spirit.

In practice, the two types of behaviors could be equally important. The impressions of the higher-level government about them could be critical, as it is the higher-level government who makes promotion decisions. Although the central government is unlikely to directly promote local officials at the municipal level, they can influence or intervene in promotion decisions using their power over higher government officials. On the other hand, since the communist ideology emphasizes loyalty and obedience and such narratives are prevalent in central government documents that local governments study, local officials' expressions of learning the central government's spirits could be one way to show their stance towards their own superiors.

The results of Table 8 show that if the proportion of work that responds to the higher (non-central) government's call increases by 1 percentage point in the last year of the term, it can increase the promotion probability of municipal party secretaries by 1.66 percentage points, while its influence in other years is not significant. Conversely, if the proportion of behavior studying the central government's spirit increases by 1 percentage point of all work, it can increase the promotion probability by 0.62 percentage points in the third year of the term, by 1.02 percentage points in the second year, and by 1.09 percentage points in the last year. This shows that the influence of studying the central government's spirit on promotion is more significant.

5.6 Differences in Political Environment

In people's perceptions, some regions in China appear to be more politically inclined than others, which is supported by our data. We discovered significant differences in the proportion of political activities undertaken by municipal party secretaries in regions with varying levels of political enthusiasm. We ranked provinces from high to low political atmosphere and divided the samples into two sub-groups based on the median of 50%. We hypothesized that engaging in political activities would be more beneficial for officials' promotions in provinces with a stronger political atmosphere, while in provinces with a weaker political atmosphere, engaging in economic activities might have a greater positive impact on promotion.

Comparing the regression coefficients in columns (1) and (3) of Table 9, if officials engage in all political behaviors during the last year of their term, the coefficient for promoting the probability of promotion in provinces with a low political atmosphere is 69.6%, while in provinces with a high political atmosphere, this coefficient reaches 73.1%. In the penultimate year of the term, the coefficients for both types of provinces are 53.7% and 54.1%, respectively. In the third-to-last year, the coefficient in low political atmosphere provinces is no longer significant, but in high political atmosphere provinces, the coefficient remains significant at 39%. This suggests that engaging in politically related behavior is indeed more advantageous in provinces with a high political atmosphere.

Similarly, when comparing the coefficients in columns (2) and (4), during the last year of the term, if officials engage solely in economic activities, the coefficient for promoting the probability of promotion in low political atmosphere provinces is 47.3%, while in high political atmosphere provinces, this coefficient is only 37.8%. Moreover, in the second, third, and fourth years following the end of the term, conducting economic activities in low political atmosphere provinces has a significant impact on the probability of promotion. This indicates that pursuing economic-related behaviors is more advantageous in low political atmosphere provinces.

5.7 Heterogeneity Analysis II

Female vs. Male: According to the description in the previous section and some literature evidence, female officials in the system face more advantages than male officials when it comes

to promotion. One contribution of our article in this field is that we can use our unique data to analyze the impact of female officials' gender and their behavior on their promotion probability from the perspective of the interaction between gender characteristics and the officials' behavior.

In the first column of Table 10(a), we first interact the dummy variable *kYeartoLeave*, which represents the term phase, with the proportion of political or economic behavior, and then with the gender dummy variable *Gender*. The regression coefficients of the triple interaction terms show that compared with male officials, female officials' political behavior during their term can significantly increase their promotion probability. The coefficients for the last year, the second-to-last year, and the third-to-last year of the term are 114%, 155%, and 135%, respectively.

In a similar regression analysis in the first column of Table 10(b), the regression coefficients of the three-way interaction terms show that compared with male officials, female officials' economic behavior during their term can also significantly increase their promotion probability. The coefficients for the last year, the second-to-last year, the third-to-last year, and the fourth-to-last year of the term are 94.7%, 96.6%, 79.8%, and 69.9%, respectively.

The above results indicate that female officials have significant advantages in promotion. Compared with male officials, they can increase their promotion probability by doing more political or economic-related behaviors during their term.

With vs. Without Political Connections: As mentioned earlier, some scholars believe that whether an official has political connections with high-level officials, rather than the achievements made during their term, is the decisive factor in whether they can obtain promotion opportunities. We manually collected the work experience before the appointment of the Municipal Party Secretary, as well as the work experience of the current Central Political Bureau members in various provinces. If their work experience intersects in time and place, and the rank difference of the official positions they held is within three levels, we consider that the Municipal Party Secretary has political connections with the Central Political Bureau members. This is captured by the dummy variable *Connection* takes a value of 1, otherwise it takes a value of 0. We first interact the dummy variable *kYeartoLeave*, which represents the term phase, and the proportion of political or economic behavior, and then with the connection dummy variable.

In the second column of Table 10(a), the regression coefficients of the triple interaction terms show that compared with officials without high-level political connections, these officials with political connections can significantly increase their promotion probability by engaging in political behaviors during their term. The coefficients for the last year, the second-to-last year, the third-to-last year, and the fourth-to-last year of the term are 116.4%, 116.7%, 136.7%, and 101.4%, respectively. At the same time, the coefficient of the double interaction term is no longer significant. This suggests that in Table 7, the increase in promotion probability for political behaviors may be entirely brought by officials with political connections. In other words, for ordinary officials without political connections, although they do more political behaviors (as can be seen from Table 5), their chances of promotion may not increase as a result.

Young vs. Old: Our hypothesis is that young and old officials may face different potential rewards when engaging in the same types of behavior, resulting in different behavior patterns. Here, we first multiply the dummy variable *kYeartoLeave* of the tenure stage by the proportion of political or economic behavior, and then multiply it by the dummy variable *Young*. However, in column (3) of Table 10(a) and Table 10(b), the coefficient of the triple interaction term is not significant, indicating that if the behavior remains the same, young officials do not have a greater advantage in terms of promotion compared to older officials.

High vs. Low Education: Another hypothesis we had earlier is that officials with high education levels and those with low education levels may face different potential rewards when engaging in the same types of behavior, resulting in different behavior patterns. Here, we first interact the dummy variable *kYeartoLeave* of the tenure stage with the proportion of political or economic behavior, and then with the dummy variable *HigherEducation* (master's or doctoral degree). However, in column (4) of Table 10(a) and Table 10(b), the coefficient of the triple interaction term is not significant, indicating that if the behavior remains the same, officials with higher education levels do not have a greater advantage in terms of promotion compared to those with lower education levels.

6 Implications

An intriguing question is whether the varying proportions of behaviors exhibited by officials will genuinely influence local outcomes, such as economic growth rates. Our panel data allows us to control for various fixed effects (year and city) and covariates to investigate the impact of officials' diverse behaviors on current and future economic growth rates. In Table 11, we included the proportions of political, economic, and livelihood behaviors in the independent variables, along with some control variables. After incorporating city and year fixed effects, we find that if the proportion of economic behavior of the municipal party secretary increases from 0 to 100%, the GDP will rise by 6.096 percentage points in that year.

The effect of economic behavior is even sustainable. If the proportion of economic behavior increases by 1 percentage point in one year, the GDP will rise by 9.032 percentage points in the second year and by 6.874 percentage points in the third year. The effect only becomes insignificant in the fourth year. Conversely, political and livelihood behavior do not significantly impact economic growth. This suggests that political behavior carries a considerable opportunity cost. If officials engage in excessive political behavior for their own promotion, they may consume the time allocated for economic-related work, leading to a negative effect on economic growth.

In Table 12 and Table 13, we merged our data with CIC (China Industrial Corporation Database), a firm-year panel. The matched sample ranges from 2006 to 2015, and we restrict our analysis to private firms to investigate the possible consequences of local officials' activities on private sections. In Table 12, a negative correlation which is significant is shown between officials' political behavior and firms' new investment scale. This result is in consist with our perception since the share of political behavior among all the officials' activities is proved to be linked with worse local economic performance, which is shown in Table 12.

And we extend the finding in Table 13. It shows that if there are two years left only for the official to leave, his or her political activities may have a significant impact on the private sector's investment decision.

7 Conclusion

This study has provided valuable insights into the dynamic behaviors of municipal party secretaries in China and their impact on promotion probabilities and economic growth. Our findings reveal that officials strategically adjust their proportions of political, economic, and livelihood-related behaviors throughout their term, with an emphasis on political behavior towards the end of their tenure to maximize promotion opportunities. Additionally, the study highlights that regional variations in political atmosphere, age, and education level of the officials play a crucial role in influencing their behavioral choices and promotion probabilities. The results call for a balanced approach to evaluating the performance of municipal party secretaries, ensuring that their focus on political activities does not overshadow the importance of fostering economic development and attending to the livelihood of local residents.

This study holds significant value for the rest of the world as it provides a comprehensive and in-depth understanding of the decision-making and behavioral dynamics of municipal party secretaries in China, one of the world's most influential nations. By analyzing a unique dataset, we offer empirical evidence on the strategic adjustments of political, economic, and livelihood-related behaviors throughout their term. These findings can serve as important lessons for policymakers and political analysts in other countries, helping them understand the complexities of governance within a different political system.

Moreover, our study highlights the trade-offs and opportunity costs associated with prioritizing political behavior, which is relevant not only for China but also for other political systems where political motivations may sometimes overshadow economic and social objectives. By emphasizing the importance of balanced performance evaluation systems that recognize the value of economic development and improving the well-being of local residents, our research promotes a more global understanding of effective governance and efficient resource allocation. Additionally, it encourages further investigation into the factors affecting the behavior of local officials in various political contexts, ultimately contributing to the development of better governance practices across the globe.

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Tables and Figures

Table 1 An Example of Using Bert Event Extraction

Official name	Full Description of Behavior	Object	Details
Shi Xiaolin	came to the homes of two elderly people, inquired about their daily lives and health, and extended New Year greetings to them.	the home of two elderly people	daily lives and health; New Year greetings
Shi Xiaolin	came to the home of a difficult masses in Fucheng Community, Jin Niu District to visit and express condolences, requesting relevant departments to always put the safety and well-being of the masses in their hearts, solve the urgent needs of the masses, and fully guarantee the basic living needs of difficult masses, to ensure that citizens can spend a happy and peaceful Spring Festival.	the home of a difficult masses in Fucheng Community, Jin Niu District	safety and well-being of the masses; urgent needs of the masses; basic living needs of difficult masses; citizens spend a happy and peaceful Spring Festival
Shi Xiaolin	came to the Second Station of the Special Operations Brigade of the detachment, and comprehensively understood the daily work, duty arrangements, and other situations, expressing gratitude to the firefighting officers and soldiers and their families on behalf of the Municipal Party Committee and Government.	the Second Station of the Special Operations Brigade	daily work, duty arrangements, and other situations; firefighting officers and soldiers and their families

Table 2 Contents of Topics

Topic Number and Label	Share of Topic
1: Reform and opening up (consensus, progress, building socialism)	0.21
2: Government meeting (municipal government arranges work)	0.03
3: Economic development planning	0.07
4: Complete superior work (urban construction)	0.03
5: Infrastructure (new industrial park)	0.03
6: Research (facing lower levels) (supervisory research)	0.02
7: Understand the situation (facing society)	0.02
8: Symposium (facing enterprise organizations, experts and scholars)	0.01
9: Learn spiritual and policy	0.06
10: Meaningless (dropped)	0.01
11: Arrange work tasks	0.03
12: Participate in the ceremony of attracting investment	0.03
13: Reception	0.02
14: Participate in (patriotic education, party day activities)	0.03
15: Municipal Party Committee meeting	0.02
16: Deepen reform (industrial structure, rural revitalization, scientific and technological innovation, poverty alleviation and development)	0.01
17: Understand enterprise needs	0.04
18: Work deployment (coordinate the next work)	0.01
19: Cultural construction (urban construction)	0.05

Notes: 4959574 activities in total are included.

Table 3 Summary Statistics

Variable	Obs	Mean	SD	P5	Median	P95
TotalReportedActivities	2869	820.58	541.222	118	720	1833
Politics	2869	0.14	0.038	0.008	0.137	0.205
Economy	2869	0.29	0.058	0.201	0.286	0.386
Welfare	2869	0.30	0.199	0.108	0.183	0.616
GDP (Billion RMB)	2823	259	377	27.6	13.8	940
GDPperCapita	2822	44883	31069	10610	36720	105492.9
Population (Million)	2678	5.07	3.81	1.379	4.379	10.
FiscalIncome (Billion)	2822	25.0	56.3	13.4	10.0	94.3
GDPGrowthRate	2785	8.83	7.548	-2.872	8.626	19.525
ServingTermLength	2869	4.86	1.857	2	5	8
Promotion	2869	0.33	0.471	0	0	1
Gender	2570	0.05	0.212	0	0	0
Connection	2869	0.33	0.470	0	0	1
Age	2555	53.80	3.741	47	54	59
HigherEducation	2869	0.52	0.500	0	1	1
CrimeCases	2089	1184.33	1722.365	2	628	4085
CrimeRates	2016	0.00	0.000	3.86e-07	.0001795	.0006444

Notes: We define connection as a dummy variable that indicates if officials are politically connected to any member of the Central Politburo. This variable takes the value of one if officials were within three ranks below (deputy mayor or higher) a member who served as a provincial party secretary in their locality. We use gender as a binary variable that indicates if officials are female. We measure higher education as a dummy variable that takes the value of one if officials have a master's degree or higher. We use crime cases as a measure of the number of criminal prosecutions in a locality; we use crime rates as a measure of the number of criminal prosecutions per capita in a locality.

Table 4 Baseline I: The Official's Behaviors Change during Their Tenure

	(1) Politics	(2) Economy	(3) Welfare
1YeartoLeave	0.007**	-0.038***	0.008
	(2.545)	(-9.754)	(1.516)
2YeartoLeave	0.003	-0.013***	-0.001
	(1.412)	(-3.941)	(-0.168)
3YeartoLeave	0.004	-0.004	-0.003
	(1.609)	(-1.281)	(-0.612)
4YeartoLeave	0.002	-0.006*	0.003
	(0.635)	(-1.648)	(0.828)
City FE	Y	Y	Y
Year FE	Y	Y	Y
Controls	Y	Y	Y
N	2286	2286	2286
r2	0.511	0.486	0.886
r2_a	0.46	0.43	0.87

Notes: Clustered at officials level. *10%, **5%, ***1%. T-values are presented in parentheses. We construct a panel dataset with Year×City (municipal party secretary) fixed effects to capture the dynamic patterns of behavior. We create a set of dummy variables that indicate the time distance to re-election, such as 1YeartoLeave, which equals one in the year of departure and zero otherwise. Politics, Economy, Welfare represent the share of officials corresponding activities. Control Variables include officials' personal characteristics such as gender, political connection, age, education background and local endowments featured by GDP scale and population scale. For variable name length limitation, some abbreviation may be used: G for gender, C for connection, Y for young, and HE for higher education background. Young equals 1 if an official's was younger than 49 when she or he began to take the secretary position.

Table 5 Impact of Gender, Connection, Age and Education on Behavior

	(1) Politics	(2) Economy	(3) Politics	(4) Economy	(5) Politics	(6) Economy	(7) Politics	(8) Economy
1YeartoLeave	0.006**	-0.037***	0.007***	-0.038***	0.004	-0.035***	0.007***	-0.040***
	(2.513)	(-9.885)	(2.715)	(-9.492)	(1.520)	(-9.319)	(2.602)	(-9.744)
2YeartoLeave	0.003	-0.011***	0.002	-0.012***	0.001	-0.009***	0.004	-0.013***
	(1.201)	(-3.443)	(1.112)	(-3.795)	(0.423)	(-2.852)	(1.564)	(-3.738)
3YeartoLeave	0.004*	-0.004	0.004*	-0.006*	0.002	-0.002	0.007***	-0.007*
	(1.796)	(-1.112)	(1.703)	(-1.709)	(1.109)	(-0.599)	(2.704)	(-1.876)
4YeartoLeave	0.001	-0.005	0.003	-0.009**	-0.001	-0.005	0.001	-0.007*
	(0.513)	(-1.592)	(1.171)	(-2.413)	(-0.269)	(-1.432)	(0.471)	(-1.742)
1YeartoLeave # Gender	0.000	-0.017*						
	(0.010)	(-1.714)						
2YeartoLeave # Gender	-0.006	-0.009						
	(-1.320)	(-1.358)						
3YeartoLeave # Gender	-0.010*	-0.006						
	(-1.746)	(-0.666)						
4YeartoLeave # Gender	0.002	-0.007						
	(0.258)	(-0.675)						
1YeartoLeave # Connection			-0.005*	0.003				
			(-1.809)	(0.668)				
2YeartoLeave # Connection			-0.001	0.004				
			(-0.484)	(1.302)				
3YeartoLeave # Connection			-0.000	0.005				
			(-0.083)	(1.238)				
4YeartoLeave # Connection			-0.007**	0.011**				
			(-2.309)	(2.354)				
1YeartoLeave # Young					0.007*	-0.011**		
					(1.798)	(-2.199)		
2YeartoLeave # Young					0.006**	-0.007*		
					(2.132)	(-1.663)		
3YeartoLeave # Young					0.006*	-0.010**		
					(1.935)	(-2.231)		
4YeartoLeave # Young					0.005	-0.001		
					(1.348)	(-0.233)		
1YeartoLeave # HiEducation							-0.005*	0.007*
							(-1.876)	(1.655)
2YeartoLeave # HiEducation							-0.003	0.006*
							(-1.636)	(1.720)
3YeartoLeave # HiEducation							-0.006**	0.006
							(-2.490)	(1.596)
4YeartoLeave # HiEducation							-0.002	0.003
							(-0.690)	(0.735)
City FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Controls	Y	Y	Y	Y	Y	Y	Y	Y
N	2486	2486	2776	2776	2776	2776	2776	2776
r2	0.495	0.474	0.491	0.471	0.491	0.471	0.491	0.471
r2_a	0.45	0.42	0.45	0.42	0.45	0.42	0.45	0.42

Notes: Clustered at officials level. *10%, **5%, ***1%. T-values are presented in parentheses. We construct a panel dataset with Year×City (municipal party secretary) fixed effects to capture the dynamic patterns of behavior. We create a set of dummy variables that indicate the time distance to re-election, such as 1YeartoLeave, which equals one in the year of departure and zero otherwise. Politics, Economy, Welfare represent the share of officials corresponding activities. Control Variables include officials' personal characteristics such as gender, political connection, age, education background and local endowments featured by GDP scale and population scale. For variable name length limitation, some abbreviation may be used: G for gender, C for connection, Y for young, and HE for higher education background. Young equals 1 if an official's was younger than 49 when she or he began to take the secretary position.

Table 6 Robust Check

	(1) Politics	(2) Politics
1YeartoLeave	0.006**	0.006**
	(2.015)	(1.985)
2YeartoLeave	0.003	0.003
	(1.161)	(1.130)
3YeartoLeave	0.003	0.003
	(1.273)	(1.245)
4YeartoLeave	0.002	0.001
	(0.589)	(0.556)
CrimeCases_log	0.001*	
	(1.914)	
CrimeRates		2.593
		(0.510)
City FE	Y	Y
Year FE	Y	Y
Controls	Y	Y
N	1936	1936
r2	0.512	0.511
r2_a	0.46	0.45

Notes: Clustered at officials level. *10%, **5%, ***1%. T-values are presented in parentheses. We construct a panel dataset with Year×City (municipal party secretary) fixed effects to capture the dynamic patterns of behavior. We create a set of dummy variables that indicate the time distance to re-election, such as 1YeartoLeave, which equals one in the year of departure and zero otherwise. Politics, Economy, Welfare represent the share of officials corresponding activities. Control Variables include officials' personal characteristics such as gender, political connection, age, education background and local endowments featured by GDP scale and population scale. For variable name length limitation, some abbreviation may be used: G for gender, C for connection, Y for young, and HE for higher education background. Young equals 1 if an official's was younger than 49 when she or he began to take the secretary position.

Table 7 Baseline II: The Impact of Officials Behavior on Promotion

	(1) Promotion	(2) Promotion	(3) Promotion
Politics # 1YeartoLeave	0.548***		
	(2.854)		
Politics # 2YeartoLeave	0.495***		
	(3.081)		
Politics # 3YeartoLeave	0.305**		
	(1.980)		
Politics # 4YeartoLeave	0.133		
	(1.032)		
Economy # 1YeartoLeave		0.387***	
		(3.663)	
Economy # 2YeartoLeave		0.314***	
		(3.718)	
Economy # 3YeartoLeave		0.246***	
		(3.198)	
Economy # 4YeartoLeave		0.161**	
		(2.556)	
Welfare # 1YeartoLeave			0.234***
			(2.996)
Welfare # 2YeartoLeave			0.185**
			(2.552)
Welfare # 3YeartoLeave			0.147**
			(2.079)
Welfare # 4YeartoLeave			0.099
			(1.530)
City FE	Y	Y	Y
Year FE	Y	Y	Y
Controls	Y	Y	Y
N	2286	2286	2286
r2	0.379	0.381	0.379
r2_a	0.32	0.32	0.32

Notes: Clustered at officials level. *10%, **5%, ***1%. T-values are presented in parentheses. We construct a panel dataset with Year×City (municipal party secretary) fixed effects to capture the dynamic patterns of behavior. We create a set of dummy variables that indicate the time distance to re-election, such as 1YeartoLeave, which equals one in the year of departure and zero otherwise. Politics, Economy, Welfare represent the share of officials corresponding activities. Control Variables include officials' personal characteristics such as gender, political connection, age, education background and local endowments featured by GDP scale and population scale. For variable name length limitation, some abbreviation may be used: G for gender, C for connection, Y for young, and HE for higher education background. Young equals 1 if an official's was younger than 49 when she or he began to take the secretary position.

Table 8 Impact of Political Behavior related to Central vs. Higher government

	(1) Promotion	(2) Promotion
Topic4 # 1YeartoLeave	1.662**	
	(2.263)	
Topic4 # 2YeartoLeave	0.972	
	(1.456)	
Topic4 # 3YeartoLeave	0.114	
	(0.168)	
Topic4 # 4YeartoLeave	-0.450	
	(-0.816)	
Topic9 # 1YeartoLeave		1.099***
		(3.035)
Topic9 # 2YeartoLeave		1.020***
		(3.131)
Topic9 # 3YeartoLeave		0.623*
		(1.863)
Topic9 # 4YeartoLeave		0.268
		(0.937)
City FE	Y	Y
Year FE	Y	Y
Controls	Y	Y
N	2286	2286
r2	0.378	0.379
r2_a	0.31	0.32

Notes: Clustered at officials level. *10%, **5%, ***1%. T-values are presented in parentheses. We construct a panel dataset with Year×City (municipal party secretary) fixed effects to capture the dynamic patterns of behavior. We create a set of dummy variables that indicate the time distance to re-election, such as 1YeartoLeave, which equals one in the year of departure and zero otherwise. Politics, Economy, Welfare represent the share of officials corresponding activities. Control Variables include officials' personal characteristics such as gender, political connection, age, education background and local endowments featured by GDP scale and population scale. For variable name length limitation, some abbreviation may be used: G for gender, C for connection, Y for young, and HE for higher education background. Young equals 1 if an official's was younger than 49 when she or he began to take the secretary position.

Table 9 The Impact of Local Political Atmosphere

	(1)	(2)	(3)	(4)
	Political atmostphere below 50%		Political atmostphere above 50%	
	Promotion	Promotion	Promotion	Promotion
Politics # 1YeartoLeave	0.696**		0.731***	
	(2.498)		(3.166)	
Politics # 2YeartoLeave	0.537**		0.541**	
	(2.078)		(2.454)	
Politics # 3YeartoLeave	0.297		0.390*	
	(1.188)		(1.858)	
Politics # 4YeartoLeave	0.332		0.089	
	(1.498)		(0.497)	
Economy # 1YeartoLeave		0.473***		0.378***
		(3.525)		(2.670)
Economy # 2YeartoLeave		0.266**		0.292**
		(2.272)		(2.459)
Economy # 3YeartoLeave		0.248**		0.176*
		(2.182)		(1.668)
Economy # 4YeartoLeave		0.155*		0.133
		(1.679)		(1.244)
City FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Controls	Y	Y	Y	Y
N	1235	1235	1224	1224
r2	0.424	0.428	0.424	0.421
r2_a	0.33	0.33	0.32	0.32

Notes: Clustered at officials level. *10%, **5%, ***1%. T-values are presented in parentheses. We construct a panel dataset with Year×City (municipal party secretary) fixed effects to capture the dynamic patterns of behavior. We create a set of dummy variables that indicate the time distance to re-election, such as 1YeartoLeave, which equals one in the year of departure and zero otherwise. Politics, Economy, Welfare represent the share of officials corresponding activities. Control Variables include officials' personal characteristics such as gender, political connection, age, education background and local endowments featured by GDP scale and population scale. For variable name length limitation, some abbreviation may be used: G for gender, C for connection, Y for young, and HE for higher education background. Young equals 1 if an official's was younger than 49 when she or he began to take the secretary position.

Table 10(a) Impact of Gender, Connection, Age and Education on Politics-Promotion Sensitivity

	(1) Promotion	(2) Promotion	(3) Promotion	(4) Promotion
Politics # 1YeartoLeave	0.541***	0.279	0.741***	0.678***
	(3.115)	(1.459)	(3.891)	(3.372)
Politics # 2YeartoLeave	0.340**	0.087	0.471***	0.358*
	(2.184)	(0.503)	(2.662)	(1.854)
Politics # 3YeartoLeave	0.185	-0.147	0.321*	0.269
	(1.247)	(-0.892)	(1.933)	(1.451)
Politics # 4YeartoLeave	0.048	-0.182	0.064	0.156
	(0.375)	(-1.222)	(0.426)	(0.850)
Politics # 1YeartoLeave # Gender	1.144**			
	(2.409)			
Politics # 2YeartoLeave # Gender	1.551***			
	(2.752)			
Politics # 3YeartoLeave # Gender	1.355**			
	(2.274)			
Politics # 4YeartoLeave # Gender	0.706			
	(1.209)			
Politics # 1YeartoLeave # Connection		1.164***		
		(4.751)		
Politics # 2YeartoLeave # Connection		1.167***		
		(4.423)		
Politics # 3YeartoLeave # Connection		1.367***		
		(5.225)		
Politics # 4YeartoLeave # Connection		1.014***		
		(3.822)		
Politics # 1YeartoLeave # Young			-0.330	
			(-1.104)	
Politics # 2YeartoLeave # Young			-0.034	
			(-0.117)	
Politics # 3YeartoLeave # Young			0.007	
			(0.024)	
Politics # 4YeartoLeave # Young			0.204	
			(0.618)	
Politics # 1YeartoLeave # High Edu				0.023
				(0.095)
Politics # 2YeartoLeave # High Edu				0.225
				(0.930)
Politics # 3YeartoLeave # High Edu				0.132
				(0.522)
Politics # 4YeartoLeave # H High Edu				-0.083
				(-0.310)
City FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Controls	Y	Y	Y	Y
N	2486	2776	2776	2776
r2	0.359	0.417	0.400	0.400
r2_a	0.30	0.37	0.35	0.35

Notes: Clustered at officials level. *10%, **5%, ***1%. T-values are presented in parentheses. We construct a panel dataset with Year×City (municipal party secretary) fixed effects to capture the dynamic patterns of behavior. We create a set of dummy variables that indicate the time distance to re-election, such as 1YeartoLeave, which equals one in the year of departure and zero otherwise. Politics, Economy, Welfare represent the share of officials corresponding activities. Control Variables include officials' personal

characteristics such as gender, political connection, age, education background and local endowments featured by GDP scale and population scale. For variable name length limitation, some abbreviation may be used: G for gender, C for connection, Y for young, and HE for higher education background. Young equals 1 if an official's was younger than 49 when she or he began to take the secretary position.

Table 10(b) Impact of Gender, Connection, Age and Education on Economics-Promotion Sensitivity

	(1) Promotion	(2) Promotion	(3) Promotion	(4) Promotion
Economy # 1YeartoLeave	0.388***	0.313***	0.543***	0.500***
	(3.943)	(2.848)	(5.191)	(4.289)
Economy # 2YeartoLeave	0.228***	0.161*	0.370***	0.362***
	(2.809)	(1.768)	(4.120)	(3.527)
Economy # 3YeartoLeave	0.172**	0.070	0.287***	0.320***
	(2.308)	(0.841)	(3.521)	(3.296)
Economy # 4YeartoLeave	0.100	0.047	0.177**	0.253***
	(1.602)	(0.641)	(2.386)	(2.736)
Economy # 1YeartoLeave # Gender	0.947***			
	(3.400)			
Economy # 2YeartoLeave # Gender	0.966***			
	(3.583)			
Economy # 3YeartoLeave # Gender	0.798***			
	(2.929)			
Economy # 4YeartoLeave # Gender	0.699**			
	(2.281)			
Economy # 1YeartoLeave # Connection		0.556***		
		(4.096)		
Economy # 2YeartoLeave # Connection		0.603***		
		(4.568)		
Economy # 3YeartoLeave # Connection		0.646***		
		(4.954)		
Economy # 4YeartoLeave # Connection		0.432***		
		(3.132)		
Economy # 1YeartoLeave # Young			-0.063	
			(-0.372)	
Economy # 2YeartoLeave # Young			0.024	
			(0.156)	
Economy # 3YeartoLeave # Young			0.093	
			(0.611)	
Economy # 4YeartoLeave # Young			0.112	
			(0.724)	
Economy # 1YeartoLeave # High Edu				0.066
				(0.494)
Economy # 2YeartoLeave # High Edu				0.024
				(0.196)
Economy # 3YeartoLeave # High Edu				-0.022
				(-0.181)
Economy # 4YeartoLeave # High Edu				-0.092
				(-0.690)
City FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Controls	Y	Y	Y	Y
N	2486	2776	2776	2776
r2	0.365	0.420	0.404	0.404
r2_a	0.30	0.37	0.35	0.35

Notes: Clustered at officials level. *10%, **5%, ***1%. T-values are presented in parentheses. We construct a panel dataset with Year×City (municipal party secretary) fixed effects to capture the dynamic patterns of behavior. We create a set of dummy variables that indicate the time distance to re-election, such as 1YeartoLeave, which equals one in the year of departure and zero otherwise. Politics, Economy, Welfare represent the share of officials corresponding activities. Control Variables include officials' personal

characteristics such as gender, political connection, age, education background and local endowments featured by GDP scale and population scale. For variable name length limitation, some abbreviation may be used: G for gender, C for connection, Y for young, and HE for higher education background. Young equals 1 if an official's was younger than 49 when she or he began to take the secretary position.

Table 11 Implication on Economic Development

	(1) GDPGrowthRate	(2) GDPGrowthRateF1	(3) GDPGrowthRateF2	(4) GDPGrowthRateF3
Politics	4.958	0.262	3.770	4.571
	(1.180)	(0.059)	(0.814)	(0.826)
Economy	6.096**	9.032***	6.874**	5.194
	(2.079)	(3.030)	(2.302)	(1.476)
Welfare	-2.265	0.222	0.231	-0.492
	(-1.357)	(0.127)	(0.127)	(-0.319)
City FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Controls	Y	Y	Y	Y
N	2622	2422	2201	1976
r2	0.557	0.538	0.549	0.538
r2_a	0.52	0.49	0.50	0.49

Notes: Clustered at officials level. *10%, **5%, ***1%. T-values are presented in parentheses. We construct a panel dataset with Year×City (municipal party secretary) fixed effects to capture the dynamic patterns of behavior. We create a set of dummy variables that indicate the time distance to re-election, such as 1YeartoLeave, which equals one in the year of departure and zero otherwise. Politics, Economy, Welfare represent the share of officials corresponding activities. Control Variables include officials' personal characteristics such as gender, political connection, age, education background and local endowments featured by GDP scale and population scale. For variable name length limitation, some abbreviation may be used: G for gender, C for connection, Y for young, and HE for higher education background. Young equals 1 if an official's was younger than 49 when she or he began to take the secretary position.

Table 12 Effect on Privates Firms' Investment

	(1)	(2)	(3)
		Log Investment	
Politics	-1.276*		
	(-1.658)		
Economy		0.153	
		(0.216)	
Welfare			0.366
			(1.177)
City FE	Y	Y	Y
Firm FE	Y	Y	Y
Year FE	Y	Y	Y
Controls	Y	Y	Y
N	863368	863368	863368
r2	0.695	0.695	0.695
r2_a	0.58	0.58	0.58

Notes: Clustered at officials level. *10%, **5%, ***1%. T-values are presented in parentheses. We construct a panel dataset with Year×Firm. We create a set of dummy variables that indicate the time distance to re-election, such as 1YeartoLeave, which equals one in the year of departure and zero otherwise. Politics, Economy, Welfare represent the share of officials corresponding activities. Control Variables include Sales and Number of employees to capture the scale of firms.

Table 13 Dynamical Effect on Privates Firms' Investment

	(1)	(2)	(3)
		Log Investment	
Politics # 1YeartoLeave	-0.552		
	(-1.159)		
Politics # 2YeartoLeave	-1.107**		
	(-2.330)		
Politics # 3YeartoLeave	-0.662		
	(-1.239)		
Politics # 4YeartoLeave	0.071		
	(0.169)		
Economy # 1YeartoLeave		-0.219	
		(-0.817)	
Economy # 2YeartoLeave		-0.348	
		(-1.583)	
Economy # 3YeartoLeave		-0.187	
		(-0.866)	
Economy # 4YeartoLeave		0.076	
		(0.415)	
Welfare # 1YeartoLeave			-0.054
			(-0.276)
Welfare # 2YeartoLeave			-0.082
			(-0.462)
Welfare # 3YeartoLeave			-0.031
			(-0.160)
Welfare # 4YeartoLeave			0.155
			(1.291)
City FE	Y	Y	Y
Firm FE	Y	Y	Y
Year FE	Y	Y	Y
Controls	Y	Y	Y
N	863368	863368	863368
r2	0.695	0.695	0.695
r2_a	0.58	0.58	0.58

Notes: Clustered at officials level. *10%, **5%, ***1%. T-values are presented in parentheses. We construct a panel dataset with Year×Firm. We create a set of dummy variables that indicate the time distance to re-election, such as 1YeartoLeave, which equals one in the year of departure and zero otherwise. Politics, Economy, Welfare represent the share of officials corresponding activities. Control Variables include Sales and Number of employees to capture the scale of firms.