



Demystifying Political Selection Using Large Language Models: The Case of China

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Abstract. China's economic reform has driven remarkable growth and poverty reduction despite institutional structures that seem ill-suited for such achievements. To explain this "China puzzle," this paper investigates the regionally decentralized authoritarian system that supports China's governance. In this system, political promotion is a key mechanism that connects local officials' incentives to national goals. Using a new dataset that combines biographical details of municipal leaders with economic performance metrics and sociopolitical event data from news sources, this study explores how economic growth and public events influence the promotion prospects of local officials. The findings indicate that economic performance, especially GDP growth, significantly boosts the chances of promotion — particularly for party secretaries — while public events like protests and cooperation activities have limited or inconsistent effects. These results suggest that China's decentralized authoritarian system accounts for both its impressive achievements and ongoing governance issues, as performance-based incentives dominate cadre evaluation, with broader social factors playing a secondary role.

Keywords: political selection, large language models, political forecasting

1 Introduction

What explains the promotion of local leaders in China? Do public events—such as protests, demonstrations, or cooperative activities—play a role in shaping their political careers? Or is economic performance the key factor that plays a significant role in the determination of promotion? Understanding the determinants of cadre promotion is crucial because promotion is the key mechanism through which the Chinese Communist Party (CCP) aligns local officials' incentives with national priorities. Promotion decisions reveal how the regime evaluates political performance, rewards or punishes local behavior, and shapes policy outcomes in an authoritarian context. China provides a particularly striking case for studying the dynamics of promotion. Since the late 1970s, the country has experienced radical economic growth and rapid poverty reduction. Yet, this "China puzzle" is puzzling precisely because such remarkable achievements have occurred under a political system that appears, at first sight, ill-suited to deliver them. As Xu (2011) argues, China's governance structure can be characterized

as a regionally decentralized authoritarian (RDA) system^[1]. Under this institutional arrangement, the central government retains a monopoly over cadre appointments, political evaluations, and strategic policymaking. In contrast, subnational governments enjoy substantial autonomy in managing local economies, implementing reforms, and even adapting or resisting central policies. This dual structure creates powerful incentives for local officials to deliver measurable results, particularly economic growth, while also generating governance challenges such as information asymmetry and policy distortion. A vast body of literature has sought to explain how this institutional structure influences promotion outcomes. One influential perspective emphasizes economic performance as the dominant factor: Li and Zhou (2005) show that rapid GDP growth significantly increases officials' promotion prospects, suggesting a "tournament" model of political competition^[2]. Others challenge this view, highlighting the role of factional loyalty, political reliability, and social stability (Shin, Adolf, and Liu 2012)^[3]. More recent work adopts a multidimensional approach, arguing that both merit and connections shape career advancement (Jia, Kudamatsu, and Seim 2015)^[4]. Meanwhile, some studies have even found that close ties to top leaders can hinder promotion (Fisman et al. 2020)^[5]. Together, this literature suggests that promotion decisions likely reflect a complex combination of economic, political, and social considerations.

This paper contributes to this debate in two ways. First, it systematically examines how both economic performance and public events influence the promotion of local officials. While economic indicators have been extensively studied, relatively little empirical work has explored whether sociopolitical events—such as protests or cooperative activities—affect promotion outcomes by signaling governance capacity or social stability. Second, the paper introduces new data and methods by combining biographical records of municipal leaders (1994–2017) with event data from global news sources (2013–2017), which are further refined using large language models (LLMs) to classify event types and extract sentiment. This approach enables a more nuanced assessment of public events than previous studies.

The analysis reveals a clear pattern. Economic performance, measured by GDP level and growth, has a strong and significant positive effect on the promotion of party secretaries, although its impact on mayors is weaker. By contrast, public events do not show consistent effects on promotion outcomes, suggesting that social signals captured in media reports may not be systematically incorporated into the cadre evaluation process. These findings highlight the continued primacy of economic performance in China's promotion system while raising questions about how—and whether—broader social dynamics influence political advancement.

The remainder of this paper is organized as follows. Section 2 provides the institutional background. Section 3 describes the data and variables and presents the data patterns. Section 4 presents the empirical analysis. Section 5 concludes with implications and directions for future research.

2 Background

2.1 Political Selection in China

Although opaque, according to the analytical outcomes of data from multiple literatures, there are a few key determinants of the political selection. From the perspective of the performance-based promotion hypothesis, economic performance is a strong predictor of the promotion of provincial leaders in China, as noted by Li and Zhou (2005)^[2]. Besides, factional alignment and regime stability are also primary drivers of the party's promotion system, in addition to economic performance, as mentioned by Shih, Adolf, and Liu (2012)^[3]. Some scholars also offer a more nuanced view, emphasizing that achievements and connections are complementary in shaping promotion prospects. Jia, Kudamatsu, and Seim (2015) argue that while neither strong performance nor elite ties alone ensures promotion, their combination significantly increases the likelihood of promotion^[4]. Additionally, a contrasting perspective is also offered, viewing social ties as a hindrance rather than a benefit in official promotions. Fisman et al. (2020) find that officials with connections to top leaders are significantly less likely—not more likely—to enter the Politburo⁵. Collectively, these papers suggest a shift from a single-factor model in the prediction of political selection to a multi-dimensional framework that takes into account meritocracy promotion, stability-oriented promotion, and elite networks.

Beyond research produced by scholars, the Chinese government's document offers an equally important official context for understanding these dynamics. The “Regulations on the Selection and Appointment of Party and Government Leading Cadres” (2019 revision) lists the principles, procedures, and criteria of cadre promotion^[10]. According to the document, “political standards must be placed in the first place” in cadre evaluation, emphasizing loyalty and commitment to the Party and its leadership as core criteria. Besides, the regulations state that cadre assessment should be comprehensive, considering “virtue, competence, diligence, performance, and integrity” (*de, neng, qin, ji, lian*)—a five-dimensional framework that extends well beyond economic performance alone. Furthermore, the 2019 regulations emphasize that evaluations of local leadership should involve a broad range of governance outcomes, including economic development, political construction, cultural progress, social governance, ecological protection, and Party building. The central government explicitly warns against “evaluating performance solely based on economic growth rates,” instead advocating for a more balanced approach that considers multiple aspects of governance. The regulations also formalize procedures such as democratic recommendation, public selection, performance evaluations, and supervision mechanisms to enhance transparency and accountability in the promotion process.

The juxtaposition of government tone and scholar's voice offers an interesting view. While formal documents emphasize the more comprehensive but official dimensions, empirical studies consistently focus on how more realistic factors, which the government is not willing to announce directly, remain essential and measurable predictors of promotion. Both sides have their value for the research, recognizing that this nuance

gap between formal institutional design and empirical results is crucial for understanding how political selection works in modern China.

2.2 Public Events in China

Chinese public events are more than just news headlines on foreign media and a banned topic in China; they're a window into the country's complex political and social fabric. They reflect underlying public frustrations while also serving as a space where citizens and the state navigate delicate issues of power, legitimacy, and governance. To truly understand how Chinese politics works, we must examine closely the reasons behind these events and their effects.

A significant amount of research indicates that public events in China do emerge spontaneously—they're deeply rooted in social and institutional contexts. At the local level, they often express discontent with economic changes, environmental problems, or perceived government failures. But these aren't just one-off outbursts. As Barsztyn et al. (2021) point out, there's an apparent "social network effect" at play: once someone joins a protest, they're more likely to do so again, especially when others around them are involved^[6]. This suggests that public events are connected—part of an ongoing social process, not just isolated incidents.

How the government reacts also reveals a great deal about China's style of governance. Beraja et al. (2023) find that social instability often pushes authorities to tighten control—for example, by investing more in AI surveillance^[7]. This reveals a key dynamic: public events don't just signal unhappiness; they can also trigger shifts in state strategy, pushing the government to refine its tools of control. In this way, social movements and state resilience influence each other.

We can also think of public events as society's way of coping with external pressures. Gong et al. (2025) show that in extreme environmental conditions, communities often come together and cooperate as a form of adaptation^[8]. This broadens our view: public gatherings aren't always about confrontation. Sometimes, they serve as a way for people to adjust to significant structural shifts—whether economic, political, or environmental.

That said, the political importance of any event depends heavily on its visibility—and on what the government decides to show. Gong et al. (2024) describe a "disclosure dilemma" faced by local officials: whether to disclose or conceal sensitive information, such as pollution data^[9]. When events are underreported or silenced, their ability to signal problems to higher-ups is weakened. So, even when public events do occur, their impact on things like official promotions may be muted—not because they don't matter, but because information about them is filtered.

Ultimately, public events in China reveal a multifaceted narrative. They emerge from social tensions and governance gaps, gain momentum through networks and mobilization, and ultimately shape—and are shaped by—state responses and policy adjustments. Yet their visible political consequences are mediated through mechanisms of control, adaptation, and selective disclosure. Understanding this full cycle is essential to grasping how public contention functions within China's unique, regionally decentralized authoritarian system.

3 Data

The first source is the China Center for Economic Research government officials database, which provides detailed personal and career information on Chinese government officials and/or politicians who worked from 1994 to 2017.

The data on China's cooperation and protest events is derived from the Global Data on Events, Location, and Tone (GDELT) Project, which is increasingly used in studies of social unrest (Barrett, 2022, socialunrest). The GDELT project utilizes text analysis and machine learning methods to capture the salient characteristics (e.g., location, date, category, actor) of public events, drawing on a comprehensive set of global news resources. We restrict our sample to cooperation and protest events that took place in China between 2013 and 2017, resulting in a total of 731,374 events, comprising 681,886 cooperation events and 49,488 protest events.

Specifically, each event is classified under the Conflict and Mediation Events Observations (CAMEO) Event and verb codebook, where socioeconomic activities and protests are the two most important categories. Socioeconomic activities encompass economic, judicial, and information exchange, all of which generate economic and social value and can be initiated by individuals or firms. Protests include political dissent, hunger strikes, strikes or boycotts, obstructing passage or blocking, protesting violently or rioting, etc.

Table 1. Summary Statistics for City Leaders & Provincial Leaders

City Leader					
Variable	Obs	Mean	Std. dev.	Min	Max
1(Promotion)	15,926	0.145	0.353	0	1
1(Above college)	15,926	0.463	0.499	0	1
1(Minority)	15,926	0.232	0.422	0	1
Birthyear	14,217	1955.535	7.060	1932	1976
1(Female)	14,436	0.041	0.199	0	1
Provincial Leader					
Variable	Obs	Mean	Std. dev.	Min	Max
1(Promotion)	1,480	0.122	0.327	0	1
1(Above College)	1,480	0.620	0.485	0	1
1(Minority)	1,480	0.126	0.332	0	1
Birthyear	1,480	1946.803	7.802	1926	1967
1(Female)	1,480	0.014	0.115	0	1

Notes: This table summarizes the demographic and career characteristics of municipal- and provincial-level leaders, including promotion status, education, ethnicity, birth year, and gender. The sample covers officials serving between 1994 and 2017. Values are expressed as sample means with standard deviations in parentheses. All variables are defined as in the text of Section 3.1.

Table 1 provides a summary of key statistics for city- and provincial-level leaders, including promotion status, education, ethnicity, birth year, and gender. It reveals significant differences between administrative levels, indicating that provincial leaders are generally older, more educated, but less diverse. This is crucial for placing the analysis in context and understanding the composition of the political elite.

4 Empirical Analysis

The empirical strategy is linear regression with fixed effects using panel data sets. Specifically, I estimate the following regression equation:

$$1(Promotion_{ilt}) = \alpha X_{it} + \gamma_i + \gamma_t + u_{it},$$

where $1(Promotion_{ilt})$ is a dummy variable indicating whether the leader l in city i is promoted in year t X_{it} is a vector of city-level factors, including GDP growth and public events, γ_i is city fixed effects, γ_t is year fixed effects, and u_{it} is an error term. I cluster standard errors at the city level in all regressions.

Table 2. Determinants of Promotion for City Leaders

	(1)	(2)	(3)	(4)	(5)	(6)
	1(Promotion)					
	All	PS	Mayor	All	PS	Mayor
log GDP	0.0248 (0.0195)	0.0714** (0.0341)	-0.0218 (0.0176)			
GDP growth rate				0.00354 (0.00257)	0.00810 (0.00501)	-0.00101 (0.00115)
City FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
Observations	2,652	1,324	1,324	2,102	1,047	1,047
R-squared	0.284	0.608	0.629	0.331	0.737	0.725

Notes: The sample covers 270 cities (2013–2017). All specifications include city fixed effects and year fixed effects. Standard errors are clustered at the city level. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Dependent variable: 1(Promotion). Independent variables: log GDP and GDP growth rate.

Table 2 shows regression results examining the connection between economic performance (log GDP and GDP growth rate) and the likelihood of promotion for all officials, party secretaries, and mayors. It directly tests the hypothesis that economic performance influences promotions. The significant, positive relationship for party secretaries—but not mayors—supports the idea that promotion incentives are selectively applied based on political rank within the Chinese system.

Table 3. Determinants of Promotion for City Leaders

	(1)	(2)	(3)
	1(Promotion)		
	All	PS	Mayor
log GDP	0.126* (0.0689)	0.227* (0.135)	0.0243 (0.0297)
log Fiscal revenue	-0.0192 (0.0311)	-0.0373 (0.0610)	-0.00103 (0.0122)
log Dust emissions	0.000955 (0.00894)	0.00723 (0.0103)	-0.00532 (0.0148)
City FE	Y	Y	Y

Year FE	Y	Y	Y
Observations	2,048	1,020	1,020
R-squared	0.339	0.748	0.764

*Notes: This table extends the baseline regression to include $\log(\text{Fiscal Revenue})$ and $\log(\text{Dust Emissions})$ as additional performance indicators. The sample and model specification follow Table 3, with city and year fixed effects and clustered standard errors at the city level. ***, **, * denote significance at the 1%, 5%, and 10% levels.*

Table 3 expands the analysis to include fiscal revenue and environmental performance (dust emissions) alongside GDP as predictors of promotion. This assesses whether a broader set of performance metrics beyond GDP influences promotion decisions. The continued significance of GDP for party secretaries, in contrast to the null results for other factors, reinforces the dominance of economic growth as the primary performance criterion.

Table 4. Public Events and Promotion

	(1)	(2)	(3)	(4)	(5)	(6)
	I(Promotion)					
	All	PS	Mayor	All	PS	Mayor
log GDP				0.129*	0.234*	0.0232
				(0.0687)	(0.134)	(0.0303)
log Fiscal revenue				-0.0184	-0.0351	-0.00167
				(0.0312)	(0.0611)	(0.0122)
log Dust emissions				0.000690	0.00657	-0.00519
				(0.00901)	(0.0104)	(0.0149)
Diplomatic coopertation	4.41e-07 (2.09e- 05)	-1.02e-05 (4.31e- 05)	1.11e-05 (1.50e- 05)	1.68e-05 (1.88e- 05)	2.66e-05 (4.07e- 05)	7.02e-06 (9.85e- 06)
Material cooperation	-6.78e-05 (0.000116)	-0.000132 (0.000230)	-3.24e-06 (4.87e- 05)	-0.000123 (0.000118)	-0.000261 (0.000237)	1.56e-05 (3.52e- 05)
Protests	-0.000103 (0.000194)	-0.000155 (0.000368)	-4.96e-05 (0.000136)	-0.000123 (0.000151)	-0.000218 (0.000272)	-2.85e-05 (0.000130)
City FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
Observations	2,660	1,328	1,328	2,048	1,020	1,020
R-squared	0.281	0.602	0.616	0.339	0.750	0.764

*Notes: The sample covers city-year observations for 2013–2017. All models include city and year fixed effects; standard errors are clustered at the city level. Event variables (Diplomatic Cooperation, Material Cooperation, Protest Events) are annual counts from GDELT (see Section 3.1). ***, **, * denote significance at the 1%, 5%, and 10% levels, respectively.*

Table 4 integrates measures of social stability (protests) and diplomatic engagement (cooperation events) into the full model with economic controls. It examines whether political stability and foreign policy efforts are rewarded with promotion. The mostly insignificant results imply that, in this context, these factors are not the main drivers of political selection compared to economic performance.

5 Conclusion

This study examines the factors that influence the promotion of local officials in China, with a focus on the role of economic performance and public events within the country's decentralized authoritarian system. Using a novel dataset that combines biographical information of municipal leaders with global event data, the empirical analysis reveals that economic performance, particularly GDP growth, significantly enhances the promotion prospects of Party secretaries. In contrast, public events, such as protests and cooperation activities, have limited or inconsistent effects. These findings underscore the predominance of economic performance in China's promotion system, despite official policies advocating for a more comprehensive evaluation of officials based on multiple criteria. The results suggest a gap between the theoretical framework of the promotion process and its practical implementation. Future research could explore the evolving role of social stability, environmental factors, and the impact of recent policy changes or external challenges, such as economic slowdowns, on the dynamics of promotion.

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