

# Purifying the Leviathan: The Anticorruption Campaign and Governance Models in China

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## **Abstract**

Authoritarian regimes differ considerably in their tolerance for political corruption. This paper develops a strategic account of authoritarian governance over corruption, which argues that political survival of the ruler depends on popular support and a cohesive ruling coalition to maintain growth and political loyalty. Corruption is useful for coalition-building, but it undermines popular support and political loyalty. In turn, the ruler may switch from a permissive scheme to a punitive scheme for governance to preempt the institutional decay caused by corruption. Consistent with this argument, empirical investigations on the recent anticorruption campaign in China documents a positive correlation between officials' capability and the probability of investigation, as well as an increasing pandering to the party line among city leaders who were promoted during the campaign.

[Word count: 9,133]

## **Introduction**

Authoritarian regimes differ considerably in their tolerance for political corruption. While many regimes routinely accommodate bribery and embezzlement, others consider corruption a serious threat to the regime and adopt stringent anticorruption mechanisms (Gillespie and Okruhlik, 1991; Quah, 2017; Rand and Tarp, 2012). An intriguing puzzle is why rulers who are not accountable to people through popular vote would want battles against corruption. Do the anticorruption campaigns entail sincere efforts to entrench political legitimacy? Or are the campaigns just window dressing?

This paper argues that authoritarian rulers' choice between condoning or quelling corruption depends on the logic of political survival. To maintain survival, rulers have to grapple with two risks – elite defection and mass rebellion – at the same time. Although corruption may help rulers garner support from elites (Bueno De Mesquita et al., 2005; Fjelde and Hegre, 2014; Hagopian, Gervasoni and Moraes, 2009), the misbehavior of officials aggravates social grievance from the masses. Thus, corruption imposes a threat to the external viability of authoritarian regimes (Agerberg, 2019; Vera, 2019). This trade-off drives the values of two different governance models: the permissive scheme, which relies on pecuniary incentives and corruption, and the punitive scheme, which relies more on political loyalty and party discipline. Surging discontent with corruption, in turn, may prompt rulers to switch from the permissive scheme to the punitive scheme through anticorruption campaigns.

Holding China in the theoretical background of authoritarian governance, this paper investigates the anticorruption campaign launched within the ruling Chinese Communist Party (CCP) in 2013-2016 as a case in point. Similar to many authoritarian regimes, the governing system in China features deeply embedded patronage networks of bureaucrats (Jiang, 2018; Landry, Lü and Duan, 2018; Shih, Adolph and Liu, 2012). Moreover, corruption goes hand in hand with substantial policy discretion by local leaders under a decentralized administrative system (Montinola, Qian and Weingast, 1995; Xu, 2011;

Yao and Zhang, 2015). Starting in 2013, the anticorruption campaign had an unprecedented impact on bureaucratic turnovers in China. As of August 2017, the campaign placed 224 province-level officials, more than 8,600 prefecture-level officials, and more than 66,000 county-level officials under investigation.<sup>1</sup>

The existing literature provides inconclusive assessments about this campaign. Some papers report a declining growth rate following the investigation of local leaders (Araral et al., 2017; Qu, Sylwester and Wang, 2018). Others attribute investigations to strategies of power consolidation by ruling factions (Zhu and Zhang, 2017; Yuen, 2014). Several studies suggest the campaign was somewhat effective in containing corruption (Lu and Lorentzen, 2016; Manion, 2016; Zhu, Huang and Zhang, 2017). A recent paper by Chen and Kung (2018) employ transaction-level data and find that the campaign was associated with a significant drop in the cost premium enjoyed by politically connected firms in land acquisition. However, the literature does not provide an exhaustive analysis on the ruler's strategic calculations that led up to the anticorruption campaign or its broad implications for authoritarian governance.

This paper provides a conceptual argument and a simple analytical framework for understanding the strategic dilemma of rulers in dealing with corruption. As in Svulik (2012), we argue that the resilience of authoritarian governance depends on two pillars: popular support and the maintenance of a cohesive ruling coalition. When rulers lack a credible mechanism to price the support of elites, they may turn to a decentralized system and delegate powers to local officials. As such, those officials obtain a sense of ownership of the regime through boosting economic performance and capitalizing political power into rent. The focus on growth and revenue amounts to a permissive scheme featured with a high correlation between strong economic performance and corruption.

Although corruption may be used as a strategy for subscribing elites in the ruling coalition, it deteriorates popular support. When the public sentiment against corruption becomes very high, the ruler leans toward an alternative model of forging the reputation

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<sup>1</sup>Editorial in the *People's Daily*, September 18, 2017.

[http://paper.people.com.cn/rmrb/html/2017-09/18/nw.D110000renmrb\\_20170918\\_2-01.htm](http://paper.people.com.cn/rmrb/html/2017-09/18/nw.D110000renmrb_20170918_2-01.htm)

of a clean government. Thus, prosecution of corrupted officials provides a costly signal of willingness to restore political integrity. To make the image of clean and responsive government credible, the ruler has to pay more attention to addressing social grievance and has to spend more resources on public health, environmental protection, social security, and poverty reduction. Consequentially, rulers increasingly rely on ideological exhortation and loyal to the party line to sustain the ruling coalition. We define this scenario as the implementation of a punitive scheme.

We test the theoretically derived hypotheses using manually collected data of the anticorruption investigations and biographic data of prefecture-level city leaders. The analysis comes down to three main findings:

1. Officials' capability of boosting economic performance, an indicator of the valence of growth mandate under the permissive scheme, was positively associated with the probability of investigation in the anticorruption campaign.
2. Capability ceased to be significant for promotion after 2013, which was the year the anticorruption campaign began.
3. The punitive scheme created an incentive of pandering to the party line. Consistent with this logic, we find suggestive evidence that city leaders who were promoted during the anticorruption campaign exhibit higher allegiance to the ideological exhortation of the leadership, as indicated by the textual analysis based on annual work reports of city governments.

The empirical pattern of the anticorruption campaign revealed by our analysis sheds lights on models of authoritarian governance. The positive relationship between performance and investigation attests to the permissive scheme that condones the corruption of highly capable officials. Besides the conventional wisdom that depicts corruption as a symptom of a weak state (Ferraz and Finan, 2008; Shleifer and Vishny, 1993; Treisman, 2000) or immature democracies (Bhattacharyya and Hodler, 2010; Keefer, 2007; Sandholtz and Koetzle, 2000), a strand of recent literature suggests that corruption may be

useful for supporting authoritarian political survival (Guardado, 2018; Hagopian, Gervasoni and Moraes, 2009; Hollyer and Wantchekon, 2015). Our paper echoes those studies by examining the ruler's strategic dilemma between winning the confidence of the masses and securing the ruling coalition.

Beyond corruption, this paper speaks to the literature on political patronage in authoritarian and hybrid regimes (Arriola, 2009; Hagopian, Gervasoni and Moraes, 2009). This paper extends the focus on electoral patronage (Dickens, 2018; Kerevel, 2015; Kramon, 2016; Reuter and Robertson, 2012; Reuter et al., 2016) to bureaucratic politics, and it resonates with a strand of previous research that shows that personal networks may help enhance bureaucratic performance and social stability (Hassan, 2017; Jia, Kudamatsu and Seim, 2015; Jiang, 2018). The patterns with regard to political selection during the anticorruption campaign attest to the instrumental value of personnel control in expanding rulers' power base. Thus, our investigation on the anticorruption campaign in China contributes to the general understanding about authoritarian governance.

## **Corruption as a coalition building strategy**

Authoritarian regimes employ a wide array of political institutions – from legislature to bureaucracy – to establish the ruling coalition (Arriola, 2009; Francois, Rainer and Trebbi, 2015; Gandhi and Lust-Okar, 2009; Magaloni, 2008; Wright and Escribà-Folch, 2012). The cooptation of capable agents in the ruling coalition defuses the danger of intra-elite conflicts and invests in potential rivals a common interest of preserving the political status quo (Boix and Svobik, 2013; Gandhi and Przeworski, 2007).

Meanwhile, rulers face the challenge of how to contain the risk of elite defection and sustain the political support of the coalition (Reuter and Szakonyi, 2019; Reuter and Gandhi, 2010; Roessler, 2011). In turn, the nexus between corruption and authoritarian governance lies in the ruler's dependence on the existing coalition. Political rent sharing within patronage networks may provide a useful collateral for maintaining a coherent

ruling coalition and may secure mutual trust between the ruler and subordinate agents. Using the idea of the selectorate theory (Shirk, 1993), Bueno De Mesquita et al. (2005) develop a theoretical framework in which the ruler's incentives with regard to rent distribution and public goods provision are shaped by the size of the ruling coalition. When the size of the coalition necessary for maintaining political survival is relatively small, the ruler optimally resorts to private spoils to buy the support of the elites. It follows that a certain level of corruption may arise in equilibrium as a coalition building strategy to boost the internal stability of the regime.

The ability of the ruler to sustain the ruling coalition is further limited by the amount of feasible rents, which depends on economic governance. The Soviet Union and the European Communist regimes adopted a planned economic system, which generated insufficient political rents for sustaining elite support (Sachs and Woo, 1994; Shleifer and Vishny, 1992). Some authoritarian regimes rely on natural resource extraction to provide rents, subjecting the political stability to fluctuating global resource prices (Nordvik, 2019; Robinson, Torvik and Verdier, 2006). In contrast, the governing institutions of the CCP accommodate a decentralized administrative system and employ economic and political incentives to encourage regional competition (Li and Zhou, 2005; Xu, 2011; Yao and Zhang, 2015). As such, this model combines corruption with an overwhelming emphasis on the growth mandate.

## **The price of corruption**

Although accommodating corruption helps extend the ruling coalition, this model of governance may undermine popular support for authoritarian regimes. A handful of recent works shows that authoritarian rulers' survival depends on the maintenance of a certain level of popularity (Hollyer, Rosendorff and Vreeland, 2015; Huang, Boranbay-Akan and Huang, 2019; Little, 2016). Social grievance of various kinds, including human rights violation, workplace disaster, environmental degradation, and public health crisis,

serves as a public signal for citizens to coordinate on collective actions against the regime. Moreover, the pursuit of personal enrichment through corruption inevitably gives rise to severe social antagonism between citizens and the ruling political elites. Because the central government relies on local officials to boost the economy, it rarely intervenes in the mediation of popular contentions (Cai, 2008; Lorentzen, 2013). This issue makes it difficult for the corruption-based governance model to sustain its popularity among citizens in the long term.

Moreover, the corruption-based model may undermine the cohesion of the ruling coalition by inducing political opportunism (Xi, Yao and Zhang, 2018). When economic growth occupies a central position in the attention of the leadership, political loyalty can be compromised. For the incentive, local officials allocate more effort to economic affairs than the party line when the economy is a top priority in their performance evaluation. For the selection, growth mandate encourages rulers to favor technocrats who are capable of running economic policies but who are weak on ideological exhortation. The ruler, who is concerned with the internal cohesion of the ruling coalition, may have to switch the governance model to one that merits more political loyalty.

## **A heuristic model**

Consider a game with a ruler ( $R$ ) and an agent ( $i$ ). The agent is endowed with one unit of time, which is allocated between two tasks: the management of economic growth (growth),  $E_g$ , and ideological exhortation (ideology),  $E_l$ . The outputs of growth and ideology are  $Y = E_g$  and  $L = E_l$ . Intuitively, we can interpret  $Y$  as a measure of capability and  $L$  as a measure of loyalty. Exerting effort on growth incurs a cost  $C_i(E_g) = E_g^2/\alpha_i$ . The effort spent on ideological exhortation is costless. Agents differ in their capabilities, so  $\alpha_i \in \{\alpha_H, \alpha_L\}$  for some  $\alpha_H > \alpha_L > 0$ . A highly capable agent bears a lower cost of effort; thus, she exerts more effort on growth.

The agent may commit corruption. In the case of corruption, the agent reaps a rent

worth fixed share of  $\theta E_g$ , where  $\theta$  is a fixed share of the growth output.  $\theta$  can be understood as a parameter of the institutional loophole in the governance institution. Corruption causes social grievance and undermines popular support. Thus, it imposes a disutility on the ruler, but not on the agent. We specify that the disutility is proportional to the level of corruption:  $-\lambda\theta E_g$ , where  $\lambda$  indicates the public sentiment against corruption.

The agent's type,  $\alpha_i$ , is perfectly observed by the ruler. In the beginning of the game, the ruler decides which type of agent should be selected. The ruler obtains utilities from  $Y$  and  $L$ , which are verifiable and contractible. Let  $\pi$  and  $1 - \pi$ , respectively, be the weight the ruler assigns to growth and ideology, with  $\pi > 1/2$ . The ruler provides the following incentive scheme to the agent:

$$\text{Payment}_i = \phi[\pi Y + (1 - \pi)L].$$

$\phi$  is the parameter that measures the strength of the incentive scheme. Without loss of generality, we assume  $\phi = 1$ : the ruler designs the incentive contract in a way that a career-concerned agent maximizes the weighted average of  $Y$  and  $L$ , provided there is no corruption. In addition, the ruler can implement an anticorruption mechanism such that the corrupted agent will be caught with probability  $\delta$  and will endure a punishment cost  $M$ . Assuming the Von Neumann-Morgenstern utility function, the expected loss of the agent associated with corruption is  $-\delta M = -Q$  for the agent. Let  $I$  be a binary variable that indicates whether the agent commits corruption. The agent's utility optimization is determined by the following equation:

$$\begin{aligned} \max_{E_g, E_l, I} \quad & U_a = [\pi(1 - I \cdot \theta)E_g + (1 - \pi)E_l] + \theta E_g - E_g^2/\alpha_i - I \cdot Q. \\ \text{s.t.} \quad & E_g + E_l = 1 \quad E_g, E_l > 0, \quad I \in \{0, 1\}. \end{aligned} \tag{1}$$

Let  $E_g^*$ ,  $E_l^*$ , and  $I^*$  be the solution to the bureaucrat's optimization problem.  $U_a^*$  is the maximum value obtained from Equation (1).

The ruler's problem involves two decisions:  $s = \{H, L\}$ , whether to appoint an agent

with high or low capability, and  $Q$ , the intensity of the anticorruption measure. By a similar token, we normalize the ruler's marginal utility from the weighted sum of growth and ideology to one. The ruler's optimization problem is the following:

$$\begin{aligned} \max_{s, Q} \quad & U_R = [\pi(1 - I^* \cdot \theta)E_g^* + (1 - \pi)E_l^*] - \lambda I^* \cdot \theta E_g^*. \\ \text{s.t.} \quad & \{E_g^*, E_l^*, I^*\} \in \arg \max U_a. \end{aligned} \quad (2)$$

Here is the timing of moves in this game. The ruler first chooses  $Q$ , which determines the implementation of the permissive scheme or the punitive scheme, and  $s$ , the type of agent. Then, the agent decides  $I$ ,  $E_g$ , and  $E_l$ . By examining  $E_g^*$  for both types of agent under the permissive and punitive schemes, we can obtain a generic relationship among the capability of agent, loyalty, and corruption.

Notice that in the formulation of the ruler's problem, the anticorruption campaign does not incur a direct cost but affects the ruler's utility through its impact on the agent's effort allocation and the choice about corruption. If the ruler sets  $Q$  sufficiently high, the agent will refrain from corruption:  $I^* = 0$  for  $i \in \{H, L\}$ . We define this circumstance as the "punitive scheme." It is easy to obtain that  $E_g^*(I = 0) = \frac{(2\pi-1)\alpha_i}{2}$ , and  $U_i^*(I = 0) = (2\pi - 1)^2(\alpha_i/4) + (1 - \pi)$ .

By contrast, corruption will not be deterred if  $Q$  is relatively small. We define such a scenario as the "permissive scheme." The agent's optimal effort spent on growth will then be  $E_g^*(I = 1) = (\alpha_i/2)[\pi + (1 - \pi)(\theta - 1)]$ . This yields the agent a utility worth  $U_i^*(I = 1) = (\alpha_i/4)[\pi + (1 - \pi)(\theta - 1)]^2 + (1 - \pi) - Q$ .

**Claim 1.** *In both the permissive and punitive schemes, the agent with the high capability type allocates more effort on growth and less effort on ideology compared with the low capability type. Fixing the type, the agent allocates more effort on growth and less effort on ideology when committing corruption.*

This result explains the logic of capability versus loyalty trade-off in which the agent has to allocate attention between growth and ideology. Importantly, the permissive scheme grants a higher private return for the agent through corruption, which depends further on

growth. Thus, the permissive scheme tends to undermine the production of ideology (loyalty) by inducing more effort allocated on growth.

The agent's tendency with regard to corruption is determined by the comparison between two utilities,  $U_i^*(I = 0)$  and  $U_i^*(I = 1)$ . Simple algebra shows that  $U_i^*(I = 0) \geq U_i^*(I = 1)$  if  $(\alpha_i/4)(1 - \pi)^2[\frac{2\pi}{1-\pi}\theta - \theta^2] \leq Q$ . The left-hand side of the inequality increases in  $\alpha_i$ , which implies that an agent with the high capability type is more likely to commit corruption. At the same time, the left-hand side increases in  $\pi$ , the ruler's subjective weight for growth, if  $\theta > (2\pi - 1)/(1 - \pi)$ .

**Claim 2.** *The agent with the high capability type is more likely to commit corruption. Moreover, the agent is more likely to commit corruption when the ruler has greater care about growth (large  $\pi$ ), provided that the institutional loophole is sufficiently large:  $\theta > (2\pi - 1)/(1 - \pi)$ .*

Claim 2 establishes the central premise of a positive correlation between capability (as measured by average performance in the empirical analysis) and the prevalence of corruption at the individual level. Meanwhile, a larger subjective weight for economic growth (larger  $\pi$ ) induces more corruption.

Let  $\overline{Q}_i = (\alpha_i/4)(1 - \pi)^2[\frac{2\pi}{1-\pi}\theta - \theta^2]$ , the minimum intensity of the anticorruption mechanism to deter the agent from committing corruption. The ruler's choices boil down to  $s \in \{H, L\}$  and  $Q \in \{0, \overline{Q}_i\}$ .<sup>2</sup> This produces four scenarios: (1)  $s = H$ ,  $Q = 0$ ; (2)  $s = H$ ,  $Q = \overline{Q}_H$ ; (3),  $s = L$ ,  $Q = \overline{Q}_L$ ; and (4)  $s = L$ ,  $Q = 0$ . Among them, scenario (1) largely conforms with the governance model in which the ruler relies on capable agents to boost growth and to use corruption as a coalition-building strategy; scenario (3) is consistent with the governance model that hinges on political loyalty and cracking down on corruption. Table 1 illustrates the cases.

Now we turn to the ruler's choices with regard to  $s$  and  $Q$ . For simplicity, let  $\alpha_H$  and  $\alpha_L$  be the reserve utilities for the high and low capability types. To illustrate this intuitive

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<sup>2</sup>We assume that the ruler prefers no action on the anticorruption campaign to some small action if it does not deter the corruption.

Table 1: Equilibrium cases

Scenarios	Permissive scheme	Punitive scheme
High capability	1	2
Low capability	4	3

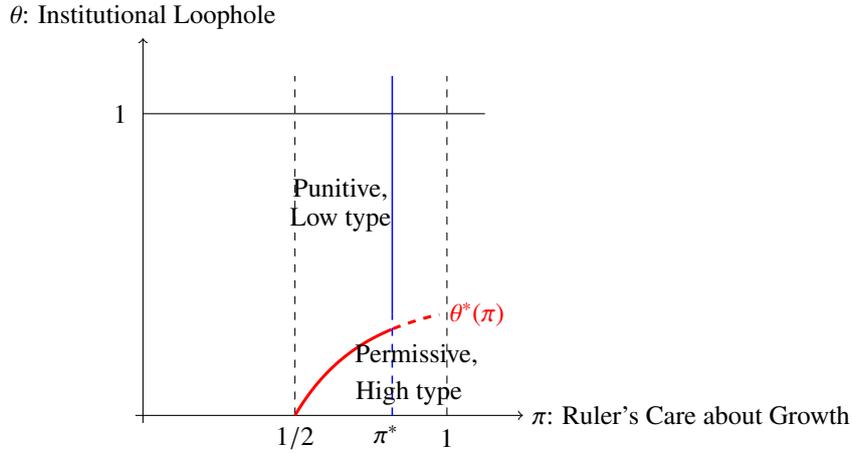
argument, one should focus on the conditions in which the participation constraint is satisfied for the low capability type but not for the high capability type under the punitive scheme.

**Claim 3.** *Suppose that  $\alpha_H > 1/2 > \alpha_L$ , there exists a value  $\pi^*$  and a threshold function  $\theta^*(\pi)$ , such that the ruler implements the punitive scheme and uses the low capability type when  $\pi < \pi^*$  and  $\theta > \theta^*(\pi)$  or the ruler implements the permissive scheme and uses the high capability type when  $\pi > \pi^*$  or when  $\pi < \pi^*$  and  $\theta < \theta^*(\pi)$ .  $\pi^*$  and  $\theta^*(\pi)$  are defined by  $\frac{4(1-\pi)}{(1+2\pi)(3-2\pi)} = \alpha_L$  and  $\frac{\alpha_L}{\alpha_H} = [1 - (\frac{\pi+\lambda}{2\pi-1})\theta^*][1 + (\frac{1-\pi}{2\pi-1})\theta^*]$ .*

Figure 1 demonstrates the ruler's choice of governance model given the parameter distribution of the institutional loophole ( $\theta$ ) and the ruler's care about growth. It shows that the ruler tends to choose the permissive scheme and places capability as a priority when growth is an overwhelmingly important goal of the ruling regime ( $\pi > \pi^*$ ) or when there are some institutional checks on the level of corruption ( $\theta < \theta^*(\pi)$ ). A decay in the institutional quality (decrease in  $\theta$ ), a decrease in the salience of growth (decreasing  $\pi$ ), or increasing popular discontent toward corruption (downward move of  $\theta^*(\pi)$ ) may all induce a shift of governance model from the permissive scheme to the punitive scheme. Intuitively, the regime will be more likely to endure the adverse impacts of corruption if the institutional loophole is small:  $\theta < \theta^*(\pi)$ . However, the preference between the punitive scheme and permissive scheme is also shaped by the ruler's subjective weight for economic growth. When this weight is sufficiently large,  $\pi > \pi^*$ , the growth and rent-generating motives supersede the concern about increasing popular discontent, notwithstanding severe institutional loopholes.

The results in Claims 1-3 and the equilibrium results summarized by Figure 1 readily

Figure 1: Ruler's choice of governance model



Notes: When there is a single agent to appoint, only scenarios 1 and 3 in Table 1 will possibly arise in equilibrium. The equilibrium case is 1 (permissive scheme, high type) when  $\pi > \pi^*$  or when  $\pi \in [1/2, \pi^*]$  and  $\theta < \theta^*(\pi)$ . The equilibrium case is 3 (punitive scheme, low type) when  $\pi \in [1/2, \pi^*]$  and  $\theta > \theta^*(\pi)$ .

produce testable empirical hypotheses with regard to the mechanisms of governance and political selection through the lens of corruption. First, Claim 1 implies an instrumental role of corruption in inducing growth-enhancing efforts. In turn, Claim 2 indicates that more capable agents have better growth records and are more likely to commit corruption. While corruption is not systematically observable, the massive scale of anticorruption audits directed by the Central Commission for Discipline and Inspection (CCDI) ensures a strong positive association between the intensity of corruption and the probability of being investigated during the campaign. Using investigation as an indicator of corruption, we can test the implication of the permissive scheme through the following hypothesis.

**Hypothesis 1.** *More capable city leaders are more likely to be investigated for corruption in 2013-2016.*

Second, Claim 3 suggests that highly capable agents tend to be favorably evaluated when the ruler's subjective weight for growth is sufficiently large ( $\pi > \pi^*$ ). In contrast, when the ruler's subjective weight is relatively small, or when the institutional loophole is large, highly capable agents are less favorably evaluated and selected. Situating this

result in the context of political selection, it implies a changing utility of capability from the ruler's perspective when it comes to promotion.

**Hypothesis 2.** *More capable city leaders are more likely to be promoted before the start of the anticorruption campaign and less likely afterward.*

Third, Claims 1 and 3 imply that, when the ruler switches from the permissive scheme to the punitive scheme, the newly selected agents tend to spend more effort on ideological exhortation because they are more likely to have lower capability.

**Hypothesis 3.** *City officials who were appointed after 2013 exhibit a higher degree of allegiance to the party line.*

## **Switching governance models in China**

The governance model of China in Jiang Zemin's era was primarily focused on growth. After the Southern Tour of Deng Xiaoping, a spiritual figure and retired paramount leader, Jiang enthusiastically reacted to Deng's call for economic reform. Under Jiang's leadership, the CCP adopted a large set of policy changes, including mass privatization of state-owned enterprises and market liberalization. The guiding ideological exhortation of the Jiang era is summarized as the Three Represents, which depicts the leading role of the CCP as representing the advanced social productive forces, the progressive course of China's advanced culture, and the fundamental interests of the majority (Guo et al., 2014; Tsai, 2006). Corruption surged on all fronts – from industrial parks to infrastructure projects – because of regional decentralization and a focus on revenue (Bai, Hsieh and Song, 2014; Pei, 2006). Some high-profile cases, such as the smuggling case in Xi-amen, were featured with collective corruption by a large collusion between officials and businesspeople (Shieh, 2005).

The policy orientation in Hu Jintao's era did not shy away from the economy. In Hu's first term from 2003 to 2007, annual gross domestic product (GDP) growth was more

than 12 percent. Nevertheless, Hu attempted to address social grievance. The central government repealed the agricultural tax and established widely covered social safety networks for rural residents. However, the leadership did not take substantial measures to deter corruption. Rampant corruption peaked in Hu's second term, with several politburo members getting involved in high-profile corruption scandals. Along with a rising tendency of corruption, political loyalty and party discipline were compromised. Hu's second term as the CCP's general secretary was impaired by power fragmentation and faction conflicts within the Politburo Standing Committee (Chen and Hong, 2019; Shih and Lee, 2018). With regards to the heuristic model in the previous section, the governance models during Jiang's and Hu's eras are largely featured with the permissive scheme and the performance-based promotion of officials. Claims 1 and 2 imply a relatively high level of growth and a low level of ideology output during this period.

In contrast to his two predecessors, Xi Jinping embraced major policy changes after assuming power in 2013. In 2014, Xi proposed the term "New Normal" to cope with the economic slowdown and to downplay the growth mandate. As an alternative to an exclusive focus on growth, new policy paradigms under Xi's leadership attached more importance to environmental protection, poverty reduction, and redistribution (Kostka and Zhang, 2018; Noesselt, 2017).

An anticorruption campaign was carried out with the mandate of reinstating a clean government and the CCP's "original aspiration." This move is logically consistent with a switch to the governance model based on political loyalty, which may stem from an increasing concern with severe institutional decay and Xi's personal ambition to restore political legitimacy as one of the Party's Crown Princes (Zhao, 2016).<sup>3</sup> In 2016, Xi raised "four types of consciousness" as key evaluation criteria for all cadres. This term includes the consciousness "of the need to maintain political integrity, think in big-picture terms, support the leadership core, and keep in alignment with the center."<sup>4</sup> The focus on the party line in political selection departs from the practice in the Jiang and Hu eras, when

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<sup>3</sup>Crown Princes refer to the descendants of the revolutionary Communist leaders.

<sup>4</sup>*Code of Conduct for Intraparty Political Life under New Circumstances.*

the recruitment strategy was intended to embody the “advanced social productive forces” (Dickson, 2003). This move is consistent with a transition from the permissive scheme to the punitive scheme triggered by rising popular discontent (smaller  $\theta^*$ ) and the ruler’s awareness of institutional decay (decreasing  $\theta$ ).

In turn, the pattern of anticorruption investigation reflects the discrepancy between the permissive and punitive schemes. Under the permissive scheme, public investment projects became a hotbed for corruption. The testimonies released by the anticorruption investigators suggest that a sense of entitlement to political rents might be behind many cases. For example, a former deputy director of the Reform and Development Commission in Guangxi province, who was investigated and prosecuted for corruption in 2013, asserted,

*I do not think that I am worthless, especially in economic development. I will not despise my own morality. It is no exaggeration that almost every item of expressway, coastal port, river port, airport, subway and countless projects came from me.... You can criticize my life and my morality, but my hard work cannot be obliterated.*<sup>5</sup>

## Data

We obtain the officially released reports of the anticorruption investigations from the CCDI website. Combining those reports with Chinese Official Data from the China Center for Economic Research,<sup>6</sup> we construct a data set that covers 1,118 prefecture-level city mayors and party secretaries (henceforth, city leaders) who presided over major prefectures in 2013-2016.<sup>7</sup> The CCDI started sending inspection teams to provincial and

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<sup>5</sup>*Chinese Bulletin of Discipline and Inspection*, February 16, 2015.

<sup>6</sup>The data provides detailed personal and career information on mayors and party secretaries in prefecture-level cities for 1994-2016.

<sup>7</sup>We focus on city leaders, as opposed to province or higher-level leaders, to examine the hypotheses presented in the heuristic model. City leaders include mayors and party secretaries of prefectures, who constitute the major candidate pool for the selection of provincial leaders. The sanction and promotion of city leaders have far-reaching impacts on the ruling coalition of the next generation. Moreover, internal power structures at lower levels resemble those at the top. In turn, changing patterns in political selection and anticorruption at the subnational level reflect the CCP’s highest leadership.

prefecture governments in 2013. Corruption charges often followed inspections. During this period, 83 city leaders (7.42 percent) were investigated for corruption.<sup>8</sup> Among the investigated city leaders, 8 were charged in 2013, 35 in 2014, 21 in 2015, and 19 in 2016. The timing of the investigation cases may be correlated with the frequency of the CCDI's inspections conducted each year. We control the year of inspection in each province to deal with this problem.

**Capability.** The main test of interest requires a measure of capability in boosting the economy. While GDP growth is a commonly used measure, it may be incidentally driven by unobserved city and year effects. To deal with this problem, we focus on the long-term personal effects of city leaders on growth. Specifically, we take advantage of the rotation system in China to disentangle city leaders' capability and city or year specific effects. Most city leaders were rotated between several cities through their tenure as city leaders. As such, superior leaders may form an inference about mayors' economic capability by observing the records of GDP performance. By a similar token, city leaders may develop a reputation of corruption, which tends to be correlated with GDP growth, through their careers. Following the same approach used by Yao and Zhang (2015), we estimate capability as individual fixed effects estimated from cities' GDP growth.

$$y_{i(jt)} = X_{i(jt)} + \delta_i + \psi_j + \gamma_t + \epsilon_{i(jt)} \quad (3)$$

In Equation (3),  $y_{i(jt)}$  is city  $j$ 's growth rate in year  $t$ , when official  $i$  was a leader of city  $j$ .  $X_{i(jt)}$  is a set of time-varying control variables.  $\delta_i$  is official  $i$ 's fixed effect to be estimated.  $\psi_j$  represents city fixed effects and  $\gamma_t$  represents year fixed effects.  $\epsilon_{i(jt)}$  is an independently and identically distributed error term.  $\delta_i$  can be consistently estimated relative to a common mean in a connected sample of cities among which officials were laterally transferred. In the data, the largest connected sample contains all cities except for those in Tibet and Xinjiang. This reduces the number of city leaders used for our

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<sup>8</sup>Only five provincial governors or party secretaries were investigated during the period. We do not study vice mayors, vice party secretaries, or departmental heads in the provincial government because it is difficult to measure their performance, which is a key variable in our hypotheses.

analysis to 998. We use the estimated value of  $\hat{\delta}_i$  based on the growth data in 1994-2016 as a measure of *Capability*. For the charged officials who exited the sample before 2016, *Capability* is estimated based on their individual effects on growth between the first year they took a leadership position and the exiting year when they were investigated.<sup>9</sup>

***Political connection.*** The literature identifies political connection to be an important factor in political selection and provides various options to measure political connection. Thus, we include political connection as a control variable to alleviate the confounders of anticorruption investigations. A widely adopted strategy is to define two officials as connected if they have a common birthplace, hometown, or an overlapping college experience (Fisman et al., 2018; Meyer, Shih and Lee, 2016). Another route of research identifies political connection between officials and their superiors according to colleague experience (Jia, Kudamatsu and Seim, 2015; Jiang, 2018; Landry, Lü and Duan, 2018). Our analysis focuses on officials' political capital that is formally developed within the nomenclature system; thus, colleague experience is more suitable than personal relation (*guanxi*).

Following this logic, we define a city leader as connected to the *incumbent* provincial party secretary in the inspection year if the following two conditions are met: (1) the incumbent provincial party secretary was the city leader's superior when both worked in a province- or city-level government<sup>10</sup> and (2) the official's rank at the time was no more than two levels below the provincial party secretary.

In addition to the binary measure of connection, we measure the strength of connection by counting years of colleague experience. We define the second measure as categorical connection. We expect the strength of connection to increase over time along with work experience. We also control for city leaders' personal characteristics, includ-

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<sup>9</sup>An alternative measure is an index of relative economic growth in comparison with one's peers throughout a city leader's tenure. This second measure controls specific time trends but may be biased by unobserved local conditions that shape a city's long-term growth potential. We computed a measure of capability based on a relative growth index. The results are qualitatively similar to those using *Capability* estimated from Equation (1). To save space, we do not report those results in the main text.

<sup>10</sup>Our data start from 1994. By that time, many current provincial party secretaries already held positions at the city level. Therefore, we are unable to include collegueship at the county level. Hence, the estimate on collegueship-based connection can be considered a lower bound.

ing the dummy variables that indicate college education, minority, and female. Table A1 in the appendix summarizes the variables used in the econometric analysis.

## Capability, connection, and corruption

Following the theoretical framework presented in the previous sections, the logic of transformation between governance models is manifested by the link between the valence of economic performance and the probability of investigation. In particular, Claims 1 and 2 predict that high capability is positively associated with corruption. We estimate the probability of corruption investigation using the following probit model:

$$\Pr(\text{investigation}_{ij}) = \Phi[a + b \cdot \text{Capability}_i + c \cdot \text{Connection}_i + d \cdot \text{Capability}_i \cdot \text{Connection}_i + X_i \mathbf{b} + \phi_i + u_j + T_j]. \quad (4)$$

In Equation (4),  $\text{investigation}_{ij}$  is a dummy that indicates whether official  $i$  working in city  $j$  was investigated for corruption in 2013-2016.<sup>11</sup>  $\Phi[\cdot]$  is the cumulative distribution function of the standard normal distribution.  $\text{Capability}_i$  is the point estimate for  $\delta_i$ , the personal effects estimated from Equation (1).  $\text{Connection}_i$  is the binary or categorical measure of political connection. The interaction term  $\text{Capability}_i \cdot \text{Connection}_i$  addresses the possibility that the marginal effect of  $\text{Capability}_i$  on the probability of investigation is contingent on the political connection with provincial incumbent party secretaries.<sup>12</sup>  $X_i$  is the set of personal variables.  $\phi_i$  is a set of dummy variables indicating whether official  $i$  served as a city leader (mayor or party secretary) each year between 2013 and 2016.<sup>13</sup>

<sup>11</sup>The sample of officials for analysis includes officials who had been mayors or party secretaries of prefecture cities in 2013-2016. Note that most of the officials served as city leaders or held deputy positions before 2013. The capability is estimated based on the 1994-2016 sample of cities. Thus, the capability measure largely indicates officials' performance before the anticorruption campaign.

<sup>12</sup>We use the method proposed by Ai and Norton (2003) to compute the marginal effect of the interactive term. The corresponding Stata command is *inteff*.

<sup>13</sup>Some officials were moved to other posts during 2013-2016. Often, officials were investigated after they were moved from their posts before inspection. Controlling the year of incumbency alleviates

$u_j$  is a set of dummy variables indicating the region of an official's last post.  $T_j$  is a set of dummy variables indicating the year when the city was inspected by the CCDI's inspection team.

Table 2: Testing H1: Capability and the probability of being investigated for corruption

Dependent variable: Being investigated in 2013-2016				
	(1)	(2)	(3)	(4)
<i>Capability</i>	13.26*** (2.59) [2.30]***	17.25*** (0.93) [2.75]***	13.99*** (2.43) [2.50]***	17.76*** (0.92) [2.88]***
<i>Connection (binary)</i>	-0.38** (0.16) [-0.05]**	-0.29** (0.13) [-0.03]**		
<i>Capability × Connection (binary)</i>	-9.51** (4.80) [-1.18]**	-10.14** (4.33) [-1.39]**		
<i>Connection (categorical)</i>			-0.07** (0.04) [-0.01]*	-0.07 (0.05) [-0.01]*
<i>Capability × Connection (categorical)</i>			-7.97*** (1.36) [-0.48]*	-7.44*** (1.33) [-0.41]*
Other controls	NO	YES	NO	YES
Region Fixed Effects	NO	YES	NO	YES
Incumbency-year dummies	NO	YES	NO	YES
Observations	998	998	998	998
Pseudo R-squared	0.02	0.16	0.02	0.16

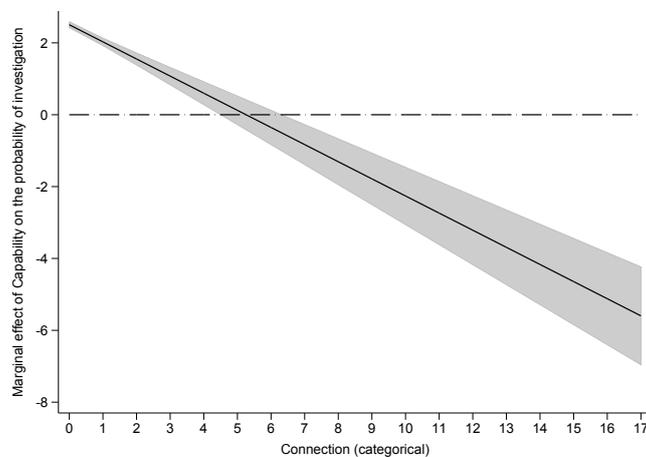
Notes: This table presents the estimates for the probability of being investigated in 2013-2016. The sample consists of 998 prefecture-level mayors or party secretaries who were in office in 2013-2016. *Capability* is the point estimate for  $\delta_i$  in Equation (3) using the largest connected 1994-2016 sample. The following variables are controlled but not reported: whether the official has a college degree, whether the official is from an ethnic minority group, and whether the official is female, as well as the dummy variables indicating whether the official's city was audited in a specific year. Incumbency-year dummies are a set of dummies indicating whether the official was in office in a specific year in 2013-2016. The results were obtained by heteroscedasticity-robust probit model. The robust standard errors of the estimated coefficient are reported in parentheses. The marginal effects are reported in brackets. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

Table 2 reports the estimates for Equation (2). First, the coefficient of *Capability<sub>i</sub>* is positive and significant in all columns. A 0.01 increase in the value of *Capability<sub>i</sub>* translates into an increase of 2.5 percentage points in the probability of investigation when the selection bias due to nonrandom exit.

official is not connected to the provincial party secretary. A one-standard-deviation increase in  $Capability_i$  explains 18.6 percent of one standard deviation in the probability of investigation. At the same time, city leaders who were politically connected with incumbent provincial party secretaries were 3-5 percentage points less likely to be investigated for corruption at the level of average capability, as columns (1) and (2) show. On top of that, the marginal effects for the interaction term,  $Capability_i \cdot Connection_i$ , are estimated to be significantly negative.

Figure 2 plots the marginal effects of  $Capability$  on the probability of investigation, conditional on the categories of political connection. As shown,  $Capability$  has a positive effect on the probability of investigation only for weakly connected officials. In contrast, strongly connected city leaders (category 6 or larger) are less likely to get into trouble from the corruption investigations when they are associated with higher capability.

Figure 2: The marginal effects of capability on the probability of investigation



Notes: The plot is obtained based on the estimation in column (3) of Table 2. The marginal effects are evaluated by setting capability at the sample mean, zero. The marginal effects are presented with bootstrapping confidence intervals at the 95 percent level, 200 repetitions.

## Pattern of promotion

To further examine the logic of switching governance models, we turn to the pattern of promotion. While the model assumes a single agent, the logic of political selection can be easily extended to the situation with multiple agents where institutional loopholes vary across different jurisdictions and ranks. As long as the type of agent is discernible by the ruler, the choices with regard to anticorruption measures and the type of agents are determined by  $\pi$  and  $\theta$ , respectively. Note that when  $\pi < \pi^*$ , and  $\theta$  varies across different regions and positions, the ruler opts for different choices with regard to  $s$ . Thus, the equilibrium may have a mixture of agents with low and high capability, and corruption is only partially deterred for the low types. This reasoning implies that capability is a strong predictor for promotion before the start of the anticorruption campaign but plays a less significant role driving promotion afterward.

Table 3: Testing H2: Changing pattern of promotion

	Dependent variable: Promotion			
	1994-2012		2013-2016	
	(1)	(2)	(3)	(4)
Capability	1.29** (0.62) [0.32]**	1.50** (0.70) [0.37]**	-2.52 (2.33) [-0.41]	-2.20 (2.26) [-0.34]
Connection (binary)	0.15*** (0.03) [0.04] ***	0.07* (0.03) [0.02]**	0.26*** (0.09) [0.04]***	0.30*** (0.09) [0.05]***
Other controls	NO	YES	NO	YES
Region Fixed Effects	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES
Observations	10,289	10,066	2,346	2,343
R-squared	0.04	0.15	0.03	0.11

Notes: This table presents the estimates for the probability of promotion for prefecture-level mayors and party secretaries in 2013-2016. *Capability* is the point estimates for  $\delta_i$  in Equation (3) using the largest connected 1994-2016 sample. The following variables are controlled but not reported: whether the official has a college degree, whether the official is from an ethnic minority group, whether the official is female, age, and the squared term of age. The results were obtained by heteroscedasticity-robust probit model. The robust standard errors of the estimated coefficient are reported in parentheses. The marginal effects evaluated at the sample means are reported in brackets. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

We define promotion as an event in which an official  $i$  was appointed to a new higher-

ranking position in year  $t$ . For prefecture-level city leaders, promotion involves an appointment to a position of the sub-provincial level. If the anticorruption campaign facilitates a shifting away from the growth mandate, the effect of  $Capability_i$  should be different before and during the campaign. We estimate the following probit model for the probability of promotion before and after 2013, the year when the anticorruption campaign started:

$$Promotion_{ijt} = \Phi[\alpha + \beta \cdot Capability_i + \gamma \cdot Connection_i + X_j b + u_j + T]. \quad (5)$$

In Equation (5),  $Promotion_{ijt}$  is the probability of the promotion of official  $i$  presiding over city  $j$  in year  $t$ . The definitions for  $Capability_i$  and  $Connection_i$  remain the same.  $X_j$  is a set of personal variables, including the official's current age and the square term of age, college dummy, minority dummy, and female dummy.  $u_j$  stands for city fixed effects, and  $T$  stands for year fixed effects. Consistent with our prediction, the estimates presented in Table 3 show that  $Capability_i$  has a positive and statistically significant coefficient associated with promotion in 1994-2012 and an insignificantly negative coefficient in 2013-2016. Meanwhile, the coefficients of  $Connection_i$  are positive and significant in both periods, with a slightly more sizable estimate in 2013-2016. The results suggest a trade-off between boosting economic performance and maintaining the party line in the transition period.

## Shifted policy focus

To test whether the anticorruption campaign may be instrumental for inducing changes in the governance model, we use annual work reports by city governments to construct measures of policy inclination of city leaders.<sup>14</sup> In China, local governments deliver an annual work report that covers comprehensive policy domains to the local people's congress, the de jure legislative branch. The reports are drafted by mayors' offices and

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<sup>14</sup>The work reports are downloaded from <http://data.people.com.cn/>.

need to be read and approved by both mayors and party secretaries before the annual meeting of the local people's congress. While the reports cover a wide range of policy issues, they differ considerably in the lengths devoted to different topics. We assume that the difference in the lengths of topics reflects city leaders' policy and political preference.

The textual analysis consists of two steps. In the first step, we divide work reports by paragraph and treat each paragraph as a unit of analysis. We randomly draw 160,000 units to conduct unsupervised machine learning through the latent Dirichlet allocation (LDA) algorithm to identify potential topics from the training units. In the second step, we treat each work report as a unit of analysis and use the LDA algorithm to compute the probability distribution of topics in each report.<sup>15</sup> By examining the keywords used for identifying each topic, we are able to define a topic as pertaining to a specific policy agenda, such as economic growth or party discipline. We then assign a value of policy weight by summing up the estimated probabilities of a cluster of topics in each report.

Using the estimates obtained from the LDA models, we develop three aggregate measures of policy inclination of city governments as indicated by the annual work reports. *Economic growth* includes a cluster of topics with policy keywords, such as GDP, revenue, investment, and real estate. *Economic reform* combines the topics containing the keywords, such as sustainable development, business environment, and market liberalization. *Party discipline* captures the weight of discourses that signal political loyalty and conformity to the party line.<sup>16</sup> It is evident from Figure 3 that the prevalence of economic growth declined, and the trend of economic reform picked up during the recent years. At the same time, the share of topics related to party discipline and loyalty followed a rising trend, particularly after 2013. Since the contents of the annual work reports are directly controlled by city leaders, the patterns arguably corroborate changing policy preferences of local officials induced by the anticorruption campaign.

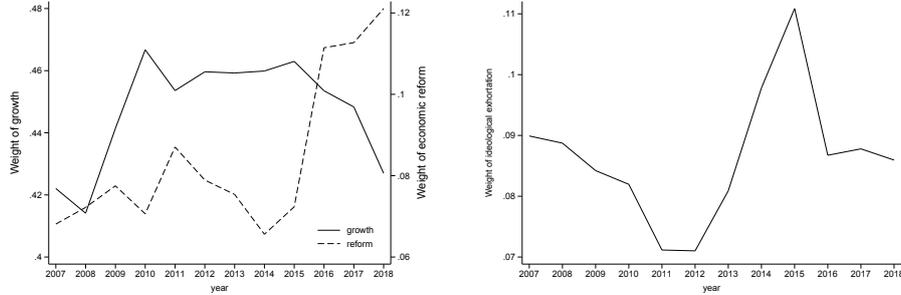
Table 4 reports a further piece of evidence based on regressions of policy preferences,

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<sup>15</sup>The computation for topic modelling is implemented by using Gensim in the Python library: <https://radimrehurek.com/gensim/>.

<sup>16</sup>The details about the topics are included in the appendix.

Figure 3: Trends of topics related to economic growth, reform, and party discipline in government reports



Notes: The left panel presents the average trends of weights on topics related to economic performance. The right panel presents the average trends of topics on loyalty and the party discipline.

Table 4: Testing H3: Changing policy preferences

Weight for	Dependent variable: Weight of Topic			
	Growth (1)	Reform (2)	Growth + Reform (3)	Party Discipline (4)
Promoted After 2013	2.03*** (0.42)	0.33 (0.26)	2.36*** (0.48)	0.61** (0.25)
Other controls	YES	YES	YES	YES
City Fixed Effects	YES	YES	YES	YES
Observations	2,520	2,520	2,520	2,520
R-squared	0.09	0.16	0.05	0.18

Notes: The results are obtained using linear panel regression. The following control variables are included but not reported: the growth rate of GDP, the age of the mayor, education of the mayor, whether the mayor is female, and whether the mayor is from an ethnic minority group. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

measured by the weights of different topics in annual work reports of city governments. The main variable of interest is a dummy that indicates whether the incumbent mayor was promoted after 2013. The theoretical argument is partially supported because new appointees during the anticorruption campaign devote more space to topics related to the party discipline in their reports (column (4)). Interestingly, the coefficient of *promotion after 2013* is also positive when estimating growth-related topics. We attribute this finding to the fact that the political discourse in annual work reports is a coarse measure of officials' real efforts allocation. Succeeding leaders may just act like highly capable types through cheap talks about economic policies without exerting costly efforts in pushing forward investments.

## Pure power struggle?

While we focus on the implication of the anticorruption campaign on governance models, it is possible that the campaign was for power consolidation only. To address this concern, we check the robustness with regard to the exclusion of city leaders who were connected to purged provincial leaders. If the campaign was not meant to have a far-reaching impact, the empirical pattern of corruption investigation established in previous sections should not appear in the other provinces. We drop the city leaders connected to purged provincial leaders and re-estimate the models for investigation and promotion.<sup>17</sup>

Table A2 in the appendix reports the estimated investigation patterns using the new sample. *Capability* remains positively correlated to the probability of investigation. The results are qualitatively similar if we include the *Connection* variables and their interaction with *Capability*. Both connection measures are negatively correlated to investigation, and so are the interactions. The robustness check lends more support to the argument that the anticorruption campaign signified a turning point to a new governance model. How-

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<sup>17</sup>Altogether, 5 out of 91 provincial leaders were investigated in 2013-2017. The purged provincial leaders were Zhou Benshun (Hebei), Su Shulin (Fujian), Wei Hong (Sichuan), Wang Min (Liaoning), and Huang Xingguo (Tianjin).

ever, the campaign is costly to the extent that officials may be deterred from exerting the effort to enhance economic performance.

## **Conclusion**

In the literature on authoritarianism, relatively limited effort is spent on studying the institutional change within regimes. Examining the anticorruption campaign in China, this paper argues that the ruler may direct popular discontent toward corruption as a strategy to reshuffle power configuration in the ruling coalition. As such, anticorruption investigations may help facilitate the transformation from a governance model relying on corruption to one relying more on loyalty. Consistent with this logic, empirical analysis reports a positive correlation between officials' capability and the corruption investigation and a decreasing impact of capability on promotion following the campaign. Applying the topic modelling on the annual work reports of city governments suggests that officials who were promoted during the campaign have a higher degree of alignment with the party line.

The transition toward new governance models through the anticorruption campaign is, nevertheless, costly. Massive investigations and prosecutions of officials deter personal efforts to promote economic growth. By weakening growth incentives in bureaucracy, the campaign undermined one important handler of the promotion system. In turn, the void of pecuniary incentives has to be replaced by ideological exhortation and party discipline. The open question is whether such strategy is enough to maintain internal stability. The absence of institutionalized mechanisms to process conflicts renders the "re-equilibrium" process difficult. Over time, the dilemma may entail a cycle between corruption and campaigns to purge corruption.

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## Appendix not for publication

### Proof for Claim 3

*Proof.* The ruler's utility of the ruler under scenario 1 is:

$$\begin{aligned} U_R(s = H, Q = 0) &= [\pi(1 - \theta)E_g^*(I = 1|\alpha_H) + (1 - \pi)E_l^*(I = 1|\alpha_H)] - \lambda\theta E_g^*(I = 1|\alpha_H) \\ &= (1 - \pi) + \frac{[2\pi - 1 - (\pi + \lambda)\theta][2\pi - 1 + (1 - \pi)\theta]\alpha_H}{2} \end{aligned}$$

The ruler's utility under scenario (2) is:

$$\begin{aligned} U_R(s = H, Q = \overline{Q_H}) &= [\pi E_g^*(I = 0|\alpha_H) + (1 - \pi)E_l^*(I = 0|\alpha_H)] \\ &= (1 - \pi) + \frac{(2\pi - 1)^2\alpha_H}{2} \end{aligned}$$

The ruler's utility under scenario (3) is:

$$\begin{aligned} U_R(s = L, Q = \overline{Q_L}) &= [\pi E_g^*(I = 0|\alpha_L) + (1 - \pi)E_l^*(I = 0|\alpha_L)] \\ &= (1 - \pi) + \frac{(2\pi - 1)^2\alpha_L}{2} \end{aligned}$$

The ruler's utility under scenario (4) is:

$$\begin{aligned} U_R(s = L, Q = 0) &= [\pi(1 - \theta)E_g^*(I = 1|\alpha_L) + (1 - \pi)E_l^*(I = 1|\alpha_L)] - \lambda\theta E_g^*(I = 1|\alpha_L) \\ &= (1 - \pi) + \frac{[2\pi - 1 - (\pi + \lambda)\theta][2\pi - 1 + (1 - \pi)\theta]\alpha_L}{2} \end{aligned}$$

Inspecting the ruler's utility expression under the four scenarios shows that for any type  $\alpha_i$ , the ruler strictly prefers the punitive scheme to the permissive scheme. However,

it may occur that the agent's utility under the punitive scheme is lower than the agent's reserve utility, so the punitive scheme may be infeasible. Note that  $\alpha_H$  and  $\alpha_L$  are the reserve utilities for the high and low capability types. Simple algebra obtains that the condition is  $\alpha_H > \frac{4(1-\pi)}{(1+2\pi)(3-2\pi)} > \alpha_L$ .

Note that the ruler always prefers the high capability type to the low capability type under the permissive scheme:  $U_R(s = H, Q = 0) > U_R(s = L, Q = 0)$ . The ruler's preference between using the low type under the punitive scheme and the high type under the permissive scheme depends on the comparison between two values,  $U_R(s = H, Q = 0)$  and  $U_R(s = L, Q = \overline{Q_L})$ . Solving the algebra for  $U_R(s = H, Q = 0) \geq U_R(s = L, Q = \overline{Q_L})$  obtains the conditions favoring the permissive scheme.

□

Table A1: Summary statistics

Variable	N	Mean	Standard deviation	Min	Max
Individual level variables					
Being investigated	998	0.069	0.25	0	1
Capability	998	0.00	0.02	-0.10	0.11
Binary connections	998	0.20	0.40	0	1
Categorical connections	998	0.65	1.81	0	17
College	998	0.70	0.46	0	1
Minority	998	0.14	0.34	0	1
Female	998	0.06	0.23	0	1
Inspection_2014	998	0.58	0.49	0	1
Inspection_2016	998	0.33	0.47	0	1
City-year level variables					
Promotion	12,635	0.16	0.37	0	1
Capability	12,635	0.00	0.03	-0.54	0.35
Binary connections	12,635	0.26	0.44	0	1
Categorical connections	12,635	0.90	2.08	0	17

Notes: Capability is normalized to have zero mean.

Table A2: Investigation: Excluding connections to purged provincial leaders

Dependent variable: Investigation			
	(1)	(2)	(3)
<i>Capability</i>	15.13*** (2.59) [1.81***]	15.19*** (1.42) [1.78***]	16.39*** (1.94) [1.81***]
<i>Connection (binary)</i>		-0.18 (0.15) [-0.02]	
<i>Capability × Connection (binary)</i>		-9.70* (5.16) [-0.92*]	
<i>Connection (categorical)</i>			-0.05 (0.05) [-0.01]
<i>Capability × Connection (categorical)</i>			-6.99*** (1.70) [-0.22]
Other controls	YES	YES	YES
Region Fixed Effects	YES	YES	YES
Incumbency-year dummies	YES	YES	YES
Observations	976	976	976
R-squared	0.17	0.17	0.18

Notes: Notes: This table presents the estimates for the probability of being investigated in 2013-2016. The sample consists of 976 prefecture-level mayors or party secretaries who were in office in 2013-2016, excluding those connected to the provincial party secretaries who were prosecuted for corruption in this period. *Capability* is the point estimates for  $\delta_i$  in Equation (3) using the largest connected 1994-2016 sample. The following variables are controlled but not reported: whether the official has a college degree, whether the official is from an ethnic minority group, whether the official is female, the dummies indicating whether the official's city was exposed to an auditing in a specific year. The results were obtained by heteroscedasticity-robust probit model. The robust standard errors of the estimated coefficient are reported in parentheses. The marginal effects are reported in brackets. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .



