

Strategic Promotion, Reputation, and Responsiveness in Bureaucratic Hierarchies*

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Abstract

While existing studies usually model promotion as a bilateral interaction between promoter and promotee, it is not uncommon that the promoter is under the influence of a third-party. For instance, authoritarian rulers may consider how their interactions with local agents change the way that citizens view them. Similarly, a mid-tier officer in a bureaucratic hierarchy often concerns herself with her image in the eyes of her superior when managing her subordinates. In this paper, we construct a game-theoretic model to investigate promotion strategies when promoters have reputation concerns. We show that promoters can use promotion as a signaling tool, where she can deliberately postpone promoting the subordinate to enhance her own reputation. Furthermore, the promoter has extra incentives to shirk, knowing that she can manipulate promotion in the future. Thus, strategic promotions decrease government responsiveness. Counter-intuitively, such decrease is more severe when intra-bureaucracy information is more transparent. In other words, transparency may do more harm than good. We conduct a case study of the Chinese bureaucracy and provide supportive evidence.

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1. Introduction

Bureaucratic appointment, removal, and promotion are central to both democratic and authoritarian politics. Within the bureaucratic hierarchy, a personnel decision in one tier could have far-reaching impacts on another. Existing studies have revealed a rich set of factors that a superior may consider when making a personnel decision, which include, among others, subordinate competence, efforts, loyalty and networks (e.g., Egorov and Sonin 2011; Lewis 2011; Li and Zhou 2005; Shih, Adolph, and Liu 2012). Although specific findings may vary, these studies share a similar framework of analyzing personnel decisions as a bilateral relationship between a superior and a subordinate, i.e., two tiers rather than the whole hierarchy. In other words, they assume away the complex impacts from the rest of the hierarchy.

However, it is not uncommon that the superior is also under third-party influences. This is particularly because third-party observers, be they higher-ranking bureaucrats or an important audience outside of the hierarchy, may infer information about the promoter from her promotion decisions, which raises reputation concerns. For instance, while making a promotion decision, a mid-tier bureaucrat may worry about how the decision gives away information about her to higher-ranking officers in the hierarchy. Similar reputation concerns also apply to politicians, even the top ones. Unsurprisingly, politicians care about public support in democracies because it translates into electoral votes. Even in authoritarian regimes, rulers care about their popularity because they live under the shadow of mass political unrest and electoral defeat (Geddes, Wright and Frantz 2014).¹

Departing from previous studies, we ask how a promoter should promote her subordinates in a way that increases her reputation in the eyes of a significant third party when the latter is sophisticated enough to infer information from promotion decisions. Additionally, we investigate the consequences of such strategic promotions. Intuitively, a promoter with reputation concerns tries to act like a “good” officer, by adopting the same promotion strategy

¹ Geddes, Wright, and Frantz’s (2014) data set shows that uprisings, rebellions and election defeats jointly account for 51% of the 223 post-World War II dictatorial regime collapses.

that a good officer would choose. An immediate consequence is that of promotion inefficiencies, which serves as a salient example of how “bad” governance can be made out of “good” politics. Furthermore, if the manipulation of reputation through personnel control is successful, the promoter has extra incentives to shirk when the subordinate is competent, knowing that information manipulation is always an option in the future. Our analysis thus demonstrates that strategic promotion decreases government responsiveness.

We build a game-theoretic model to study an organizational structure in which observable performance reflects joint efficacies of the superior and the subordinate, in which the superior cares about her reputation among the audience outside the organization and determines the subordinate’s career prospects. This structure resembles the relationship between a popularity-minded authoritarian ruler and her appointed local agent, or between an elected politician and her appointed bureaucrat. Citizens outside the government form the third-party audience. The superior’s reputation is the public’s *perception* of her efficacy to deliver good performance. Citizens measure ability based on desirable attributes, such as competence and non-corruptness, among others, while the superior can promote the subordinate. Our model highlights a novel role of promotion and lack thereof: promotion as a signal of the promoter’s efficacy.

Specifically, we assume there are a central ruler, a local bureaucrat, and a representative citizen. (Alternatively, they can be a mid-tier officer, her subordinate, and her superior, respectively.) Our model assumes asymmetric information between the state (ruler and bureaucrat) and the citizen. The citizen observes only the revealed governance outcomes, but not the exact efficacies of the principal (central ruler) and her agents (local bureaucrat). Information is complete within the state. Since local governance depends jointly on central and local governments, it is difficult for the citizen to identify what role each government has played when local governance is mediocre; in other words, the citizen knows that either the central or the local

government is bad, but does not know which one it is.² In particular, when the citizen cannot distinguish between a good principal and a bad agent versus a bad principal and a good agent, the principal may manipulate promotion decisions to trick the citizen. To do this, bad principals mimic what good principals do (to their bad agents), i.e., they do not promote the agent. Consequently, good agents are denied deserved promotions: the ruler uses promotion as a signaling tool to build her own reputation. In the model, we allow efficacies to be costly “chosen” based on the individual's talent before delivering performance, which adds a moral hazard problem before the signaling problem: a competent promoter has fewer incentives to respond timely to citizens’ demands because of the ability to manipulate reputation in the future.

Our model generates the following testable predictions: a strong ruler always promotes bureaucrats to important positions in an efficient way, namely, promoting the strong only. A weak ruler is likely to prevent deserved promotions to mimic a strong ruler when reputation concerns are significant and when the efficiency benefits from promotion are small. Consequently, when local government performance sends a mixed signal (i.e., when the citizens cannot distinguish a team of good ruler and bad bureaucrat from a team of bad ruler and good bureaucrat), promotion is a “bad” signal for ruler's efficacy because a strong ruler would never promote a weak bureaucrat. Therefore, citizens feel less positively toward the ruler once promotion is observed. Furthermore, the ruler may actively shirk at her job, in the expectation that she can restore some of the reputation loss from strategic promotion.

Our analysis makes several contributions to the literature. First, our work contributes to the literature on strategic promotions. A classical paradigm focuses on the tradeoff between promoting for competence versus loyalty (Egorov and Sonin 2011). Another objective of strategic promotion is to prevent poaching. Waldman (1984) argues that in corporate

² Existing studies have recognized the difficulty of citizens in inferring efficacies of multiple governments based on jointly determined governance outcomes. For instance, Birney (2014) argues that Chinese citizens have difficulty in inferring the corruptness of local officials when observing non-implementation of the village election law. This is because the non-implementation can be due to either corrupt local officials or mandates from irresponsible high-ranking officials.

environments, firms are more reluctant to promote workers if they anticipate poaching from competitors because promotions send a positive signal of the worker's quality. Our paper is closer to Waldman (1984) since we both consider the signaling role of promotions. However, instead of viewing promotion as a signal about the *promotee*, this paper considers promotion as a signal about the *promoter*.

Second, our study speaks to the burgeoning literature on information management in dictatorships. Although politicians in democratic governments also manage information to enhance their image, citizens in authoritarian regimes face low transparency and media freedom, which makes them more susceptible to governmental information management. An authoritarian ruler may improve her reputation and gain public support through actual performance improvement, information manipulation, or both (Chen and Xu 2017; Guriev and Treisman 2015). While some resilient authoritarian rulers are dedicated to sustaining good economic performance, which is challenging, they also spend substantial financial resources on propaganda to convince the ruled of their various desirable attributes (e.g., Gilley 2008; Shambaugh 2007). Researchers have identified various information management tools, such as signaling their strength through propaganda (Huang 2015), concealing information about economic (under)performance (Hollyer, Rosendorff, and Vreeland 2015), or censoring the media (Lorentzen 2014). We add to this literature by proposing a novel information manipulation technique, namely strategic promotion.

Moreover, we contrast existing studies of “naïve” propaganda of authoritarian regimes by introducing sophisticated citizens. Specifically, in the presence of undesirable governance outcomes, authoritarian central rulers frequently make use of official propaganda to shift blame to local bureaucrats, which enables rulers to gain higher levels of political support (Cai 2008; Li Cheng 2006; Li Lianjiang 2016; Tang 2016). Although the top-down blame-shifting may sometimes work, over time citizens may grow more sophisticated and stop accepting such naïve propaganda: Aware that the central government decides local officials’ career prospects, they do

not expect the latter to defend themselves when the central government scapegoats them; this, in turn, hinders the credibility of the propaganda.³ Different from the assumption of naïve citizens, we highlight that a central ruler can effectively shift blame to maintain reputation even in presence of sophisticated citizens.

Third, our study shows that centralized personnel control can significantly affect governance quality and regime survival. While various tools exist to increase government responsiveness and accountability, such as increased media coverage (Snyder and Strömberg 2010), enhanced transparency (Bordignon and Minelli 2001), and the separation of power (Persson, Roland, and Tabellini 1997), we argue that this particular signaling tool dampens the principal's responsiveness and accountability. This is because she can send signals to shift blame after shirking. Blame shifting is more effective when the principal knows the agents well because she can determine when to send the signal. Consequently, intra-governmental transparency (or effective monitoring) may reduce the responsiveness of the superior. This is in sharp contrast to the conventional wisdom that advocates transparency for good governance.

Additionally, our prediction implies that centralized bureaucratic control can strengthen dictatorial rule. The central government - but less so the local government - must maintain its good reputation to hold off demands for political change and to sustain authoritarian rule (e.g., Li 2004). Building on this literature, we further propose that a centralized personnel control system can sustain dictatorial rule by providing a chance for the central government to maintain its good reputation through manipulating promotion. Future empirical studies may consider including centralized bureaucratic control as an explanatory variable for authoritarian survival.

2. Model

³ For instance, Chinese local officials will risk their career prospects if they openly defend themselves in the presence of central government's blame-shifting (Li 2016, p.115).

Consider a game of incomplete information with three players: a central ruler (r), a local bureaucrat (b), and a representative citizen.⁴ The ruler and the bureaucrat enter the game with some talents given by Nature. Talents can be h (high) or l (low). Talent transforms into efficacy through efforts. We model effort choice as a privilege of talented officers (both the ruler and the bureaucrat): High-talent officers can choose to work, which leads to high efficacy, or to shirk, which leads to low efficacy; Low-talent officers end up with low efficacy regardless of working or shirking. Working comes with a cost $c > 0$ while shirking is costless. The ruler chooses effort first, the bureaucrat second.⁵ Once effort is chosen, it becomes the officer's efficacy and is fixed in the game thereafter. Local performance is jointly determined by the efficacies of the ruler and the bureaucrat. After local performance is realized, the ruler decides whether to promote the bureaucrat or not. Higher efficacies are preferred for promotion. The citizen cares about her ruler's efficacy and tries to infer it from two signals: local performance and promotion decision. The ruler is career-concerned and cares about her evaluation in the eyes of the citizen when she takes actions.

Formally, the timing is as follows:

1. Nature draws the central ruler's talent $\tau_r \in \{h, l\}$ and the local bureaucrat's talent $\tau_b \in \{h, l\}$ from the same pool that $\Pr(\tau_i = h) = \mu_0, i = r, b$. Talent is common knowledge for the ruler and the bureaucrat, but not for the citizen. The citizen holds (correct) prior belief μ_0 that an officer is of high talent. The two draws of talent are independent.
2. The central ruler chooses effort, which then becomes her efficacy $\theta_r \in \{\tau_r, l\}$. This is observed by the local bureaucrat but not by the citizen.
3. The local bureaucrat chooses effort, which then becomes her efficacy $\theta_b \in \{\tau_b, l\}$. This is observed by the ruler but not by the citizen.
4. Local performance is delivered as the sum of efficacies: $X = \theta_r + \theta_b$.

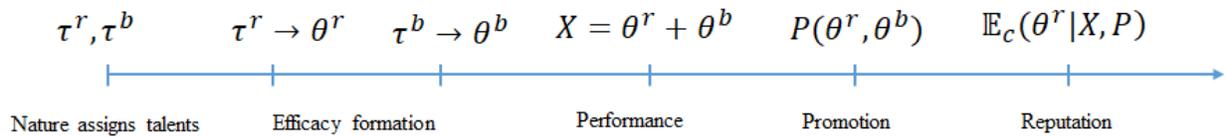
⁴ We use *leader*, *superior*, *central government* and *principal* interchangeably to refer to the central ruler. Meanwhile, *subordinate*, *local official*, and *agent* all refer to the local bureaucrat.

⁵ This assumption makes sense because local bureaucrats sometimes need to follow central policies or guidelines from above, which will be discussed in more details later.

5. The citizen observes performance X .
6. The ruler decides whether to promote the bureaucrat. The promotion probability $p(\theta_r, \theta_b) \in [0,1]$ is jointly determined by the efficacies of ruler and bureaucrat.⁶
7. The citizen observes the promotion outcome $P(\theta_r, \theta_b) \in \{0,1\}$, and updates her beliefs about the ruler.
8. Payoffs are assigned.

An illustration of the timing is shown in Figure 1.

Figure 1. Timing of the game



The key elements of the model are explained as follows.

Talents and efficacies. We interpret efficacies as the attributes that the citizen prefers the ruling authority to have. Standard interpretation in the literature includes competence of governance, non-corruptness, and vision.⁷ We assume efficacy is common knowledge to the ruler and the bureaucrat, but not to the citizen: frequent interactions between the ruler and the bureaucrat through meetings usually generate rich information about efficacies; the citizen, as an outsider, does not have access to such interactions and thus often has limited information.⁸

⁶ To be precise, the promotion probability is jointly determined by the efficacies of the ruler and bureaucrat, both of which are functions of each individual's talent and subsequent effort choices.

⁷ We suppress potentially multi-dimensional competence to one-dimensional parameters τ and θ for the convenience of discussions. Assuming competence to be a vector of multiple attributes does not change the results qualitatively.

⁸ Sometimes such interactions within the bureaucracy also fail to perfectly reveal the efficacy information. Section 3.3 analyzes such situation.

High efficacy comes from a good skill set (talents) as well as good executions (efforts). We assume that moral hazard only applies to high talent individuals, to highlight the fact that less capable individuals' efforts have limited contributions to the eventual outcome. It also simplifies the analysis. We illustrate the rules of efficacy formation in Table 1.

The second assumption is that the ruler chooses efforts before the bureaucrat. This reflects that central policies are usually established before local execution and that local bureaucrats can often infer the ruler's efforts from policy details. For instance, in China, the central government sometimes moves first by allocating a certain amount of funding to local government for policy implementation, which precedes the effort choice of local bureaucrats (Fan 2017). For conciseness, we sometimes denote high-efficacy officers as strong ones and low-efficacy officers as weak ones.

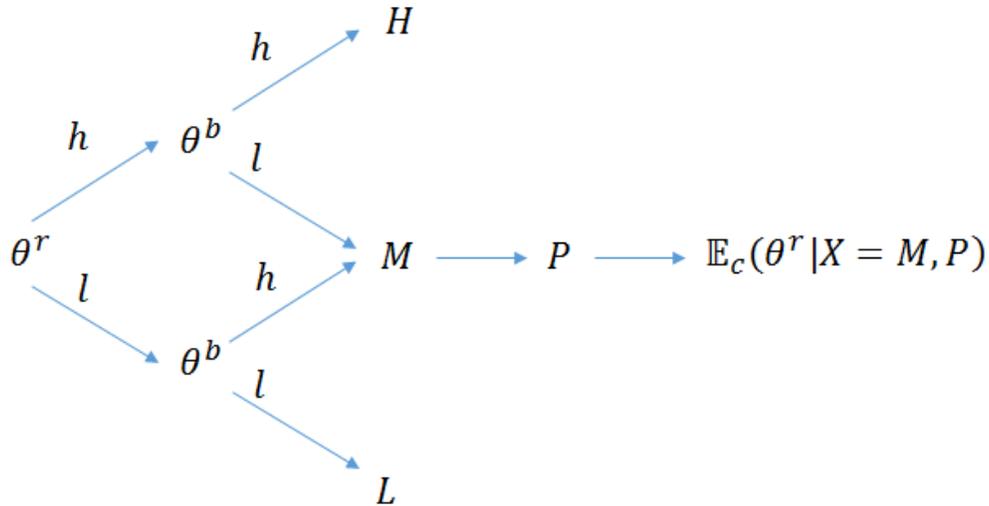
Table 1. Efficacy Formation for Ruler (Promoter) and Bureaucrat (Promotee)

Talent (for both r and b)	Effort (Work or Shirk)	Efficacy formed
High	Yes	High
High	No	Low
Low	Yes	Low
Low	No	Low

Local Performance. We assume that local governance performance is the sum of the central ruler and local bureaucrat's efficacies. This assumption is based on the fact that both central policies and local execution affect governance outcomes. As a joint product, local performance serves as a useful, but imperfect signal for the citizen. Given binary efficacies, local performance takes three values $\{2l, h + l, 2h\}$, denoted as $\{L, M, H\}$ respectively. When local performance is Low, the citizen immediately infers $\theta_r = \theta_b = l$. Similarly, the citizen infers that $\theta_r = \theta_b = h$ after High performance. The signal is jammed only when performance is Mediocre, because the

citizen does not know who contributes h and who contributes l . Thus the citizen needs the additional signal from promotion to make better inferences. The inference process and timing are illustrated in Figure 2.

Figure 2. Inference Process of the Citizen



Promotion. Promotion has two roles in the model: it facilitates the ruler's job *and* provides information about the ruler's efficacy. By promoting a local bureaucrat to a more important office, the central ruler gains additional helping hands. It is straightforward to see that high-efficacy bureaucrats are more preferred in this regard because low-efficacy bureaucrats may not fit in the higher office. Moreover, the ruler may receive praises for having a keen eye for competence.⁹ However, promotion also creates a local power vacuum because the central ruler is responsible for finding a proper replacement. In this regard, promoting a good bureaucrat makes it harder to find an equally competent successor. For the ruler, the (net) gains from promotion balance both considerations. In the model, we assume that the first consideration dominates.¹⁰

⁹ The praises can be regarded as another form of reputation (on the ruler's ability to discover competent individuals). We interpret reputation as the perceived quality of individual attributes (competence, non-corruptness, etc.). Therefore, we aggregate the praises into the net gains of promotion, $g(\theta_b)$, introduced next.

¹⁰ We consider an alternative possibility that the local power vacuum is a bigger concern for the central ruler in the

That is, if we denote the net gains from promotion for the ruler as $g(\theta_b)$, we assume $g' > 0, g(h) > 0 > g(l)$. In particular, the second part of the inequality suggests that an ignorant bureaucrat placed at high office can be detrimental.

We assume that the ruler chooses a promotion probability $p(\theta_r, \theta_b) \in [0,1]$, to accommodate both pure and mixed strategy equilibrium. The citizen does not observe p , but instead the realization of the promotion decision, $P \in \{0,1\}$: $P = 1$ with probability p , $P = 0$ with probability $1 - p$. Consequently, the citizen updates belief about the ruler's reputation, i.e., the expected efficacy of the ruler, as $\mathbb{E}_c(\theta_r|X, P)$. Some justifications about modeling reputation are seen below.

Reputation. We assume a non-strategic citizen who infers the efficacy of the central ruler. The role of a non-strategic citizen in evaluating the ruler is common in the literature, both in theoretical works (Gehlbach and Simpson 2015; Little 2015) and empirical investigations (e.g., Li 2004). Unlike existing literature, we do not focus on the survival of the ruler (e.g., Edmond 2013). Instead, we interpret the ruler's preference toward being perceived of high efficacy as her reputation concern. The preference towards a good perception also indicates a moral hazard problem that one does not need to be good, as long as the citizen believes that she is.

Payoffs. We specify the ruler's and the bureaucrat's payoffs as follows:

$$U_r(\tau_r, \theta_r) = (1 - \alpha - \beta)X(\theta_r, \theta_b) + \alpha p(\theta_r, \theta_b)g(\theta_b) + \beta \mathbb{E}_c(\theta_r|X, P) - c\mathbb{I}(\theta_r = h)$$

$$U_b(\tau_b, \theta_b) = (1 - \gamma)X(\theta_r, \theta_b) + \gamma P(\theta_r, \theta_b)w - c\mathbb{I}(\theta_b = h)$$

We assume that the ruler's payoff is the weighted average of the gains from local performance, promotion, and reputation, minus the cost of effort. The first term corresponds to the gains from local performance. The second term corresponds to the ruler's expected efficiency gains from promotion if the ruler promotes a bureaucrat of efficacy θ_b with promotion probability $p(\theta_r, \theta_b)$. The third term corresponds to ruler's reputation concerns, which is proportional to the ruler's perceived efficacy in the eyes of the citizen, after observing

performance X and promotion outcome P . α and β are the weights assigned to each term. We normalize the total weights to one.

We model the bureaucrat's payoff as a weighted-average (with weight γ) of local performance and wage increase (w) upon promotion. We leave out reputation concern for the bureaucrat to emphasize that reputation building is a more critical task for the central ruler.¹¹

3. Analysis

We use backward induction. When the efficacies are formed, the ruler plays a game of strategic promotion to build her reputation, which is analyzed in Section 3.1. In the efficacy-forming stage, the bureaucrat trades off the benefit of shirking with the decrease in performance and promotion opportunities. The ruler, in the meantime, trades off the benefit of shirking with the decrease in performance and reputation loss but may recover some of her reputation by manipulating promotions. In particular, we are interested in finding equilibria where the ruler does shirk and takes advantage of the manipulation option later. This is analyzed in Section 3.2. Moreover, we are interested in how intra-bureaucracy transparency affects the working incentives in the presence of strategic promotions, which is analyzed in Section 3.3.

3.1 Strategic promotion

First, we analyze the stage where efficacies are already formed, and the citizen infers them through local performance and promotion decisions. When the signal from performance is clear, i.e., $X = H$ or $X = L$, the citizen perfectly learns the ruler's efficacy, and there is no incentive for the ruler to manipulate promotion. The ruler bases the decision purely on promotion gains, $g(\theta_b)$. Therefore, promotion is efficient¹² and based purely on merits, which means $p(\theta_r, \theta_b) = 1$ if and only if $\theta_b = h$; $p(\theta_r, \theta_b) = 0$ if and only if $\theta_b = l$.

¹¹ Alternatively, one may assume that reputation concern exists for bureaucrat, but with a small weight that can be essentially ignored.

¹² Here, we slightly abuse the notation of efficiency: Efficiency in this model means to promote a bureaucrat if and

The interesting case is when the signal is jammed, i.e., $X = M$. From now on we only consider this case. There are two scenarios. First, a high-efficacy ruler is paired with a low-efficacy bureaucrat. Ignoring the local performance and the cost of effort¹³, the strong ruler faces the following (revised) maximization problem:

$$\max_{p(h,l)} \tilde{U}_r(h) = \alpha p(h,l)g(l) + \beta \mathbb{E}_c(\theta_r | X = M, P)$$

Second, a low-efficacy ruler is paired with a high-efficacy bureaucrat. Similarly, the weak ruler faces the following problem:

$$\max_{p(l,h)} \tilde{U}_r(l) = \alpha p(l,h)g(h) + \beta \mathbb{E}_c(\theta_r | X = M, P)$$

Our solution concept of the strategic promotion sub-game is Perfect Bayesian Equilibrium. To analyze the ruler's promotion decision, we denote the citizen's beliefs after mediocre performance as $\mu = \Pr(\theta_r = h | X = M)$. The true probability is a function of ruler's and bureaucrat's effort choice. However, in this sub-game, the citizen is assumed to have correct belief. The ruler makes her promotion decision ($p(h,l)$ for the strong ruler, $p(l,h)$ for the weak ruler) and collects promotion gains. The citizen makes a conjecture about the strategy of the ruler, $\hat{p}(h,l)$ and $\hat{p}(l,h)$, then uses the conjecture to update her beliefs about the ruler after seeing the promotion outcome. In equilibrium, the strong (weak) ruler should maximize her payoff given the strategy that a weak (strong) leader would have chosen and given the citizen's conjectures. In the meantime, the citizen's conjectures should be correct, i.e., coinciding with the ruler's strategy.

Formally, given the citizen's conjecture, denote the belief that the ruler is strong after seeing promotion $P = 1$ as q_P , and that after non-promotion $P = 0$ as q_{NP} ,

$$q_P := \Pr(\theta_r = h | X = M, P = 1) = \frac{\mu \hat{p}(h,l)}{\mu \hat{p}(h,l) + (1 - \mu) \hat{p}(l,h)}$$

only if $g(\theta_b) > 0$. Therefore, it is efficient to promote a high-efficacy bureaucrat, but not a low-efficacy one. Although a positive $g(\theta_b)$ benefits only the ruler in the model (thus the abuse of notation), it is qualitatively the same as saying high-efficacy bureaucrats in high-ranked offices are usually good for the society.

¹³ This is without loss of generality because local performance is realized as the sum of (fixed) efficacies in this stage. In other words, they have no choice to make in terms of local performance. Similarly, the cost of effort is sunk in this stage, thus is also ignored in the maximization problem.

$$q_{NP} := \Pr(\theta_r = h | X = M, P = 0) = \frac{\mu[1 - \hat{p}(h, l)]}{1 - \mu\hat{p}(h, l) - (1 - \mu)\hat{p}(l, h)}$$

In equilibrium, we require:

$$\hat{p}(h, l) = \operatorname{argmax}_{p(h, l)} \alpha p(h, l)g(l) + \beta \mathbb{E}_c[\theta_r | X = M, P(h, l)]$$

and

$$\hat{p}(l, h) = \operatorname{argmax}_{p(l, h)} \alpha p(l, h)g(h) + \beta \mathbb{E}_c[\theta_r | X = M, P(l, h)]$$

We make off-equilibrium path belief assumptions to be consistent with the perfect information case.¹⁴ In particular, if $\hat{p}(h, l) = \hat{p}(l, h) = 1$, the citizen assigns any deviation to non-promotion probability one of being strong; if $\hat{p}(h, l) = \hat{p}(l, h) = 0$, the citizen assigns any deviation to promotion probability one of being weak.

Intuitively, in face of mediocre performance, promotion harms the strong ruler ($g(l) < 0$) and benefits the weak ruler ($g(h) > 0$). Therefore, without reputation concerns, the weak ruler promotes, while the strong one does not. However, since citizens interpret non-promotion as a signal of strength, the weak ruler may have incentives to mimic the strong one by not promoting a well-deserved bureaucrat. Anticipating this, the citizen should downgrade her belief of a strong ruler upon observing a promotion. In equilibrium, the weak ruler is indifferent between promotion and non-promotion (i.e., does not want to mimic the strong ruler any further), and the citizen's conjecture is correct. On the other hand, a strong ruler has no incentive to feign weakness by promoting undeserving bureaucrats, because it is not beneficial in terms of efficiency or reputation gains. We summarize the above intuition in the following proposition.

Proposition 1. *In equilibrium, when local performance is mediocre, the strong ruler never promotes. The weak ruler promotes in the following manner:*

¹⁴ There are, of course, other off-equilibrium path assumptions we can make. Since we emphasize the signaling role of promotion in an incomplete-information set-up, it is natural to stick to how players behave under complete information, as citizen's off-equilibrium path beliefs.

she never promotes when $\frac{\alpha g(h)}{\beta(h-1)} \leq 1 - \mu$;

she promotes with probability $\frac{1}{\mu} - \frac{\beta(h-1)}{\alpha g(h)}$ when $1 - \mu < \frac{\alpha g(h)}{\beta(h-1)} < 1$;

she always promotes when $\frac{\alpha g(h)}{\beta(h-1)} \geq 1$.

As a result, the reputation of the ruler always decreases after promotion (see online Appendix for the proof).

Therefore, in equilibrium, there may be insufficient promotions due to the ruler's reputation concerns. This is consistent with the “bad reputation” literature (e.g., Ely and Välimäki 2003) in which players manipulate decisions when they are concerned about their reputation. It also provides a new driving force to explain insufficient promotions, in addition to the incentivization or networks arguments (see Ting 2003).

Proposition 1 generates several interesting comparative statics, for a given μ . Recall that manipulation is more severe when the weak ruler is more likely to decline promotions. This occurs when the ruler places more weights on reputation than promotion gains ($\frac{\beta}{\alpha}$ is larger). It makes intuitive sense: when reputation concerns are intrinsically more important, the incentive to manipulate promotion is higher, resulting in increased manipulations. If we interpret β as a measure of the extent to which politicians care about their reputation among citizens, then Proposition 1 suggests that manipulation is more severe in democracies due to electoral pressure.¹⁵ Manipulation is also more severe when the performance of the weak officer is worse (l is lower). That is, when the outside option of revealing true efficacy is less attractive, the ruler tends to hide weakness more.

The above two comparative statics are straightforward. The comparative statics of the value of a high efficacy, h , are less so. On the one hand, higher h triggers larger promotion gains

¹⁵ This is because authoritarian rulers usually have alternative strategies to stay in office, such as using repression.

$g(h)$, thus incentivizing promotion; on the other hand, high h indicates higher reputation gains, which discourage promotion. If $g(h)$ is sufficiently concave, e.g., $g(h) = h^{\frac{1}{2}}$, which suggests diminishing marginal returns to officer efficacy, then a higher h induces fewer promotions because reputation gains dominate promotion gains. If $g(h)$ is sufficiently convex, e.g., $g(h) = h^2$, which suggests that high-quality officers can exponentially improve governance, then the promotion probability is U-shaped in h : it decreases first because reputation gains dominate and increases later because the increasing return from governance becomes significant.¹⁶

Thus far we have discussed strategic promotion (and lack thereof) as a signaling tool. In theory, promotion and demotion are two sides of the same coin. One could expect a bad ruler to mimic the demotion pattern of a good one, i.e., if demotions are allowed, the incompetent ruler may demote her competent agents out of reputation concerns. Therefore, we do not discuss demotion separately. Instead, we proceed to highlight an alternative to demotions, namely pseudo promotions, which can be even more prevalent in some political contexts.

Pseudo promotion refers to the tactic of replacing an unsatisfactory local official by transferring the official to an idle but privileged position at the same or sometimes higher level. For instance, an authoritarian ruler often deems demotion undesirable because it significantly disincentivizes agents from performing well (Cai 2014). Some autocracies, like China, have a long tradition of avoiding demotion of local officials unless there is a catastrophic event (Landry 2008; Mei and Pearson 2014). Pseudo promotion is so commonly deployed in China that a Chinese phrase was invented to describe the very situation: *Mingsheng anjiang* (“promote to demote”). Moreover, there is evidence that the public is familiar with the tactic and understands its implications.¹⁷ Pseudo promotion thus gives the ruler an opportunity to select a new local

¹⁶ To see this, when $g(h) = h^{\frac{1}{2}}$, $\frac{d\frac{\beta(h-1)}{\alpha g(h)}}{dh} = \frac{\beta}{\alpha} \left(\frac{1}{2} h^{-\frac{1}{2}} + \frac{1}{2} l h^{-\frac{3}{2}} \right) > 0$. Thus, higher efficacy leads to lower promotion probability. On the other hand, when $g(h) = h^2$, $\frac{d\frac{\beta(h-1)}{\alpha g(h)}}{dh} = \frac{\beta}{\alpha h^2} \left(\frac{2l}{h} - 1 \right) > 0$ if and only if $h > 2l$. That is, we see the promotion probability decreases with h when $h \leq 2l$, and increases with h when $h > 2l$.

¹⁷ Yizi Chen's (2013) memoir suggests that students and young intellectuals proposed moving old leaders to a consultative organization to accelerate China's market reform.

official. In the online Appendix, we show that pseudo promotions increase the promoter's reputation. In pseudo promotions, a low-efficacy ruler mimics a high-efficacy one, leading to over-promotion and bureaucratic redundancy. Interestingly, in the context of strategic promotion, bureaucratic redundancy becomes a positive signal of ruler's efficacy: only high-efficacy ruler affords to accommodate a weak local bureaucrat to an idle position (which translates to bureaucratic redundancy), in the expectation of a better replacement.

3.2 Active shirking

We now turn to the effort choice before strategic promotion decisions. In light of the opportunity to manipulate reputation, the ruler may deliberate on the effort choice to take advantage of strategic promotion later.

To highlight the impact on effort choice, we first set up a benchmark with only the moral hazard problem where no strategic promotion takes place. That is, efficacies are revealed to the citizen after they are chosen. The intuition of the strategic interaction is as follows: when reputation can no longer be manipulated, the ruler's signaling tool to hide weakness is no longer effective. Thus, when the cost of exerting effort is low, a talented ruler should always work hard. For the bureaucrat who does not control promotion decisions, her only consideration is the cost of effort. We, therefore, have the following proposition.

Proposition 2. *In the non-signaling benchmark, when the cost of effort is not too high, high talent individuals always work. That is, there exists $\tilde{c} > 0$ such that $\theta_i = h$ whenever $\tau_i = h$, and $c \leq \tilde{c}$; $i \in \{r, b\}$ (see online Appendix for the proof).*

Now consider the case where efficacies are not revealed after they are chosen, and the ruler can manipulate promotion to fake reputation. The existence of signal jamming explained in the strategic promotion section provides an opportunity for a weak ruler to earn a better reputation

than she otherwise deserves. However, it also provides a talented ruler with incentives to shirk and choose to become a weak one, and to exploit the reputation gains from manipulating promotion. In this case, the ruler's signaling tool has negative externality on the moral hazard problem, thus the shirking. The following proposition constructs precisely such an equilibrium: the strong ruler chooses to shirk in the expectation that she can manipulate promotion to maintain a decent reputation later.

Proposition 3. *When cost of effort is neither too large nor too small, there exists a top-shirking equilibrium where the ruler shirks when she observes a talented local bureaucrat, and cheats the citizen by not promoting the high-performing bureaucrat. Formally, when $c \in [\underline{c}, \bar{c}]$, where $\bar{c} \leq \tilde{c}$, there exists an equilibrium where $\theta_b = h$ but $\theta_r = l$ when $\tau_r = \tau_b = h$ (see online Appendix for the proof).*

Proposition 3 speaks to the negative externality of promotion as a signaling tool for the central ruler. When the bureaucrat chooses her level of efforts, she plays a simple career concern game similar to Holmstrom (1999) in which the incentive of choosing costly effort is two-fold: the immediate benefit in higher output (better local performance) and the long-term higher promotion probabilities. When the ruler has the promotion tool, she can incentivize higher effort from the bureaucrat while doing less herself and manipulating promotions to maintain her reputation. By selecting low efforts, the ruler effectively forces the bureaucrat to exert effort while saving some costs of effort herself. The downside of her reputation risk is consequently mitigated by not promoting the high-performing bureaucrat.

There are several interesting implications of this “active shirking of the ruler.” First, the phenomenon takes place only when both the ruler and the bureaucrat are of high talents: if the ruler is of low talent, then she does not have a choice; and if the ruler is of high talent but the bureaucrat is of low talent, shirking from the top eradicates her reputation by fully revealing the

efficacies. Second, the cost of effort must be mild: if the cost is too high, shirking is always the best choice; if the cost is too low, working and grabbing full reputation gains is always the best choice.

3.3 Transparency of talent information

Suppose now that the talent information is also private. Notably, we focus on the case where there is asymmetric information between the ruler and bureaucrat: the bureaucrat can perfectly observe the talent of the ruler, but not vice versa.¹⁸ Formally, the ruler has probability $v \in [0,1]$ of knowing the bureaucrat's talent before choosing her effort level. With probability $1 - v$, bureaucrat's talent is private information.

With such asymmetry of information, we revisit Proposition 3. In Proposition 3, the incentive for the ruler to shirk comes from the ability to manipulate promotion when the bureaucrat is talented and exerts effort. In all other cases, the ruler either cannot shirk or chooses not to shirk. If the ruler does not know the bureaucrat's talent, she has fewer incentives to shirk. That is, if the information regarding the bureaucrat's talent is less transparent, the ruler's manipulation tool is less effective, decreasing the ruler's incentive to shirk. To put in the opposite direction, intra-governmental transparency (or effective monitoring) reduces the responsiveness of the superior, which can be bad for social welfare¹⁹.

Formally we have the following corollary.

Corollary 1. *When the ruler does not know the bureaucrat's talent for sure, the more uncertain the ruler is, the less likely that she shirks. In particular, when it is completely non-transparent*

¹⁸ One justification of such asymmetry is that it is easier for the bureaucrat to identify the talent of the ruler through meetings (where the ruler talks most of the time) or policy documents. But it is hard for the ruler to validate the talents of the bureaucrat before she observes the local performance.

¹⁹ Here we omit the definition of social welfare for conciseness of discussion. An intuitive requirement for first-best social welfare can be “no-shirking”, which basically assumes the social benefit of rulers' and bureaucrats' working outweigh their costs of efforts.

within the bureaucracy, $v = 0$, the ruler never shirks if the probability of high talent is not too high, $\mu_0 < \bar{\mu}$ (see online Appendix for the proof).

Corollary 1 generates another prediction: intra-government opacity, namely a ruler with limited access to detailed information about her agents, could reduce shirking. In particular, the moral hazard problem may be mitigated entirely when the ruler has no information about the bureaucrat. On the other hand, institutions that enable a ruler to collect detailed information about her agents, such as the Organization Department within the Communist Party of China (CPC), will increase intra-governmental transparency and may make shirking more likely. This “benefit of the blur” is also discussed in Gailmard and Patty (2018), where an increase in top-down transparency (information disclosure of the principal to the agent) constrains the choice set of the principal. As the corollary suggests, even if the communication channel within the bureaucracy is completely blocked ($v = 0$), as long as the ruler believes there is a considerable probability that the bureaucrat can be of low talent ($\mu_0 < \bar{\mu}$)²⁰, she would not take the risk by shirking and consequently suffer from reputation loss.

4. A Case Study from China

Our theory has two major empirical implications: First, under with mediocre governance performance, low-efficacy rulers pool with high-efficacy ones by not promoting the bureaucrats, which immediately implies a decline of a ruler’s reputation after she promotes a bureaucrat (Proposition 1). Second, a ruler shirks when bureaucrats are talented, and her effort cost is mild, to take advantage of strategic promotion and reputation manipulation later (Proposition 3).

²⁰ Notice that the probability of high talent (μ_0) is determined by the average education/training quality of the officer cohort, while the intra-bureaucracy transparency (v) is determined by bureaucratic structure. Though they may be correlated because a good designer of bureaucratic structure may also introduce a high-quality officer recruitment system, it remains possible that a high probability of high talent and low intra-bureaucrat transparency co-exist. In the meantime, Corollary 1 speaks to a more realistic scenario, where low transparency is paired with low probability of good talent, which makes it closer and more applicable to reality.

While lacking proper data to examine either proposition rigorously, we conduct a case study on the Chinese bureaucracy. In the case study, we first show that China matches the model setup, then provide evidence that several widely accepted facts in Chinese politics support the existence of strategic promotion and active shirking at the top. Finally, we conduct an empirical analysis using survey data from a three-month episode in China. The data analysis shows a pattern consistent with Proposition 1: The promotion of provincial leaders (i.e., promotee) negatively affects central government's (i.e., promoter) popularity. Unfortunately, due to data limitation, we cannot fully assess all alternative mechanisms nor confidently rule them out. Thus, the data analysis is more suggestive than conclusive. Nevertheless, it reveals a pattern consistent with our model, which is unexpected in existing studies. To our knowledge, we are the first to examine the reputation effect of bureaucratic promotions in China. Additionally, the revealed dynamics of the central government's popularity immediately before and after the promotion announcement also help to solidify our assumption that citizens (i.e., the third-party audience) are sophisticated enough to make inferences about the promoter via promotions.

We study the case of China for several reasons. First, the Chinese context matches our model set-up. To begin with, China has a centralized personnel control system, where the central government retains, promotes, or demotes provincial leaders (Bo 1996). Additionally, due to economic decentralization, local governance is jointly determined by central and local governments (Xu 2011), which is consistent with our model. The central government influences local governance via various channels, such as top-down mandates, economic and social policies, and fiscal subsidies (Duan and Zhan 2011; Fan 2017; Lü 2014). More importantly, the central government's influences are not always transparent to ordinary citizens, which renders it difficult for citizens to attribute the responsibility of governance outcomes correctly (Birney 2014).

Second, existing literature has accumulated abundant, though mostly indirect, evidence that Chinese central government uses promotions to bolster its reputation. China observers generally agree that Chinese central government cares profoundly about its reputation and has managed to

maintain a high popularity, sometimes at the expense of ruining the reputation of its local agents.²¹ For instance, the poor implementation of a popular policy can be due to either a lack of funding from central government or a lack of effort from local bureaucrats or both. However, to maintain its popularity, the central government sometimes uses its propaganda machine to scapegoat local bureaucrats, even though the lack of funding is the real reason (Fan 2017; Li 2016; Li Cheng 2006; Tang 2016). To further convince the public that the devil lies in the local, the central government charges local bureaucrats with corruption and demotes them to shift blame. This comes in handy especially when the cost of doing so is low, e.g., the involved bureaucrats are of low ranking (Cai 2008, 2014).

Similar logic applies to Chinese local politics. For instance, top local leaders (promoter) may blame the heads of local environmental department (promotee) for pollution and demote them. However, it may be the former who has allowed or even encouraged polluting firms to operate in the first place, because of their contribution to local economic growth and the leaders' career prospects.²² In this case, the third-party audience can be upper-level governments or/and local residents. Thus, it seems reasonable that promotion is one of the tools, though may not be the only one, for the promoter to sustain a good image.

Third, extant studies have revealed the existence of top shirking in China. Typically, the central government promises to citizens that the governments will implement a popular policy or enhance social services provision, but provides substantially insufficient financial support, if at all, for local governments to do so (Fan 2017; Li 2016). More importantly, local bureaucrats cannot just respond by informing citizens that the policy is not funded adequately because such response is politically suicidal (Li 2016, p.115). The silence of local bureaucrats intensifies citizens' difficulties of responsibility attribution in the presence of poor policy implementation.

²¹ Consequently, researchers have repeatedly found evidence for hierarchical public trust in different levels of government in China: the central government gains more political trust than the local government does. See Li (2016) for a recent and detailed review.

²² Danhua Zhang, "Administrative Accountability Is Like the Yitian Sword." *People's Daily*, 20 February 2017. Retrieved from http://paper.people.com.cn/rmrb/html/2017-02/20/nw.D110000renmrb_20170220_2-14.htm.

Alternatively, fearing that poor implementation of central policies will hurt their career prospects, local leaders sometimes have to use local extrabudgetary revenue to ensure a proper implementation (Fan 2017). The expected extra efforts from local government may have incentivized the central government to actively shirk (i.e., deliberately under-funding popular policies) in the first place.

Next, we proceed to the data analysis. Specifically, we focus on a narrow episode from November 16, 2012 to January 21, 2013, and leverage a promotion announcement on an ex-ante unpredicted date to investigate the reputation effect of promotions. On December 18, 2012, the Governor of Shanxi, Wang Jun, was promoted to the Party Secretary of Inner Mongolia, while the Party Secretary of Guangxi, Guo Shengkun, was promoted to the Party Secretary of the Ministry of Public Security (and was joint-appointed as the Minister of Public Security on December 28, 2012).²³ No promotion occurred in other provinces during this period. Notably, comparing with other provinces, both Shanxi and Guangxi have intermediate governance outcome. A comprehensive governance measure, consisting of various sub-indicators of public service, public infrastructure, government size, and economic welfare of residents, ranks Shanxi and Guangxi as 17th and 24th out of the 31 provinces in 2010 during the two leaders' tenure (Tang et al. 2014).²⁴

Our focus on this particular episode is mainly driven by a unique opportunity where a national survey—the 2012 World Value Survey (WVS)—was administrated in China during this period. The survey contains a widely used measure of reputation of the promoter in our case—namely, political trust in the central government (e.g., Li 2016; Lü 2014).²⁵ Each

²³ The promotion of Guo is less clear to the public as that of Wang because the former was not recognized until December 24, 2012 when he participated in a meeting under his new title. But this fact does not affect the estimation because there were not interviews in Guangxi between Dec.18 and Dec. 24, 2012.

²⁴ Similarly, provincial GDP growth rates of Shanxi and Guangxi ranked as 20th and 18th out of the 31 provincial units in 2012. As GDP growth rate is one of the most important indicators for local government performance in reform China (e.g., Li and Zhou 2005), such intermediate growth rate which fits our definition of mediocre performance. The growth data is from the National Bureau of Statistics (NBS) of China, <http://data.stats.gov.cn/easyquery.htm?cn=E0103> (May 2017).

²⁵ At the conceptual level, political trust in an institution or a politician refers to citizens' belief or confidence that the institution or politician will work to produce outcomes consistent with their expectations (Li 2004, 2011), which

respondent is asked about his/her trust in the central government, and the values range from 1 (“Not at all”) to 4 (“Very much”).²⁶ An empirical challenge of estimating the effect of promotion is that promotions are not random. Thus, the detected correlation between promotion and promoter’s reputation may be driven by omitted variables or reverse causality. An advantage of our data is that it allows comparison of promoter’s reputation in the same provinces immediately before and after the promotion announcement, which mitigates the endogeneity concern.

If correct, Proposition 1 predicts the reputation of Chinese central government (promoter) will decline after the promotion announcement in the two corresponding provinces, but not in the others.²⁷ Figure 3 shows supportive evidence. Without controlling for any individual-level covariates, Figure 3 shows that citizens’ political trust in the central government declines by 0.189 points (p -value=0.052) on a one to four scale after the promotion in the two provinces that have witnessed promotion. In contrast, the central government’s popularity does not decline in non-promotion provinces: it even insignificantly increases (0.037; p -value=0.231). Assuming that the promotion provinces would have followed similar trends in central government trust to the non-promotion provinces in the absence of the promotions, a difference-in-differences (DiD) estimation reveals that promotion reduces the central government’s popularity by 0.226 points ($-0.189-0.037=-0.226$; p -value=0.027) in the promotion provinces.²⁸ More evidently, after controlling for individual-level covariates, such as gender, age, education, income, party membership, and daily news consumption, the DiD estimation of the negative promotion effect

fits well with our definition of reputation.

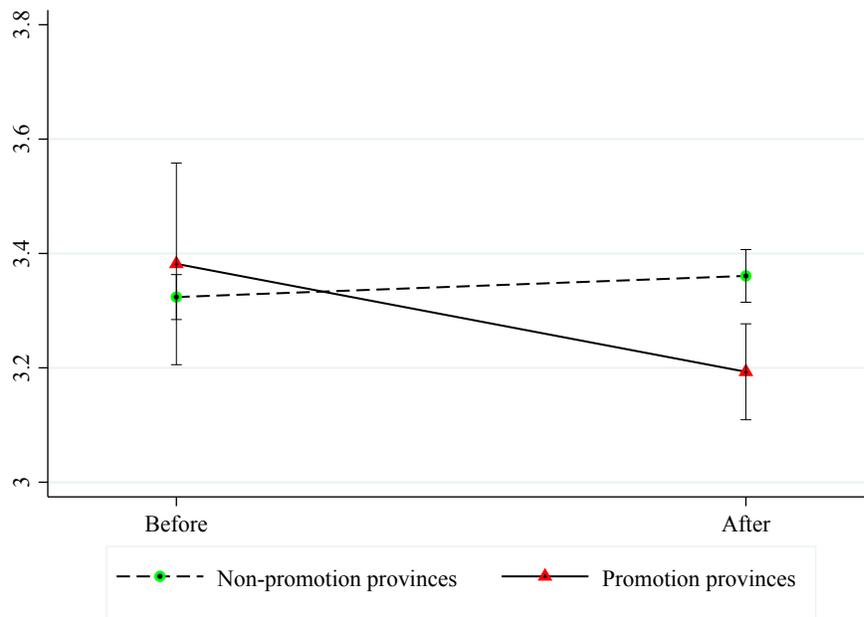
²⁶ Readers may be concerned that citizens in authoritarian China do not truthfully report their political trust due to fear. However, as discussed in previous observational and experimental studies, the magnitude of political fear is found to be too small to undermine the “validity” of the political trust measurement (Shi 2001, p. 407; Tang 2016, p. 150).

²⁷ We expect the promotion announcement to affect the popularity of central government only in the two promotion provinces, but not other provinces. This prediction is based on the assumption that citizens in each province update their beliefs about the central government’s efficacy (i.e., θ^r) based only on promotion outcomes of their provincial officials, but not on similar information from other provinces. This is because the Chinese central government often has different policies for different provinces, causing its perceived efficacy to vary across provinces. Accordingly, the information from other provinces becomes less helpful for citizens to infer the central government’s efficacy in their home provinces.

²⁸ We relegate the execution of the DiD estimation to the online Appendix, in which we include more detailed discussions on the estimation assumptions, results, and robustness checks.

increases from -0.226 to -0.27 ($p\text{-value} < 0.001$). The effect is substantial as it reflects a decline of around 8 percent from the mean (3.33) political trust in the central government. Interestingly, in an analysis reported in the online Appendix, the effect of promotion only applies to the trust in the central government, but not in that of other political actors or institutions, who are not the promoter. The uniqueness of the pattern increases our confidence that the declining popularity of the central government is due to promotion but not to other events that may shift one's general political trust.

Figure 3. Promotion of Provincial Leaders and Trust in the Central Government



Note: The plot shows citizens' mean trust in Chinese central government in provinces witnessing promotions of provincial leaders and those not before and after the promotion announcement date; the vertical lines indicate 95% confidence intervals.

Data: 2012 World Value Survey (WVS) in China.

5. Discussion and Concluding Remarks

We have shown that promotion can be used as an information management tool by

popularity-seeking rulers to manipulate reputation. We demonstrated the intuition with our formal model. Our case study supported that sophisticated citizens understand rulers' strategies and adjust their evaluations accordingly.

Our theory also predicts that strategic promotion may result in declining government responsiveness (shirking at the top). Surprisingly, intra-governmental transparency within the hierarchy has a negative impact on the ruler's responsiveness. One empirical implication is that more effective monitoring within the government will enable popularity-seeking rulers to make and implement unpopular social policies.

In our formalization, promotion decisions are the only signaling tool that the ruler possesses. In the real life, there are, of course, other channels for the ruler to signal strength and to hide weakness, such as strategically censoring the media (Lorentzen 2014), employing the strength-signaling propaganda (Huang 2015), or flexing muscles in diplomatic disputes. In this paper, we highlight the existence of an additional channel and point to the decrease of government responsiveness as a problem common to all of these channels.

In the meantime, we study strategic promotion in a one-period model. In a multi-period setting, we have two remarks: First, if there are multiple alternative signals during two promotion decisions, the citizen may hold a different prior when the strategic promotion game is played in each period. The effort choices and the strategic promotion decisions are changed accordingly. Second, if there is no other signals observed between periods, we may expect a long period of non-promotion as a result of promotion manipulation and/or active shirking from the ruler.

A similar modeling simplification concerns the set-up of local performances. A more realistic version of local performance outcome could be a noisy sum of joint efficacies, e.g., $X = \theta_r + \theta_b + \epsilon$. The insight of strategic delay of promotions and the decrease of reputation after promotion remains the same in this more complex set-up, because non-promotion remains a signal for strength. This lends confidence for us to stick to the simpler setup in the current model.

Beyond the authoritarian context, our theory could be applied to all organizations that share

such structure. For instance, the theory may advance our understanding of the relationship between an elected politician and her appointed bureaucrats in democracies and how the former shifts blame to the latter by delaying deserved promotions, or in a corporation where mid-tier officers delay promotions of their subordinates to claim credit in front of her boss.

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Strategic Promotion, Reputation, and Responsiveness in Bureaucratic Hierarchies

Online Appendix (Not for Publication)

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A Proofs

A.1 Proof of Proposition 1

Proof. Rearranging the terms to get:

$$\begin{aligned}\max_{p(h,l)} \tilde{U}_r(h) &= (\alpha g(l) + \beta [q_P h + (1 - q_P)l - q_{NP} h - (1 - q_{NP})l]) p(h,l) + \text{constant} \\ &= (\alpha g(l) + \beta (q_P - q_{NP})(h - l)) p(h,l) + \text{constant}\end{aligned}$$

and

$$\max_{p(l,h)} \tilde{U}_r(l) = (\alpha g(h) + \beta (q_P - q_{NP})(h - l)) p(l,h) + \text{constant}$$

Now suppose $q_P \geq q_{NP}$. Then $p(l,h) = 1$, the weak always promotes. Then to maintain $q_P \geq q_{NP}$ in equilibrium, it has to be that $p(l,h) = p(h,l) = 1$. However, it is easy to see that the strong ruler has profitable deviation to $p(h,l) = 0$ because by our assumption of off-equilibrium path belief, now $q_{NP} = 1$. Contradiction.

Therefore $q_P < q_{NP}$. Then from the strong ruler's problem, $p(h,l) = 0$. For the weak ruler, there are three cases:

1. $\alpha g(h) + \beta (q_P - q_{NP})(h - l) > 0$. Then $p(l,h) = 1$. In equilibrium the citizen has the correct conjecture, therefore $q_P = 0$, $q_{NP} = 1$. Such equilibrium exists if and only if $\frac{\alpha g(h)}{\beta(h-l)} \geq 1$.

2. $\alpha g(h) + \beta (q_P - q_{NP})(h - l) = 0$. In equilibrium, $q_P = \frac{\mu \hat{p}(h,l)}{\mu \hat{p}(h,l) + (1-\mu) \hat{p}(l,h)} = 0$, $q_{NP} = \frac{(1-\mu)[1-\hat{p}(h,l)]}{1-\mu \hat{p}(h,l) - (1-\mu) \hat{p}(l,h)} = \frac{1-\mu}{1-(1-\mu) \hat{p}(l,h)}$. To plug back, $p(l,h) = \frac{1}{1-\mu} - \frac{\beta(h-l)}{\alpha g(h)}$. This equilibrium exists if and only if $1 - \mu < \frac{\alpha g(h)}{\beta(h-l)} < 1$

3. $\alpha g(h) + \beta (q_P - q_{NP})(h - l) < 0$. In this case we have a pooling equilibrium where $p(l,h) = p(h,l) = 0$. Consequently and based on our off-equilibrium path assumption, $q_P = 0$, $q_{NP} = 1 - \mu$. Such equilibrium exists if and only if $\frac{\alpha g(h)}{\beta(h-l)} \leq 1 - \mu$

Lastly, $q_P < q_{NP}$ means that the reputation of the ruler always decreases after promotion. \square

A.2 Proof of Proposition 2

Proof. To achieve the result we require the following.

1. When $\tau^r = l$, $\tau^b = l$, no choice to make.
2. When $\tau^r = h$, $\tau^b = l$, $(1 - \alpha - \beta)(h + l) + \beta l - c \geq 2(1 - \alpha - \beta)l + \beta l$
3. When $\tau^r = l$, $\tau^b = h$, $(1 - \gamma)(h + l) + \gamma w - c \geq 2(1 - \gamma)l$

4. When $\tau^r = h, \tau^b = h$, since ruler moves first. We use backward induction. Given $\tau^r = h$, we require bureaucrat to choose high effort, that is: $2(1 - \gamma)h + \gamma w - c \geq (1 - \gamma)(h + l)$. Then it is bureaucrat's dominant strategy to choose to work. Next we turn to the ruler. For the ruler to work, we require: $(1 - \alpha - \beta)(h + h) + \alpha g(h) + \beta h - c \geq (1 - \alpha - \beta)(l + h) + \alpha g(h) + \beta l$.

To combine the inequalities above, we have: $c \leq \tilde{c} = \min\{(1 - \alpha - \beta)(h - l), (1 - \gamma)(h - l) + \gamma w\}$ □

A.3 Proof of Proposition 3

Proof. We aim to construct an equilibrium where the talented ruler shirks when she is paired with a talented bureaucrat, in the hope that the bureaucrat will exert effort. Next, the ruler manipulates promotion to try to convince the citizen otherwise. For the trick to succeed, it must be incentive compatible for a talented ruler to exert effort, when she is paired with an untalented bureaucrat, so that the local performance signal is jammed when it is mediocre.

Consequently, there are four cases to consider.

1. $\tau^r = l, \tau^b = l$

This is the simplest case. There is no effort choice for ruler or bureaucrat. Efficacy is perfectly learned. No promotion is made. Denote the payoff function as $U_i(\tau^i, \theta^i)$, $i \in \{r, b\}$, the payoffs are:

$$U_r(l, l) = 2(1 - \alpha - \beta)l + \beta l = (2 - 2\alpha - \beta)l$$

$$U_b(l, l) = 2(1 - \gamma)l$$

2. $\tau^r = h, \tau^b = l$

Then the ruler needs to decide whether to exert effort or not. Again denote citizen's conjecture as q_P and q_{NP} .

We look for the case where the ruler now chooses $\theta^r = h$. If ruler does exert effort, he gets:

$$U_r(h, l) = (1 - \alpha - \beta)(h + l) + \beta(q_{NP}h + (1 - q_{NP})l) - c$$

We require:

$$(1 - \alpha - \beta)(h + l) + \beta(q_{NP}h + (1 - q_{NP})l) - c \geq (2 - 2\alpha - \beta)l$$

That is,

$$c \leq (1 - \alpha - \beta + \beta q_{NP})(h - l)$$

$$3. \tau^r = l, \tau^b = h$$

Here we require the talented bureaucrat exert effort. That is,

$$U_b(h, h) = (1 - \gamma)(h + l) + \gamma \widehat{p}(l, h)w - c \geq 2(1 - \gamma)l$$

That is,

$$c \leq (1 - \gamma)(h - l) + \gamma \widehat{p}(l, h)w$$

And in this case the ruler's payoff is:

$$(1 - \alpha - \beta)(h + l) + \beta(q_{NP}h + (1 - q_{NP})l)$$

because in equilibrium the weak ruler is indifferent between mimicking the strong ruler or not.

$$4. \tau^r = h, \tau^b = h$$

Here we require the talented ruler shirks and talented bureaucrat exert effort. We divide the analysis into two parts.

First, we show the conditions under which $\theta^b = h$ after $\theta^r = l$. We require the same condition as in Case 3:

$$c \leq (1 - \gamma)(h - l) + \gamma \widehat{p}(l, h)w$$

Next, we calculate ruler's payoff if $\theta^b = h$ and $\theta^r = h$. It is straightforward to see that if the ruler exerts efforts, the bureaucrat will exert efforts because $(1 - \gamma)(h + h) + \gamma - c > (1 - \gamma)(h - l) + \gamma \widehat{p}(l, h)w - c$. Then, we can compare ruler's payoff between working and shirking, and we require that ruler prefers to shirk:

$$U_r(l, h) = (1 - \alpha - \beta)(h + l) + \beta(q_{NP}h + (1 - q_{NP})l) \geq (1 - \alpha - \beta)(h + h) + \beta h - c = U_r(h, h)$$

That is,

$$c \geq (1 - \alpha - \beta q_{NP})(h - l)$$

So now let's recap: when the citizen sees a mediocre performance $X = M$, he knows there are the following possibilities: 1. With probability $\mu_0(1 - \mu_0)$, a high talent ruler who works and a low talent bureaucrat. In this case we shall see no promotion; 2. With probability $\mu_0(1 - \mu_0)$, a low talent ruler and a high talent bureaucrat who works. In this case ruler promotes with probability $p(l, h)$; 3. With probability μ_0^2 , a high talent ruler who shirks and a high talent bureaucrat who

works. In this case ruler also promotes with probability $p(l, h)$.

We want to construct an equilibrium where all the following conditions hold at the same time.

$$c \leq (1 - \alpha - \beta + \beta q_{NP})(h - l)$$

$$c \leq (1 - \gamma)(h - l) + \gamma \hat{p}(l, h) w$$

$$c \geq (1 - \alpha - \beta q_{NP})(h - l)$$

$$\hat{p}(h, l) = \arg \max_{p(h, l)} \alpha p(h, l) g(l) + \beta (p(h, l) [q_P h + (1 - q_P) l] + [1 - p(h, l)] [q_{NP} h + (1 - q_{NP}) l])$$

$$\hat{p}(l, h) = \arg \max_{p(l, h)} \alpha p(l, h) g(h) + \beta (p(l, h) [q_P h + (1 - q_P) l] + [1 - p(l, h)] [q_{NP} h + (1 - q_{NP}) l])$$

$$q_P := \frac{\hat{p}(h, l) \mu_0 (1 - \mu_0)}{\hat{p}(h, l) \mu_0 (1 - \mu_0) + \hat{p}(l, h) [\mu_0 (1 - \mu_0) + \mu_0^2]} = \frac{\hat{p}(h, l) (1 - \mu_0)}{\hat{p}(h, l) (1 - \mu_0) + \hat{p}(l, h)}$$

$$q_{NP} := \frac{[1 - \hat{p}(h, l)] \mu_0 (1 - \mu_0)}{[1 - \hat{p}(h, l)] \mu_0 (1 - \mu_0) + [1 - \hat{p}(l, h)] [\mu_0 (1 - \mu_0) + \mu_0^2]} = \frac{[1 - \hat{p}(h, l)] (1 - \mu_0)}{[1 - \hat{p}(h, l)] (1 - \mu_0) + [1 - \hat{p}(l, h)]}$$

$$p(l, h) = \hat{p}(l, h) \in (0, 1)$$

$$p(h, l) = \hat{p}(h, l) = 0$$

Similar with the simple model, the solution of the equilibrium boils down to solving

$$\alpha g(h) + \beta (q_P - q_{NP})(h - l) = 0$$

That is,

$$p(l, h) = 2 - \mu_0 - (1 - \mu_0) \frac{\beta(h-l)}{\alpha g(h)}$$

In the meantime, from

$$c \leq (1 - \alpha - \beta + \beta q_{NP})(h-l)$$

$$c \leq (1 - \gamma)(h-l) + \gamma \hat{p}(l, h) w$$

we know that denote $\bar{c} = \min\{(1 - \alpha - \beta + \beta q_{NP})(h-l), (1 - \gamma)(h-l) + \gamma \hat{p}(l, h) w\}$, $\bar{c} \leq \tilde{c} = \min\{(1 - \alpha - \beta)(h-l), (1 - \gamma)(h-l) + \gamma w\}$. \square

A.4 Proof of Corollary 1

Proof. We only need to look at the case where information is hidden and the ruler has high talents. There are two cases.

If the bureaucrat's talent is seen, then everything is the same as in the original equilibrium.

If the bureaucrat's talent is hidden, the condition for the ruler to shirk is:

$$\mu U_r(l, h) + (1 - \mu) U_r(l, l) \geq \mu U_r(h, h) + (1 - \mu) U_r(h, l)$$

Comparing with the shirking condition in original equilibrium:

$$U_r(l, h) \geq U_r(h, h)$$

Since $U_r(l, l) \leq U_r(h, l)$ (Case 2 in the proof of Proposition 3), the condition is harder to satisfy than in the original equilibrium. In particular, when $U_r(l, l) < U_r(h, l)$ and $\mu = 0$, the inequality is reversed: the ruler never shirks. By continuity there exists $\underline{\mu}$ such that the ruler never shirks whenever $\mu \leq \underline{\mu}$. \square

B Pseudo Promotions and Bureaucratic Redundancy

Here we consider an alternate set-up. In the simple model we assume $g(h) > 0 > g(l)$, which corresponds to promotions where the role at a higher office is more important, or fits only for strong individuals. But sometimes the higher office may not necessarily be more powerful, nor difficult to harness. We argue that it is possible for some promotions that $g(l) > 0 > g(h)$. We refer the promotions satisfying this condition “pseudo promotions”, while we refer the promotions in the simple model as “real promotions”. Below we explain where the name comes from.

Pseudo promotion is created for the purpose of allocating those promoted officers without offering them real power. The reason behind such design is for replacement of local bureaucrat: if the local office is vital and a weak bureaucrat is sitting on it, the ruler has incentive to replace him, even with reasonable costs. However, demotion is often unusual and too costly in such centralized regime. Consequently, the ruler can pseudo promote the bureaucrat to some idle position with fancy titles, thus leaving the local office an opportunity to select a new one.¹ It is straightforward that in this case only pseudo promoting weak bureaucrats achieves the purpose ($g(l) > g(h)$). Pseudo promoting strong bureaucrat only brings additional local uncertainty because the local successor may not be high efficacy ($0 > g(h)$). Using the same solution techniques as in the simple model, we have the following corollary.

Corollary. *For pseudo promotions, in equilibrium, the strong ruler always promotes after mediocre local performance. And the reputation of the ruler always weakly increases after promotion.*

Proof. Rearranging the terms to get:

$$\begin{aligned} \max_{p(h,l)} \tilde{U}_r(h) &= (\alpha g(l) + \beta [q_P h + (1 - q_P)l - q_{NP} h - (1 - q_{NP})l]) p(h,l) + constant \\ &= (\alpha g(l) + \beta (q_P - q_{NP})(h - l)) p(h,l) + constant \end{aligned}$$

and

$$\max_{p(l,h)} \tilde{U}_r(l) = (\alpha g(h) + \beta (q_P - q_{NP})(h - l)) p(l,h) + constant$$

Now suppose $q_P \leq q_{NP}$. Then $p(l,h) = 0$, the weak never promotes. Then to maintain $q_P \leq q_{NP}$ in equilibrium, it has to be that $p(l,h) = p(h,l) = 0$. However, it is easy to see that the strong ruler

¹A similar motive applies to the teacher selection in public schools of the United States. Principals of schools send out the bad teachers, i.e. the lemons, in the hope for better replacement, because sacking teachers are very costly. See *The Economist*. 2014. “Dance of the lemons”, March 5th, <http://www.economist.com/news/united-states/21599005-reformers-want-make-it-easier-sack-bad-teachers-dance-lemons> (August 15 2017).

has profitable deviation to $p(h,l) = 1$ because by our assumption of off-equilibrium path belief, now $q_P = 1$. Contradiction.

Therefore $q_P > q_{NP}$, which means that the reputation of the ruler always increases after pseudo promotion. \square

The over-promotion under pseudo promotions sheds new light on explaining redundancy: it is a price to pay for the flexibility of personnel control. Given that demotions are hard, the superior officer sets aside idle positions at insignificant departments to accommodate the replaced local officials. Once the local officials are pseudo promoted, the superior officer is able to find potentially capable newcomers to fill in the position. Such strategic redundancy provision predicts that redundancy is not necessary an indicator of system failure. Instead, it could be a promising sign of effective replacement. For instance, we predict that redundancy could be positively correlated with local economic performance, especially when the local performance is vital to the regime. Our prediction is in stark contrast with conventional views that staff redundancy is an outcome of patronage (Ang 2016) or a tool used by local government to bargain over fiscal resources with upper-level government (Guo 2008).

The strategic roles of bureaucratic redundancy is understudied in existing literature, except for Ting (2003), who discusses redundancy as a strategic design for the principal to overcome conflict of interests with the agents. This paper adds to the literature by emphasizing redundancy as a byproduct of effective signaling in strategic promotions. That is, redundancy itself may be a good signal of competence.

References for Section B

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C Data Analysis

In this section, we provide empirical evidence in support of an implication in Proposition 1: a ruler’s reputation declines after promoting a bureaucrat whose observable performance is mediocre. As a preview of the results, using the 2012 World Value Survey (WVS) administrated in China during a narrow three-month window in coincidence with promotion of two provincial leaders, our difference-in-differences (DiD) estimation suggests that the central government’s reputation declined by eight percent after promoting provincial leaders. To our knowledge, we are the first to predict and confirm the reputation effect of bureaucratic promotions in China.

As detailed below, the limited data may render the evidence more suggestive than conclusive. However, the evidence lends reasonably strong support to our theory for several reasons. First, the detected reputation decline after promotion is unexplained by existing studies but fits well with our theory, because it is an immediate implication of Proposition 1. Notably, the empirical finding remains robust after considering two influential theses regarding promotion determinants, namely competence and networks, in Chinese bureaucracy. Additionally, we do not find similar effects of promotion on trust for other political institutions; in other words, the effects found for respondents’ trust in the central government are unique. The robustness and falsification tests increase our confidence that the empirical pattern is unlikely driven completely by channels other than what our theory has suggested.

Second, these findings also solidify our assumption that citizens (i.e., the third-party audience) are sophisticated enough to make inferences about the ruler (i.e., the promoter) after observing promotions. This is true even in the Chinese case where previous studies have assumed the effectiveness of naive propaganda and neglected the existence of sophisticated citizens. Together with existing evidence that authoritarian rulers care about their reputation among citizens (e.g., Li 2004), our new evidence about sophisticated citizens lends further support to our theoretical prediction that the promoter would manipulate promotion signals to build her reputation, resulting in promotional inefficiencies and decreased responsiveness.

C.1 Data and measures

Linking model setups to the empirics, the promoter is the Chinese central government and the subordinates are top provincial leaders, either party secretaries or governors. To test the predictions, we searched for feasible data among often used and publicly available social surveys.² Our target survey should meet two criteria: (1) it has appropriate measures of the central government’s reputation, and (2) there are promotions of provincial leaders during the survey period.

²We searched among recent waves of the Asian Barometer Survey (ABS), the Chinese General Social Survey (CGSS) and the World Value Survey (WVS).

The WVS 2012 data in China met both requirements. First, the survey interviewed 2274 individuals in China between November 16, 2012, and January 21, 2013.³ During the survey period, promotions of provincial leaders occurred in Shanxi and Guangxi on December 18, 2012, but not in any other provinces.⁴ More specifically, the Governor of Shanxi, Wang Jun, was promoted to the Party Secretary of Inner Mongolia, while the Party Secretary of Guangxi, Guo Shengkun, was promoted to the Party Secretary of the Ministry of Public Security (and was appointed as the Minister of Public Security on December 28, 2012).⁵ 62 interviews were conducted on or before December 18, 2012, and around 211 after the date in these two provinces with promotions; there were 1244 and 757 interviews conducted before and after that date, respectively, in the other provinces. Figure C.1 shows the timing of the surveys by province. It is also worth noting that the regional GDP growth rates of Shanxi and Guangxi ranked as 20th and 18th out of the 31 provincial units in 2012, which fits our definition of mediocre performance.⁶ Similarly, a comprehensive governance measure, consisting of various sub-indicators of public service, public infrastructure, government size, and economic welfare of residents, ranks Shanxi and Guangxi as 17th and 24th out of the 31 province units in 2010 during the two leaders' tenure (Tang et al. 2014).

As the promotion announcement date was not known to the public a priori, the fact that there were interviews conducted both before and after such date provides an opportunity to employ a difference-in-differences (DiD) strategy to estimate the reputation dampening effect of promotions.

Second, the survey includes a proper measure that captures the reputation of the promoter, namely political trust in the central government. Each respondent is asked about his/her trust in the central government, and values range from 1 ("Not at all") to 4 ("Very much"). Figure C.2 shows its distribution. At the conceptual level, political trust in an institution or a politician refers to citizens' belief or confidence that the institution or politician will work to produce outcomes consistent with their expectations (Li 2004, 2011), which fits well with our definition of reputation. At the

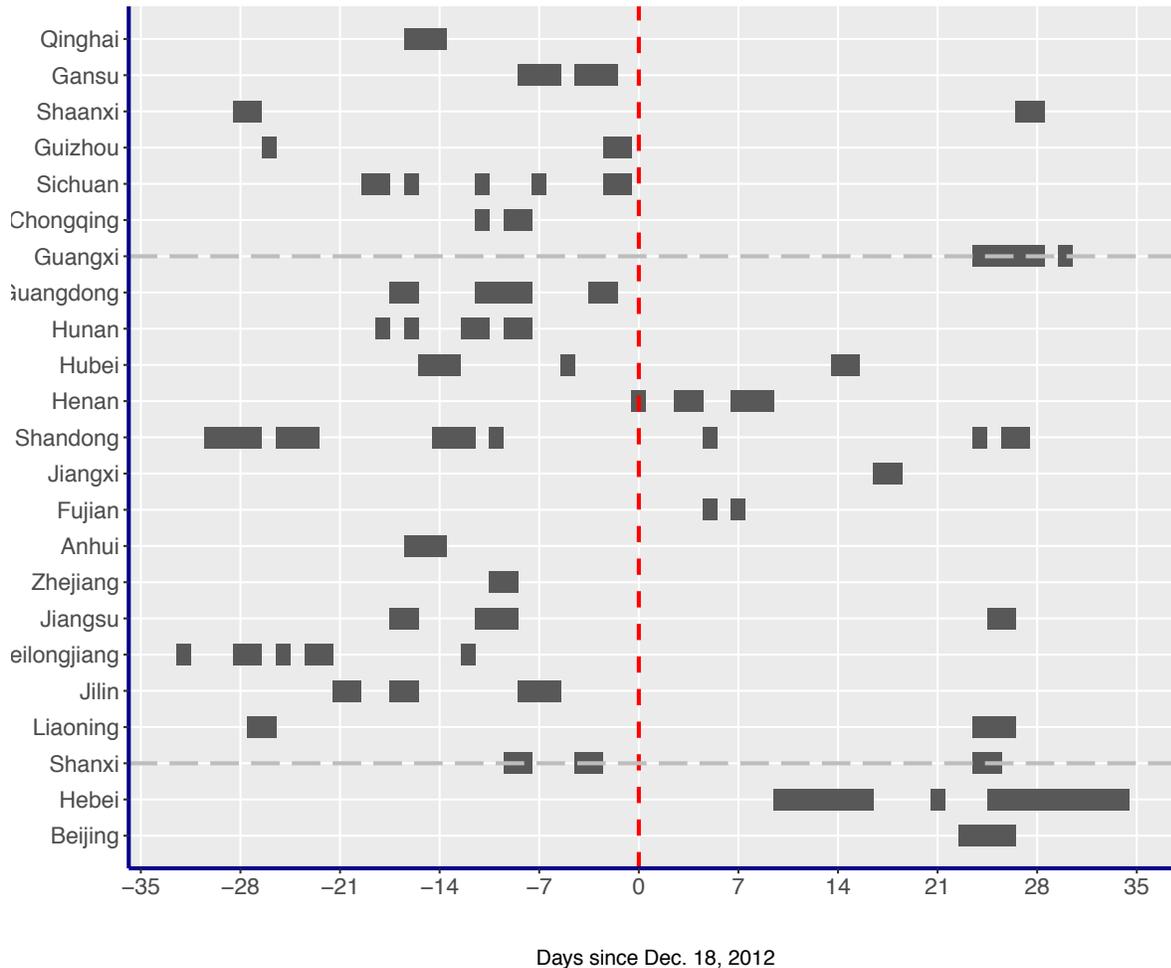
³In the original survey, 26 were interviewed before or on November 15, 2012. There were turnovers of provincial leaders in several provinces on November 15, immediately after the CPC's 18th National Congress. But only two out of the 26 respondents were from provinces with turnovers (on November 15), so the sample is not big enough to employ a DiD estimation. Thus, we focused on the estimating the effect of promotions on December 18 and dropped the 26 observations.

⁴A couple of provinces, such as Inner Mongolia, Jilin, Fujian and Sichuan, had promotions of provincial leaders on November 15, 2012 but no turnovers between November 16, 2012 and January 21, 2013, thus coded as provinces with no promotion. Their difference from other provinces experiencing no turnovers on either November 15 or December 18 will be captured by province fixed effects and will not affect our estimation.

⁵The promotion of Guo is less clear to the public as that of Wang because the former was not recognized until December 24, 2012 when he participated in a meeting under his new title. We respond to this problem in two ways: first, as all interviews conducted in Guangxi Province were in January 2013 (Figure C.1), re-coding the treatment date for Guangxi Province to December 24, 2012 does not change the result; second, as shown below, we report an additional set of results with Guangxi excluded from the sample, and the result does not change.

⁶It is widely accepted that GDP growth is one of the most important indicators of performance of Chinese local officials in the reform era (e.g., Li and Zhou 2005). The growth data is from the National Bureau of Statistics of China, <http://data.stats.gov.cn/easyquery.htm?cn=E0103> (May 2017).

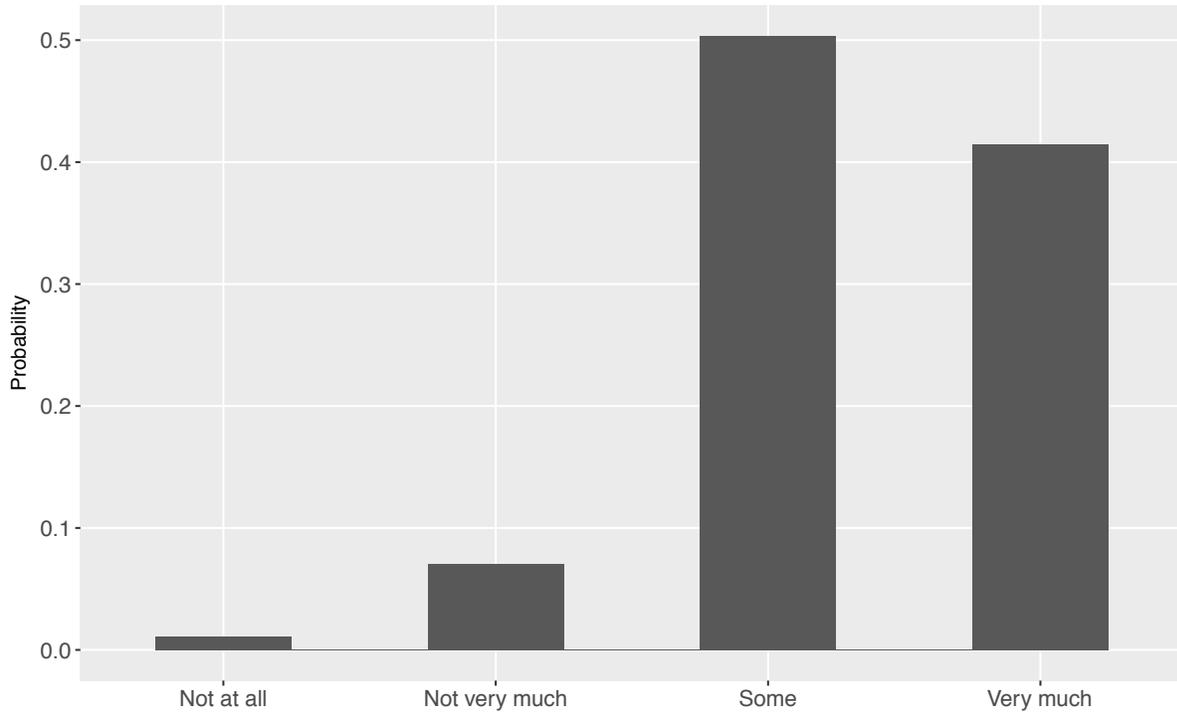
Figure C.1: Survey Time in Chinese Provinces



Note: This figure describes the World Value Survey (WVS) interview time in each province during the two-month window in late 2012 and early 2013. Negative values indicate that the interviews were conducted before December 18, 2012 while positive numbers refer to interviews conducted after such date.

operationalization level, the specific variable that we use has been frequently used as a measure for Chinese citizens’ political trust in the central government (e.g. Li 2016; Lu 2014). Additionally, as discussed in previous observational and experimental studies, although political fear in China might affect respondents’ answers to sensitive questions, like those concerning political trust, the magnitude is found to be too small to undermine the “validity” of the trust measurement (Shi 2001, p. 407; Tang 2016, p. 150).

Figure C.2: Trust in the Central Government



Data: 2012 World Value Survey (WVS) in China.

C.2 Model

We employ a DiD with province and week fixed effects:

$$y_{i,p,t} = \gamma_p + \lambda_t + \beta \left(\text{promotion}_p \times \text{post}_t \right) + X_{i,p,t} \delta + \varepsilon_{i,p,t}$$

The dependent variable ($y_{i,p,t}$) is the individual i 's trust in the central government from province p and interviewed in week t . γ and λ denote the province and week fixed effects, respectively, which capture time-invariant province effects and common time trends.⁷ `Promotion` takes the value of 1 if an individual is from a province where promotion happened during the time of the survey and is 0 otherwise; `Post` takes the value of 1 if an individual takes the survey after the promotion date and is set to 0 otherwise. The `Promotion` and `Post` variables per se are dropped because of their collinearity with the week and province dummies.

β , the coefficient of interest, is the estimator for the DiD effect of the treatment on the treated. It captures the idea that promotion decision of the central government leads citizens to downgrade its

⁷Excluding week fixed effect and including only the treatment time dummy yield qualitatively the same findings.

reputation and is expected to be negative. By conducting such test, we assume that citizens in each province update their beliefs about the central government's efficacy (i.e., θ') based only on promotion outcomes of their provincial officials, but not on similar information from other provinces. This is consistent with our model setup that there is only a central government and a local one. Consequently, citizens only infer the central government's efficacy from local performance. One may concern that citizens may acquire additional information from neighboring provinces to update their beliefs about the central government. However, the Chinese central government often has different policies for different provinces, causing its perceived efficacy to vary across regions. Accordingly, the information from other provinces becomes less helpful for citizens to infer the central government's efficacy in their home provinces.

$X_{i,p,t}$ is a set of individual-level controls, including age, gender, education, income, party membership, residence in an urban area, daily news consumption, and general social trust, which have generally been controlled for in previous studies of political trust in China (e.g., Li 2004, 2011). We also report estimation results after controlling for six variables measuring trust in domestic political institutions: trust in the civil service, trust in the army, trust in the police, trust in the courts, trust in political parties and trust in the legislature. We prefer the estimation results without controlling for those trust variables because they may be affected by the treatment; thus, including them may introduce post-treatment bias. Table C.1 presents the summary statistics.

Additionally, we consider two influential narratives about the determinants of officials' promotion in China. One narrative argues that an official's promotion chances are mainly determined by his/her competence (Li and Zhou 2005) while another argues that the chance is largely determined by networks with superior officials (Shih, Adolph, and Liu 2012). We are less concerned with the former because if true, there is no obvious reason to expect trust in the central government to decline, as stated in Proposition 1. But the network narrative indeed poses a challenge: If the narrative is valid and citizens indeed update their beliefs about the central government's quality after observing promotions, intuitively, promoting well-connected officials will decrease the central government's reputation, which generates an observationally equivalent prediction. Specifically, immediately after Wang Jun's promotion, Li Xiaopeng, the son of the former Premier Li Peng, was appointed as the acting Governor of Shanxi. We are concerned that citizens may view the promotion of Wang Jun as making room for the promotion of Li Xiaopeng, and downgrade the central government's reputation because of the perceived role of connections in Li's promotion. To mitigate these concerns, we control for the respondents' perceived importance of networks in determining success to ensure that our findings are not completely driven by the network narrative. Interestingly, we find that the promotions significantly increase respondents' perception of the importance of networks, which supports the network narrative. But because the reputation-decreasing effect of promotion still exists after controlling for the perceived importance of network, our find-

Table C.1: Summary Statistics

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Dependent variable					
Trust in national government	2,072	3.324	0.652	1	4
Key independent variables					
Post-promotion	2,274	0.426	0.495	0	1
Promotion province	2,274	0.120	0.325	0	1
Promotion province \times Post-promotion	2,274	0.093	0.290	0	1
Control variables					
Age	2,274	43.885	14.970	18	75
Female	2,274	0.509	0.500	0	1
Education	2,274	5.347	2.372	1	9
Income	2,033	4.409	1.844	1	10
Party membership	2,271	0.081	0.273	0	1
Urban residence	2,274	0.551	0.498	0	1
Daily news consumption	2,090	0.728	0.445	0	1
General social trust	2,175	0.646	0.478	0	1
Network importance	2,098	3.696	2.383	1	10
Trust in civil service	1,911	2.961	0.685	1	4
Trust in army	2,052	3.288	0.637	1	4
Trust in police	2,051	2.904	0.741	1	4
Trust in courts	2,003	3.017	0.716	1	4
Trust in political parties	1,981	3.147	0.720	1	4
Trust in legislature	2,013	3.184	0.688	1	4

ings are not driven by the network narrative.

Finally, the usual parallel trend assumption for DiD estimation applies here. Specifically, we assume that treated provinces would have followed similar trends in central government trust to the control provinces in the absence of the promotion. This assumption is plausible in our case where the promotion announcement date is unexpected and the time window under consideration - around two months - is narrow. We provide additional evidence for this assumption in the robustness check section.

C.3 Results

Table C.2 summarizes the major findings. Because treatment is assigned at the provincial level, standard errors are clustered by province to avoid potential correlation of errors within provinces.⁸ We report three sets of results estimated using different samples: (1) the full sample, (2) a sub-sample after excluding one of the two treated provinces, Guangxi, and (3) a sub-sample keeping only the four weeks during which the treated provinces have observations.⁹ The DiD estimates are found statistically significant across all the models. In our preferred estimation, model 2 of Table 2, promotion decreases individual's trust in the central government by 0.266 points on a one to four scale. Given that the mean trust in central government is around 3.325, among individuals with the mean level of political trust, promotions decrease trust in central government by around 8 percent.

⁸Due to the small number of province clusters (i.e., 24 or fewer), we implement standard error clustering by using the `partial` function in `ivreg2` of Stata (to partial out week and province dummies first).

⁹We run the regression with Guangxi excluded because all corresponding respondents were interviewed after the treatment date (see Appendix Figure C.1), and we want to ensure that the finding is not completely driven by Guangxi observations. Similarly, by using the four-week subsample, we demonstrate that observations interviewed during weeks when no interviews are taken in treated provinces are not driving the main finding.

Table 2. Diff-in-Diffs Estimation: Promotion and Promoter's Reputation

VARIABLES	Full sample			Excluding Guangxi			Four weeks only		
	1	2	3	4	5	6	7	8	9
promotion \times Post (β)	-0.267*** (0.062)	-0.266*** (0.071)	-0.267*** (0.037)	-0.268*** (0.063)	-0.265*** (0.078)	-0.268*** (0.037)	-0.322*** (0.067)	-0.431*** (0.099)	-0.256*** (0.062)
Dependent variable mean	3.324	3.325	3.312	3.334	3.336	3.323	3.297	3.305	3.291
Individual-level controls		yes	yes		yes	yes		yes	yes
Trust in domestic inst.			yes			yes			yes
Week fixed effects	yes								
Province fixed effects	yes								
Observations	2,072	1,639	1,460	1,910	1,510	1,358	1,230	965	849
R-squared	0.002	0.034	0.63	0.002	0.037	0.644	0.003	0.06	0.622

Note: Dependent variable is trust in the central government; individual-level controls include age, gender, education, income, party membership, residence in an urban area, daily news consumption, general social trust, and perceived importance of networks; trust in domestic institutions include six variables that measure trust in the civil service, the army, the police, courts, political parties and the legislatures, respectively; robust standard errors in parentheses are clustered at the province level; R-squared is computed after the week dummies and province dummies are partialled out, thus under-reporting the explanatory power; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

C.4 Robustness Checks

We conducted two robustness checks. First, we show that there is no significant difference between the promotion and non-promotion provinces before the treatment date (December 18, 2012), which lends some support to the parallel trend assumption. Second, we show that the DiD estimated effect of promotion on trust in the central government does not apply to trust in other political institutions or actors. The null effect on other political trust variables increases our confidence that the effect is driven by the promotions and the updating mechanism that our theory has proposed.

Insignificant difference between interviewers in provinces with and without promotions before the treatment. Parallel trends are a key identification assumption in DiD models. This assumption cannot be directly tested. Following Bechtel and Hainmueller (2011), we probe the plausibility of this assumption with a falsification test that estimates a placebo DiD regression for the pre-treatment period. If the falsification DiD estimate is not statistically significant, the parallel-trend assumption holds in the pre-treatment period; thus, it will be more plausible to assume that the treated and control units approximately follow parallel trends for the post-treatment period, especially given the short time window under investigation in this study.

Previously, we used all pre-promotion dates as a single pre-treatment period due to the short period of the survey time window. To test the parallel-trend assumption for the pre-treatment period, we use the subsample of two weeks before the original treatment date during which the treated provinces have observations. Then, we propose a hypothetical treatment date exactly in the middle of the two weeks, treat the two weeks as two periods, and estimate the placebo DiD regression. As shown in Table C.3, the DiD estimate is statistically insignificant with or without individual-level controls, supporting the parallel trends assumption during the pre-treatment period.

Insignificant effect on trust in other political institutions. Our theory does not explicitly speak to the impact of promotion on citizen's trust in other political institutions and thus does not necessarily predict null effects of promotion on other political trust variables. However, if indeed finding insignificant effects of promotion on other political trust variables, we will have more confidence that the reported findings are not driven by some time-varying factors that affect general political trust, which could also violate the parallel trend assumption of DiD estimation.¹⁰

Additionally, if finding no similar effects of promotion on the trust in other political actors who are not the promoter, we will be more confident that the effect is driven by promotion, rather than through some unobservable mechanisms that affect general political trust, of which the trust in central government is one component. Specifically, we estimate the effect of promotions on respondents' trust in the civil service, the army, the police, courts, political parties, legislatures and

¹⁰For instance, one may be concerned that people with some anti-government characters are somehow interviewed later. If true, we would expect the DiD estimator to yield similarly significant findings on the trust in other political institutions.

Table C.3. Falsification Test: Parallel Trend before Treatment

VARIABLES	Subsample: Two pre-treatment weeks only	
	(1)	(2)
Promotion \times Last pre-treatment week	-0.138 (0.150)	0.094 (0.233)
Mean of dependent variable	3.336	3.328
Individual-level controls		yes
Week fixed effects	yes	yes
Province fixed effects	yes	yes
Observations	666	521
R-squared	0.001	0.103

Note: Dependent variable is trust in the central government; individual-level controls include age, gender, education, income, party membership, residence in an urban area, daily news consumption, general social trust, and perceived importance of networks; robust standard errors in parentheses are clustered at the province level; R-squared is computed after the week dummies and province dummies are partialled out, thus lower than the usual R-squared; * $p < 0.1$.

international institutions, such as the Asia-Pacific Economic Cooperation (APEC) and the United Nations (UN). As summarized in Table C.4, the DiD estimates are statistically insignificant across all eight columns. Thus, they do not reveal similar effects of promotion on trust in other domestic or international institutions.

Table C.4. Placebo Test: Null Effect on Trust in Other Political Institutions

VARIABLES	Domestic political institutions					Intl. institutions		
	Civil service (1)	Army (2)	Police (3)	Courts (4)	Poli. parties (5)	Legislature (6)	APEC (7)	UN (8)
Promotion \times Post (β)	0.003 (0.112)	-0.114 (0.087)	0.255 (0.169)	0.163 (0.113)	-0.013 (0.078)	-0.035 (0.082)	0.132 (0.193)	0.035 (0.118)
Individual-level controls	yes	yes	yes	yes	yes	yes	yes	yes
Province fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Week fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Observations	1,538	1,623	1,626	1,593	1,582	1,611	667	863
R-squared	0.039	0.028	0.025	0.024	0.039	0.051	0.015	0.022

Note: Dependent variable is trust in the central government; individual-level controls include age, gender, education, income, party membership, residence in an urban area, daily news consumption, general social trust, and perceived importance of networks; robust standard errors in parentheses are clustered at the province level; R-squared is computed after the week dummies and province dummies are partialled out, thus lower than the usual R-squared; * p<0.1.

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