Don't Hatch The Messenger? On the Desirability of Restricting the Political Activity of Bureaucrats

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Abstract

Every country places restrictions on the political rights of government workers. This includes limitations on expressing political views and taking an active part in political campaigns. Are such restrictions desirable? We present a formal welfare analysis of this question. Bureaucrats' political activities can be a valuable form of communication between voters and the government, but they may induce policy mistakes, and are susceptible to "noise" from partisan bureaucrats' innate desire for political expression. Signaling through bureaucrats is least effective when voters do not "trust" in this form of communication, or when politicians have strong control over bureaucrats. In these cases, banning political activities is generally optimal.

1 Introduction

Should a clerk in the driver's license office be allowed to wear a political pin expressing support for a candidate? Should he be allowed to talk about politics to his customers or coworkers? Should he be allowed to distribute campaign materials?

Every country places limitations on the political rights of its government workforce, and the precise extent of these limitations is the subject of on-going public debate and policy experiments.[1] In the US, the Hatch Act of 1939 and its 1940 amendment prohibited all federally funded workers from taking an active role in political campaigns, including while

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[1] See Section 2 below for details on the policy background.

off duty. Over the years, courts have interpreted this to prohibit such activities as serving on a party committee, displaying a campaign poster in the workplace, or writing a series of editorials on a presidential candidate in a newsletter for government workers. Major revisions to this law were passed in 1974, 1993 and 2012, in general relaxing some of the prohibitions for some groups of employees. In spite of this, the number of new cases of suspected Hatch Act violations has risen as recently as the period following the 2016 presidential election.

The main argument for limiting the political activities of bureaucrats is that these would disrupt the efficient provision of public services. The main argument against the limitations is the value of government workers' expressing their views, which is both a basic right and a potentially important source of information in politics. In evaluating the limitations, the US, the Supreme Court explicitly established a "balancing test" where the employee's "interest as a citizen in making public comment must be balanced against the State's interest in promoting the efficiency of its employees' public services." (*Pickering v. Board of Education*, 391.U.S. 563, 1968, p563)

In this paper, we provide a model to evaluate the conditions under which voter welfare is increased when bureaucrats' political activities are limited. We formalize and extend some of the arguments made in the policy debates, and provide a rationale for the evolution of regulations observed in the US, from stricter to more relaxed rules.

Our model has three players, a politician, a bureaucrat, and a voter. In the first period, a policy is implemented and the bureaucrat may engage in political activities (which we refer to as "campaigning") on behalf of the politician. The voter observes the implemented policy and whether the bureaucrat campaigns, and decides whether to reelect the politician. In the second period, another policy is implemented, and the game ends.

The politician may be good (share the voter's preferences) or bad. In order to get reelected, she may do two things. First, she can attempt to implement a "popular" policy that the voter will interpret as a positive signal of her quality. Second, she may ask the bureaucrat to campaign. Campaigns can directly generate votes: With some probability, the voter is "impressionable," and reelects the politician if and only if the bureaucrat campaigns. In addition, for sophisticated voters, the presence or absence of campaigns can also serve as a signal of politician quality. Thus, campaigning bureaucrats provide a potentially valuable way for politicians to communicate with voters.

Campaigns, however, are a noisy channel of communication, because some bureaucrats have an innate desire to campaign. These bureaucrats whom we call "partisans" campaign irrespective of whether the politician asks them to do so. This makes it more difficult for voters to learn about the politician's type from bureaucrats' political activities. In addition, campaigns can have policy costs: Engaging in a campaign uses bureaucrats' resources, and may result in them performing worse on the job. This can result in a worse policy outcome.

Analyzing the equilibria of this multidimensional signaling game formalizes some of the existing policy arguments, and introduces some new considerations. Lower policy costs tend to make bureaucrats' political activities more desirable. At the same time, low policy costs are not sufficient for campaigns to be optimal. While campaigns can allow effective communication between politicians and voters, there are multiple equilibria, and effective communication requires coordination. The polity may end up in Pareto inferior equilibria where politicians rely on bureaucrats' campaigns "too much," or "too little." In this sense, allowing bureaucrats' political activities is optimal only if voters trust that they will be used effectively.

Another key consideration in whether political activities can fulfill their potential benefits is the institutional environment regulating the interaction of politicians and bureaucrats. We compare two scenarios: weak political control, where bureaucrats can decide to say no to a politician's request for political activities, and strong control, where bureaucrats can be forced to campaign. We show that allowing political activities can only be optimal in the first case. When politicians have strong control, banning campaigns is always optimal. The reason for this asymmetry is that the signaling role of campaigns is inverted between the two environments: under weak control, good politicians use campaigning bureaucrats to signal their type, while under strong control, they signal their type by not politicizing the bureaucracy. The latter requires the policy costs of campaigns to be large, and in equilibrium these costs dominate any signaling benefits that political activities may provide.

Our results also speak to freedom of speech considerations which would suggest that allowing campaigns is more desirable when more bureaucrats have an innate desire to campaign. In our model, this type of political expression also has costs: When bureaucrats are more likely to campaign on their own, this makes campaigns less informative to voters about the politician. Partisan bureaucrats' political activities create noise in the communication between politicians and voters, and this tends to make allowing political activities a less desirable policy.

Finally, our model highlights that campaigning bureaucrats are only one of the potential ways for politicians and voters to communicate. As in most political agency models, electoral screening can also be based on the policies implemented. Whether campaigns should be allowed depends on which screening mechanism is better and on how the two interact. We show that banning political activities can sometimes improve electoral screening through policies.[2]

[2]This idea is reminiscent of Coate (2004), where banning a form of political participation (in his case, campaign contributions) makes some actions of politicians (campaign advertising) a more effective way to

We are not aware of a formal welfare analysis of Hatch Act type regulations in either economics or political science. One closely related literature is that on civil service rules, which studies the complementary issues of politicians' control over bureaucrats' policy-making abilities, and the hiring and firing of bureaucrats (Gailmard and Patty, 2007; Ting et al., 2013; Ujhelyi, 2014; Huber and Ting, 2016; Forand, 2017). In contrast to these papers we explicitly focus on bureaucrats' political activities, which provides an additional dimension through which politicians and voters interact.[3] We model a ban on political activities as an institutional constraint, and ask about the welfare effects of this constraint in a political agency framework. This approach adds more broadly to the literature on agency relationships in government which has focused on questions like the desirability of putting politicians or bureaucrats in charge of certain policies (Maskin and Tirole, 2004; Alesina and Tabellini, 2007), or incentivizing bureaucrats to better serve their clients (Besley and Ghatak, 2005; Prendergast, 2007). One particularly relevant study is the analysis by Ting (2008) of when allowing whistleblowing in government is beneficial. Both his study and ours are concerned with a bureaucrat's action conveying information to an "outsider," but while Ting (2008) looks at a bureaucrat who reveals information about a manager to a principal (the politician), we consider a bureaucrat whose action reveals information about the politician to a voter.

2 Background: Regulating the political activities of bureaucrats

In the US, the Hatch Act of 1939 and its 1940 amendment introduced broad prohibitions on the political activities of all federally funded workers.[4] These workers were prohibited not just from using their "official authority or influence for the purpose of interfering with an election or affecting the outcome thereof," but also from taking "an active part in political management or in political campaigns," including while off duty (Section 9(a), Hatch Act of 1939). The Act covered all federal employees, as well as state and local government employees funded at least in part from federal sources. Regulating state and local government employees funded wholly from non-federal sources was left to these lower level governments, and many states have over time passed "little Hatch Acts" similar to the federal act for this purpose.

signal their quality.

[3]Relative to papers in this literature where politicians communicate with voters through only one channel (e.g., through the policies implemented by bureaucrats in Ujhelyi (2014) or by delegating authority to bureaucrats in Fox and Jordan (2011)), our setting is one of multidimensional signaling.

[4]For a history of the Hatch Act and related Supreme Court cases, see, e.g., Eccles (1981), Bloch (2004) and Azzaro (2014).

Since the Hatch Act was originally passed, it has been the subject of recurring attention from both Congress and the courts. In 1974 the Federal Election Campaign Act Amendments relaxed some of the Hatch Act's prohibitions on state and local workers, allowing them to campaign for and hold office in political organizations. Additional attempts to amend the Act failed in 1976, 1977, 1988, and 1990. In 1993, another act liberalizing the Hatch Act's provisions was signed into law, allowing extensive off-duty political activities for federal employees. In 2012, the Hatch Act Modernization Act further lifted prohibitions on political activities by allowing federally funded state and local workers to participate in partisan political campaigns - but only as long as their salary is not entirely funded from federal sources.

The majority of the provisions of the Hatch Act and its amendments concern political activities and expression on behalf of a candidate or political party. Resulting court cases involved such matters as a federal employee serving on a political party committee, a city employee circulating campaign literature and soliciting contributions while off-duty, government workers displaying campaign posters in the workplace, and an employee writing a series of articles criticizing a presidential candidate in a magazine for federal workers (see Bloch (2004) and Azzaro (2014) for examples).[5] The number of new Hatch Act complaints was around 100 per year throughout the 1990s before rising sharply to 245 in 2005 and 526 in 2010. After a temporary decline, the number of new cases rose again after the 2016 presidential election.[6]

What are the key arguments for and against limiting the political activities of bureaucrats? The idea that these activities should be limited rests on two key arguments. The first argument is inefficiency: political activities by bureaucrats may take away their time and effort from the provision of public services. This has consistently been a leading argument in Supreme Court cases on the constitutionality of the Hatch act. In one of the first such cases, the court noted, "Congress and the President are responsible for an efficient public service. If, in their judgment, efficiency may be best obtained by prohibiting active participation by classified employees in politics as party officers or workers, we see no constitutional objection." *United Public Workers v. Mitchell* (330 U.S. 75, 1947, p99).[7]

[5] Some provisions of the Hatch Act and related laws focus more specifically on prohibiting government workers from running as candidates themselves. Since this raises a different set of issues than political activities on behalf of others, we do not deal with this aspect of the prohibitions here.

[6] These figures are for the number of new complaints reported to the Office of Special Counsel, the office tasked with enforcing the Hatch Act (OSC Annual Reports to Congress, various years, available at https://osc.gov/reportsandinfo).

[7] In another landmark case, *Pickering v. Board of Education*, the Court considered four specific ways in which public employees' political speech could hinder efficiency. First, speech may affect "the government's ability to maintain discipline by superiors or harmony among coworkers;" second, it may impact the "personal loyalty and confidence" that may be necessary for proper functioning; third, it may hinder "an employee's

The second main argument for limitations is unfair electoral advantage. Bureaucrats engaging in political activities on behalf of the incumbent provide an electoral advantage to these politicians. Potential challengers, by contrast, do not have this resource at their disposal (Gely and Chandler, 2000; Bloch, 2004).

The leading argument against limitations on political activities is individuals' right to freedom of expression. As one representative put it during the congressional debate preceding the adoption of the Hatch Act: "you are proposing to reach out to millions of people [...] to gag them and handcuff them in the exercise of their political rights." (quoted in Bloch (2004), p232). In evaluating the constitutionality of the limitations, the Supreme Court explicitly created a balancing test to weigh the efficiency impacts discussed above against freedom of speech considerations: the employee's "interest as a citizen in making public comment must be balanced against the State's interest in promoting the efficiency of its employees' public services." (*Pickering v. Board of Education*, 391.U.S. 563, 1968, p563). One version of this argument is more consequentialist: since bureaucrats are experts on the government, their political participation is particularly valuable and should be encouraged: "the Hatch Act mistakenly penalizes and prohibits many of our *well-informed* citizens from full participation."[8] For example, Norton (2009) criticizes several Supreme Court rulings that upheld limitations on government workers' freedom of expression and argues that such expression would provide valuable information to the public.

Our model and results formalize some of these arguments, show their implications, and introduce some new ones.

3 Model

We consider a model with two periods and three players: a politician, a bureaucrat and a voter. In the first period, a policy outcome will be implemented and, when this is permitted, the bureaucrat may engage in political activities. After the first period, the voter decides whether to reelect the politician based on the policy and any political activities of the bureaucrat. In the second period, another policy outcome is implemented, and the game ends.

At the start of each period, a state of the world $S \in \{-1, 1\}$ is realized and observed by the bureaucrat and the politician but not the voter. State 1 is more likely: $\Pr(S = 1) = p > 1/2$. A policy outcome $X \in \{-1, 1\}$ will be jointly determined by the politician and the bureaucrat

ability to perform his job;" and finally speech could affect "an employer's ability to provide government services in an effective manner." (Gely and Chandler, 2000, p785).

[8] Former US senator F.E. Moss in his foreword to Eccles (1981), p xi, emphasis added.

and observed by all players. We will refer to a policy outcome that matches the state ($X = S$) as "good," while a policy different from the state ($X = -S$) is "bad." Note that the voter sees the policy outcome, but does not know whether it is good or bad. Because state 1 is more likely, we will call $X = 1$ the (ex ante) more "popular" policy outcome.

Depending on the institutional framework, the bureaucrat may engage in political activities. We will refer to these simply as "campaigning," and let $C = 1$ if the bureaucrat campaigns and $C = 0$ otherwise. There are two reasons a bureaucrat may campaign when this is permitted. First, some bureaucrats are "partisans," i.e., intrinsically motivated to campaign for the politician in office. When campaigning is allowed these bureaucrats always campaign. The probability that the bureaucrat is partisan is α. Second, the politician in office may direct the bureaucrat to campaign. Whether a non-partisan bureaucrat obeys this request depends on the strength of the politician's control over the bureaucracy. In Section 5 we consider the case of weak political control, where the bureaucrat can decide to say no to the politician's request. In Section 6 we study the model with strong political control, where the politician has enough power to compel the bureaucrat to campaign. Note that a nonpartisan bureaucrat does not campaign if he is not directed to do so (for example, campaigning may require resources from politicians, which partisan bureaucrats have access to on their own but non-partisans do not).

Campaigning generates votes for the politician. We model this by assuming that some voters are impressionable and reelect the politician if and only if the bureaucrat campaigned in period 1. The probability that the voter is impressionable is $(1 - \rho)$. Campaigning also affects the policy outcome. For example, a bureaucrat who campaigns may be less productive or more likely to make a mistake on the job. These policy costs of campaigning bureaucrats will be an important feature of the policy determination process which we describe next.

In each period, the politician observes the state and chooses a policy $x \in \{-1, 1\}$. If the politician chooses the bad policy ($x = -S$), then the policy outcome will be simply the policy chosen. If the politician chooses the good policy ($x = S$), then the policy outcome also depends on whether the bureaucrat is campaigning. In particular, if the bureaucrat campaigns, the policy outcome will be good with probability $(1-\kappa)$ but bad with probability κ. In other words, we have

$$\Pr(X = S|x, C) = \begin{cases} 0 & \text{if } x = -S \\ 1 & \text{if } x = S \text{ and } C = 0 \\ 1 - \kappa & \text{if } x = S \text{ and } C = 1. \end{cases}$$

This reduced form specification of the policy process captures the idea that implementing good policy outcomes requires both the politician and the bureaucrat. The politician can unilaterally ensure a bad policy outcome, but even if she chooses a good policy the implemented policy outcome may be bad when the bureaucrat is distracted by campaigning.

After period 1, an election takes place and the voter decides whether to reelect the incumbent. If she does not reelect, another politician is chosen randomly. Period 2 is a simplified version of period 1: a new state of the world is drawn; the politician in office chooses a new action; but there is no campaigning and no elections.

The voter prefers good policies: in any period, she obtains a payoff of 1 if $X = S$ and 0 otherwise. The politician may be good (type G) or bad (type B), and her type is observed by the bureaucrat but not the voter. The probability of a good politician is Π. Good politicians are policy-motivated and public-spirited: in any period, they obtain a payoff of 1 if the good policy is implemented ($X = S$) and 0 otherwise, whether they hold office or not. Bad politicians are rent seekers whose preferences are the opposite of voters': in any period in which they are in office, they obtain a payoff of 1 if the bad policy is implemented ($X = -S$). If they are out of office or if $X = S$, they obtain a payoff of 0. Non-partisan bureaucrats are also public-spirited: in any period, they obtain a payoff of 1 if $X = S$ and 0 otherwise. Every player discounts period 2 payoffs by factor $\delta < 1$. Note that voters, good politicians and non-partisan bureaucrats all share the same preferences.

As described above, with probability $1 - \rho$ the voter is impressionable and responds to campaigns mechanically. With probability ρ, she is "sophisticated," and uses her observation of implemented policies and whether or not the bureaucrat campaigns to update her beliefs regarding the politician when deciding whether to reelect.

Strategies and equilibrium. In period 2, good politicians find it optimal to choose action $x = S$ and bad politicians find it optimal to choose action $x = -S$. Furthermore, the voter and the bureaucrat make no decisions in period 2, so that we only describe strategies for all players in period 1. Given a politician of type $\theta \in \{G, B\}$ and a state S, a policy strategy $x_S(\theta) \in \{1, -1\}$ specifies the policy chosen by the politician. Denote the campaign strategy of this politician by $\gamma_S \in \{0, 1\}$ for good politicians and $\beta_S \in \{0, 1\}$ for bad politicians: this is the probability with which the politician directs the bureaucrat to campaign. For non-partisan bureaucrats, a campaign strategy $c_S(\theta) \in \{0, 1\}$ describes the bureaucrat's response to a request for a campaign by a politician of type θ in state S (i.e., $c_S(\theta) = 1$ if the bureaucrat campaigns conditional on a request being made). The voter's belief is described by the probability $\hat{\Pi}(X, C)$ that the politician is of type G conditional on observing policy outcome X and campaign activity C by the bureaucrat. A pure strategy perfect Bayesian equilibrium $(x_S, \gamma_S, \beta_S, c_S, \hat{\Pi})$, henceforth an equilibrium for short, is a profile of strategies and voter beliefs such that (i) policy choices and campaign requests are optimal for politicians given $(c_S, \hat{\Pi})$ and campaign activities are optimal for non-partisan bureaucrats given $(x_S, \gamma_S, \beta_S, \hat{\Pi})$, (ii) for any policy outcome X and state S, a sophisticated voter reelects the incumbent if $\hat{\Pi}(X, C) > \Pi$, does not reelect if $\hat{\Pi}(X, C) < \Pi$, with her electoral decision unconstrained if $\hat{\Pi}(X, C) = \Pi$, and (iii) $\hat{\Pi}$ is derived from $(x_S, \gamma_S, \beta_S, c_S)$ through Bayes' rule whenever possible.

Interpretation. Our setup is not meant to provide a comprehensive model of bureaucrats' role in policy making and politics. Rather, the goal is to include in the most parsimonious way possible some of the key components of the policy debates on the regulation of bureaucrats' political activities (as described in Section 2). To this end, the possible inefficiencies that can arise when bureaucrats spend some of their time campaigning are captured by the policy cost κ. The possibility that campaigns give the incumbent politician an electoral advantage are represented by $1 - \rho$, the share of voters whose vote is automatically secured through campaigns. From freedom of speech arguments, we take the idea that some share α of the bureaucrats have an innate desire to engage in political activities. While we do not take a stand on the direct value of this freedom, we study how the size of α affects the desirability of political activities indirectly. Finally, the idea that voters can learn valuable information from bureaucrats is at the heart of our approach. Our model extends this idea by considering that some "sophisticated" voters may learn not just from the content of bureaucrats' expression, but also from observing whether or not bureaucrats are expressing themselves (i.e, whether or not they are campaigning). In some cases, this will include learning from the absence of campaigns - this idea is similar to situations where a public official's reputation is enhanced through the absence of political scandals.[9]

4 Benchmark: Political activities of bureaucrats prohibited

Our main goal is to study whether voters benefit from allowing bureaucrats to engage in political activities. To do this, we first describe the model's outcomes when political activities are prohibited and establish some benchmark results.

In principle, politicians may have an incentive to choose policies that go against their

[9] A good example of this type of signaling in a bureaucratic context is the case of DeWitt Greer, who led the Texas Highway Department between 1940-1967. In the US, this was a period characterized by extensive political patronage and strong political control over bureaucrats. In fact, Texas is the only US state that never had a statewide civil service system. In this environment, Greer managed to keep the department out of politics and built it into a center of professional excellence. Historians and contemporary observers hold Greer in high regard and praise him for the lack of politicization of the department - at a time where many state highway departments were mired in scandals (Smith, 1974).

preferences in period 1 in order to secure reelection. In our setting, this is not the case: all politician types choose stage optimal policies in all periods.

Lemma 1 *In all equilibria, good politicians choose good policies and bad politicians choose bad policies in period 1 ($x_S(G) = S$ and $x_S(B) = -S$).*

Proof. See Appendix. ■

This preliminary result is due to discounting: the politician gets a payoff of 1 if her preferred policy X is implemented today and a payoff of $\delta < 1$ if it is implemented tomorrow. A bad politician can always secure 1 by choosing the bad policy. For a good politician, even if a good policy outcome gets her thrown out of office for sure while the bad policy gets her reelected, choosing $x = -S$ would yield δ, while choosing $x = S$ is at worst a lottery between δ and 1, which is better.

By Lemma 1, politicians always choose their favorite policy in period 1, which means that good politicians are more likely to choose the popular policy $x = 1$ and bad politicians are more likely to choose the unpopular policy $x = -1$. When campaigns are prohibited, voters base their reelection decisions on policies alone. It follows that sophisticated voters reelect the politician if and only if $X = 1$, whereas, because there are no campaigns, impressionable voters never reelect.

Proposition 1 *If political activities by bureaucrats are prohibited, sophisticated voters reelect politicians if and only if the popular policy outcome is implemented ($X = 1$).*

Voter welfare is determined by politicians' and bureaucrats' performance and by voters' ability to use elections to screen out bad politicians and reelect good ones. Fix any equilibrium, and let σ^G denote the likelihood of successful electoral screening when the politician is good, i.e., the the probability that, in equilibrium, a good politician is reelected. Let σ^B be the likelihood of successful screening when the politician is bad: the probability that a bad politician is thrown out of office. Let Q^G be the expected policy payoff to the voter in period 1 if a good politician is in office. (When a bad politician is in office, the voter's policy payoff in period 1 is always 0.) Voter welfare can then be written as

$$W = (1 - \Pi)\delta\Pi\sigma^B + \Pi(Q^G + \delta\sigma^G + \delta(1 - \sigma^G)\Pi).$$

The first term corresponds to a bad period-1 politician: with probability $\Pi\sigma^B$ she is replaced by a good politician in period 2. The second term is for a good period-1 politician. In this case, period-1 welfare is Q^G, while discounted period-2 welfare is δ if either the politician is reelected, or if she is thrown out but replaced with another good politician.

Collecting terms, we get

$$W = (1 - \Pi)\delta\Pi(\sigma^B + \sigma^G) + \Pi(Q^G + \delta\Pi). \tag{1}$$

The electoral impact of regulating bureaucrats' political activity is conveniently captured by the "overall success" of electoral screening $\sigma \equiv \sigma^B + \sigma^G$, while the policy impact is measured by the quality of the period-1 policy, Q^G.

When political activities are prohibited, Proposition 1 implies that $\sigma^G_\emptyset = p\rho$, $\sigma^B_\emptyset = p\rho + 1 - p$ and $Q^G_\emptyset = 1$. Thus, voter welfare in the benchmark is given by

$$W_\emptyset = (1 - \Pi)\delta\Pi(2\rho p + 1 - p) + \Pi(1 + \delta\Pi). \tag{2}$$

Note that, in the absence of campaigns, the voters' policy payoff from good politicians, Q^G, is maximized. This will not be the case when campaigns are allowed because of their associated policy costs. Therefore, allowing political activities can be optimal only if it increases the success σ of electoral screening.

Specifically, fix an equilibrium where political activities are allowed and the equilibrium where they are prohibited. Using (1), the welfare effect of allowing bureaucrats to campaign can be written as $W_A - W_\emptyset = \delta\Pi(1 - \Pi)(\sigma_A - \sigma_\emptyset) + \Pi(Q^G_A - Q^G_\emptyset)$, where subscripts A and $\emptyset$ stand for the regimes with and without campaigns, respectively. To simplify, we can divide by Π and express the welfare effect of allowing campaigns as

$$\begin{aligned} \Delta W &\equiv \frac{W_A - W_\emptyset}{\Pi} \\ &= \delta(1 - \Pi)(\sigma_A - \sigma_\emptyset) + (Q^G_A - Q^G_\emptyset) \\ &= \delta(1 - \Pi)(\sigma_A - 2p\rho - 1 + p) + (Q^G_A - 1), \end{aligned} \tag{3}$$

where the last equality follows from (2).

5 The political activities of bureaucrats under weak political control

As we show below, the desirability of allowing bureaucrats to engage in political activities depends critically on the institutional framework governing the interactions of politicians and bureaucrats. We first study an environment with weak political control over bureaucrats. In particular, we assume that the bureaucrat may campaign but cannot be constrained to do so by the politician.

5.1 Equilibrium

When bureaucrats can refuse politicians' request for campaigns, they have control over the communication with the voters that campaigns allow. Since non-partisan bureaucrats have the same preferences as good politicians, they will always comply with a good politician's request to campaign. Thus, with a non-partisan bureaucrat and a good politician, a campaign will occur if and only if the politician asks. By contrast, with a non-partisan bureaucrat and a bad politician, a campaign will never occur. This is because whenever a bad politician could gain by having the bureaucrat campaign the bureaucrat would refuse, and whenever the politician could lose by having the bureaucrat campaign no request will be made.

Lemma 2 *If political control over bureaucrats is weak, then with a non-partisan bureaucrat and a bad politician a campaign will never occur in equilibrium ($c_S(B) \cdot \beta_S = 0$ for all S).*

The following result characterizes the equilibria of our model in the case of weak political control. For clarity and simplicity, we focus on the case with few partisan bureaucrats (α low). Note that if most bureaucrats were partisans, then politicians would have little role to play in bureaucrats' campaigns, and sophisticated voters would ignore campaigns when making electoral decisions. Combined with the fact that under weak political control non-partisan bureaucrats never campaign for bad politicians, focusing on α low ensures that, in some states, campaigns can be informative of good politicians.[10]

Proposition 2 *Suppose that α is sufficiently small.*

1. *An equilibrium with no campaigns ($\gamma_{-1} = \gamma_1 = 0$) exists if and only if $\kappa \geq \delta(1 - \Pi)[\rho\kappa + (1-\rho)]$. In this equilibrium, the voter reelects if and only if the popular policy is implemented.*

2. *An equilibrium with full campaigns ($\gamma_{-1} = \gamma_1 = 1$) exists if and only if $\kappa \leq \delta(1 - \Pi)$. In this equilibrium, the voter reelects if and only if the bureaucrat campaigns.*

3. *An equilibrium with campaigns following the unpopular policy only ($\gamma_{-1} = 1, \gamma_1 = 0$) exists if and only if $\delta(1-\Pi)(1-\rho) \leq \kappa \leq \delta(1-\Pi)$. In this equilibrium, the voter always reelects with the popular policy but reelects with the unpopular policy only if the bureaucrat campaigns.*

4. *There does not exist an equilibrium with campaigns following the unpopular policy only ($\gamma_{-1} = 0$, $\gamma_1 = 1$).*

[10] This in turn makes it possible for campaigns to be desirable: As discussed in Section 4, if campaigns do not improve electoral screening, then allowing them can never raise voter welfare. Our proof of Proposition 2 in the Appendix establishes our equilibrium results for all values of α.

Proof. See Appendix. ■

In equilibrium, whether the good politician asks a non-partisan bureaucrat to campaign involves a simple tradeoff: campaigns increase the probability of reelection, by convincing both sophisticated and impressionable voters to support them; but they also decrease government performance. Therefore, in equilibrium, the intensity of campaigning is inversely related to their policy costs (κ). No-campaigning equilibria exist when policy costs are high, and full-campaigning equilibria exist when they are low.

For intermediate costs, there also exists a partial-campaigning equilibrium. Here, a good politician who chose the unpopular policy uses campaigning bureaucrats to convince sophisticated voters that this choice was necessary, whereas no such persuasion is required if she implements the popular policy. In equilibrium, a good politician is willing to request campaigns following the unpopular policy because she cannot be reelected without them, but she refuses to impose the policy costs of campaigns following the popular policy because sophisticated voters reelect her without them. There is no corresponding partial-campaigning equilibrium in which bureaucrats only campaign for politicians that have chosen the popular policy. The reason for this is that with weak political control, good politicians' requests for campaigns generate positive spillovers: voters attribute all observed campaigns to good politicians whenever, in equilibrium, they expect good politicians to ask for campaigns following some policy. In that case, a good politician who is willing to secure reelection through campaigns following the popular policy can also secure reelection through campaigns following the unpopular policy, so that her campaign requests cannot differ across policies.

5.2 Voter welfare

Next, we turn to the welfare effects of allowing bureaucrats to campaign. In this model, bureaucrats' political activities can allow politicians to more effectively communicate with sophisticated voters. Recall that, if political activities are banned, unpopular policies always get a politician thrown out of office because a good politician cannot reveal to voters that choosing the unpopular policy was actually in their best interest. When political activities are allowed, this becomes possible. In Proposition 2, in the partial-campaigning equilibrium, good politicians use campaigning bureaucrats to signal their type to voters when they are forced to choose an unpopular policy to maximize voters' utility. In the full-campaigning equilibrium, campaigns completely replace policies as the communication channel between voters and politicians. Here, voters reelect only if they see a campaign, and good politicians use campaigning bureaucrats to signal their type regardless of the policy that they are implementing.

Using campaigning bureaucrats as a communication channel between politicians and voters is not without costs. First, in general there is no guarantee that campaigns are a superior channel than relying on policies alone. When signaling through policies is more effective, allowing political activities may crowd out this more effective communication channel. Second, even if voters continue to use policies to evaluate politicians, campaigns can blur this signal because a policy will sometimes reflect the bureaucrat's mistake rather than the politician's action. Third, due to their policy costs, bureaucrats' campaign activities lower the expected quality of implemented policies. Whether allowing political activities is beneficial depends on comparing the impact of this regime on signaling with the negative impacts on the quality of policies.

Proposition 3 *Suppose that α is sufficiently small.*

1. *Banning campaigns by bureaucrats is optimal whenever voters expect the no-campaigning equilibrium.*

2. *When campaigns are expected in equilibrium, allowing campaigns always benefits impressionable voters, while it may benefit or hurt sophisticated voters. In particular,*

   (a) *Banning campaigns by bureaucrats is optimal if*

   $$\kappa \geq \kappa_P \equiv \frac{\delta(1-\Pi)}{1-p(1-\alpha)}\left[(1-p)(1-\alpha)-\alpha\rho(2p-1)\right].$$

   (b) *Allowing campaigns by bureaucrats is optimal if*

   $$\kappa \leq \kappa_F \equiv \delta(1-\Pi)\left[1-\alpha-\rho(2p-1)\right],$$

   where $\kappa_F < \kappa_P$.

   (c) *If $\kappa_F \leq \kappa \leq \kappa_P$, allowing campaigns by bureaucrats is optimal if voters expect the partial-campaigning equilibrium but banning campaigns is optimal if voters expect the full-campaigning equilibrium.*

Proof. See Appendix. ■

If in equilibrium politicians do not use campaigning bureaucrats to communicate with sophisticated voters, then allowing campaigns is never optimal. In this case, only partisan bureaucrats campaign, and this is costly. Campaigns directly lower the expected quality of implemented policies. In addition, they make it more difficult for sophisticated voters to screen politicians based on the policies, as these will sometimes reflect mistakes made by campaigning bureaucrats rather than the politician's actions. Here, politicians choose the same policies in the regime with and without campaign, and voters rely exclusively on policies to screen politicians in both regimes, yet allowing campaigns hurts voters' ability to screen.

Interestingly, while part 1 of Proposition 3 shows that politicians may use campaigns "too little," part 2(c) shows that they may also use them "too much." When $\kappa^F \leq \kappa \leq \kappa^P$, the partial-campaigning equilibrium yields higher welfare than banning political activities, but the full-campaigning equilibrium does not. Here, voters' self-fulfilling expectation that politicians would "over-use" bureaucrats if they were allowed may make it desirable to ban political activities. This is so even though, when properly utilized, allowing campaigns could make voters better off. In this sense, whether allowing political activities is desirable can depend crucially on whether voters trust that politicians will use them effectively.

For sufficiently low policy cost κ, allowing political activities is always optimal.[11] In that case, campaigns serve as a valuable communication channel complementing, or replacing, the implemented policies.

The following corollary describes how the different parameters of the model affect the desirability of bureaucrats' political activities.

Corollary 1 *All else equal, allowing campaigns by bureaucrats is more likely to be optimal when α, p, κ, and ρ are lower.*

Proof. See Appendix. ■

Not surprisingly, campaigns are more desirable when the policy cost κ is smaller. While κ directly lowers the quality of the implemented policy, it can also hurt sophisticated voters' ability to screen. When campaigns are allowed but voters still rely on policies for screening (as in the no-campaigning equilibrium) a higher κ makes observed policies more likely to reflect policy mistakes and hence less informative of the politician's type. This "multiplier effect" creates an additional argument in favor of banning political activities by bureaucrats when policy costs are large.

Corollary 1 also shows that allowing political activities is more desirable when there are fewer partisans (lower α) and when the variance of the state is larger (p closer to $1/2$). These effects make campaigns a more effective communication channel than policies. With fewer partisans, campaigns are less "noisy" and more likely to reflect the politician's type

[11] For low enough κ, Proposition 2 shows that campaigns are always used in equilibrium, and Part 2(b) of Proposition 3 shows that allowing campaigns is always optimal in this case.

rather than bureaucrats' own desire to campaign. When p is closer to $1/2$, screening based on policies alone is less effective because the policy outcomes generated by the two types of politicians are more similar ex ante. This makes the signals about incumbent quality provided by campaigns more valuable.

Perhaps surprisingly, political activities are also more desirable when the share of sophisticated voters (ρ) is low. Even though any improvement in communication is only realized when voters are sophisticated, impressionable voters always benefit unambiguously from campaigns. With more impressionable voters, allowing political activities is more likely to raise voter welfare. This result turns out to be specific to this environment with weak political control: as we shall see in Section 6, impressionable voters always lose when bad politicians have enough leverage over bureaucrats to force them to campaign.

6 The political activities of bureaucrats under strong political control

We now turn to an environment with strong political control. Specifically, we assume that the politician can simply direct the bureaucrat to campaign (i.e., we impose the constraint that $c_S(G) = 1$ and $c_S(B) = 1$ for all S). We first describe how this changes the equilibrium of the model, and then study the welfare impact of allowing campaigns in this environment.

6.1 Equilibrium

Now the control over the communication between bureaucrats and voters lies squarely with politicians, and, in stark contrast with the case of weak political control, this means that bad politicians always direct bureaucrats to campaign.

Lemma 3 *If political control over bureaucrats is strong, then with a non-partisan bureaucrat and a bad politician a campaign will always occur in equilibrium ($c_S(B) \cdot \beta_S = 1$ for all S).*

Proof. See Appendix. ■

Because campaigns always induce impressionable voters to reelect, bad politicians will always request campaigns if these (weakly) increase the likelihood that sophisticated voters reelect them. That no equilibrium exists in which bad politicians fail to campaign in some state then follows because in that case observing a campaign would be good news about the incumbent for sophisticated voters.

The simple observation underlying Lemma 3 immediately implies two ways in which the institutional environment regulating politicians' interactions with the bureaucracy alters the nature of bureaucrats' political activities. First, under weak political control bad politicians were never able to use non-partisan bureaucrats to obtain the support of impressionable voters. Under strong control, bad politicians *always* rely on the political activities of bureaucrats to obtain the impressionable vote. Second, strong political control inverts the informational role of bureaucratic campaigns, in that a politically inactive bureaucracy is now a positive signal of politician quality. This affects the quality of bureaucrats' communication with sophisticated voters. Observing a bureaucrat who campaigns can now reveal the politician's bad type and allow a sophisticated voter to throw him out of office. Similarly, observing a bureaucrat who does not campaign can reveal a good politician's type.

The following proposition describes the equilibria of this model with strong political control. To ensure comparability of our results with those of Section 5, we focus on characterizing equilibria in the case of weak bureaucratic partisanship (α small).[12]

Proposition 4 *Suppose that α is sufficiently small.*

1. *An equilibrium with no campaigns ($\gamma_{-1} = \gamma_1 = 0$) exists if and only if $\rho \leq 1/2$ and , $\kappa \geq \delta(1 - \Pi)[1 - 2\rho]$. In this equilibrium, the voter reelects if and only if there is no campaign.*

2. *An equilibrium with campaigns following the unpopular policy only ($\gamma_{-1} = 1$, $\gamma_1 = 0$) exists if and only if $\rho \leq 1/2$ and $\delta(1 - \Pi)[1 - 2\rho] \leq \kappa \leq \delta(1 - \Pi)[1 - \rho]$. In this equilibrium, the voter never reelects following the unpopular policy and reelects with the popular policy only if there is no campaign.*

3. *An equilibrium with campaigns following the popular policy only ($\gamma_{-1} = 0$, $\gamma_1 = 1$) exists if and only if $\rho \leq 1/2$ and $\delta(1 - \Pi)[1 - 2\rho] \leq \kappa \leq \delta(1 - \Pi)[1 - \rho]$. In this equilibrium, the voter never reelects following the popular policy and reelects following the unpopular policy only if there is no campaign.*

4. *An equilibrium with full campaigns exists if and only if $\kappa \leq \delta(1-\Pi) \min\left\{\frac{1}{1+\rho\delta(1-\Pi)}, \frac{1-\rho}{1-\rho\delta(1-\Pi)}\right\}$. In all such equilibria, if the bureaucrat campaigns, then the voter reelects following the popular policy and does not reelect following the unpopular policy. If the bureaucrat does not campaign, then the voter may reelect or not, but all such equilibria yield the same payoffs to all voter types.*

[12] Appendix A.1 establishes our equilibrium results for all values of α.

Proof. See Appendix. ■

As was the case for weak political control, equilibrium campaign intensity is inversely related to the policy costs that campaigns impose. However, when political control is strong, campaigns transmit information about the politician's quality to sophisticated voters only if there is some state in which good politicians fail to request campaigns from bureaucrats (cases 1-3 of Proposition 4). Paradoxically, a necessary condition for informative campaigns is that is that the voter is relatively *unlikely* to be sophisticated ($\rho \leq 1/2$). This is because, in equilibrium, bad politicians must not have incentives to manipulate sophisticated voters' beliefs about their type by failing to ask their bureaucrats to campaign.[13]

Under strong political control, equilibria with partial campaigning can exist for intermediate level of campaign costs. The key distinction with corresponding equilibria under weak political control is that partial campaigns can now arise following both the popular or the unpopular policy. The reason for this is that with strong political control, restraint in good politicians' demands for campaigns generates negative spillovers: voters attribute all observed campaigns to bad politicians whenever, in equilibrium, they expect good politicians to turn down campaigns following some policy. In that case, a good politician cannot secure reelection from sophisticated voters following any policy by requesting campaigns so that, in particular, good politicians lose their natural advantage when implementing the popular policy. Furthermore, in partial-campaigning equilibria good politicians must be willing to request campaigns following one policy and not the other, so that voters must attribute the absence of campaigns following policies for which they expect one to bad politicians.[14] Therefore, with strong political control, partial-campaigning equilibria have incumbents reelected if and only if no campaign is observed when voters expect not to observe a campaign, so that the cases in which campaigns occur either following the popular or the unpopular policy are symmetric.

[13] When political control was weak, the incentives of bad politicians were irrelevant because they never successfully recruited non-partisan civil servants for political activities.

[14] All such observations are inconsistent with equilibrium behavior, and hence sophisticated voters' beliefs are undetermined (this indeterminacy of voters' beliefs when expected campaigns are not observed also explains the equilibrium multiplicity reflected in Part 4 of Proposition 4 for full-campaigning equilibria). Furthermore, when $\rho \leq 1/2$, beliefs that attribute the absence of campaigns to bad politicians fail the intuitive criterion, pointing to a non-robustness of partial-campaigning equilibria with strong political control (in Section 5, partisan civil servants ensured that campaigns always occurred with positive probability, and bad politicians ensured that there was always a positive probability of not observing campaigns, so that no observed actions were off the equilibrium path).

6.2 Voter welfare

We now turn to the welfare effects of allowing campaigns in this environment with strong political control.

Proposition 5 *Allowing bureaucrats to campaign always hurts impressionable voters. It may benefit or hurt sophisticated voters. Overall, banning campaigns is always optimal.*

Proof. See Appendix. ■

With strong political control, the most that good politicians can do is rely on the absence of campaigns to communicate their type to sophisticated voters. Thus, allowing campaigns here can improve screening by incentivizing the bad politicians to use them. This occurs for example in the no-campaigning equilibrium of Proposition 4. Here, voters rely exclusively on campaigns to screen politicians, reelecting incumbents whenever there is no campaign. Similarly, in the partial-campaigning equilibrium of Proposition 4 part 2 a good politician uses the absence of campaigns to signal her type when choosing the popular policy. In both of these cases, allowing campaigns improves sophisticated voters' ability to screen.

However, because campaigns distort policy choices, this makes them a very costly channel of communication for sophisticated voters. Furthermore, because good politicians campaign weakly less than bad politicians, the reelection rule of impressionable voters is (at least weakly) biased in favor of the latter. The policy costs of good politicians' campaigns then imply that impressionable voters are strictly worse of when campaigns are allowed. Intuitively, the reason that screening benefits cannot outweigh these costs of campaigns is that here maximizing the amount of communication between bureaucrats and voters requires minimizing campaigns. This happens when policy costs are high enough, so that improving screening *requires* campaigns to be very costly. Ultimately, overall voter welfare is always less than without campaigns.

Unlike in the case of weak political control, it is now also possible for campaigns to be fully used by politicians, but fully ignored by voters (Proposition 4 part 4). Here, full-campaigning equilibria communicate no information to voters: both politicians direct the bureaucrat to campaign in both states of the world, and in response sophisticated voters only rely on policies for screening, just as they would do if campaigns were prohibited. Apart from the direct policy cost, campaigns create noise in the implemented policies and make it harder for voters to use policies as a signal. This is similar to the no-campaigning equilibrium under weak control. But while there campaigns only came from partisan bureaucrats, here campaigns are fully used by all types of politicians (and hence bureaucrats). Hence, allowing campaigns is particularly costly in this case.

The following corollary summarizes the impact of the parameters on the welfare effect of allowing campaigns. Most of these effects mirror those in the case of weak political control from Corollary 1.[15]

Corollary 2 *All else equal, allowing campaigns by bureaucrats hurts voter welfare less when* α*,* p*, and* κ *are lower. Depending on the equilibrium, the impact of* ρ *can be negative or positive.*

Proof. See Appendix. ■

7 Discussion

Bureaucrats' political activities can be a form of communication between politicians and voters. Based on this observation, the above results add several considerations to the policy debate on bureaucrats' political activities (reviewed in Section 2).

First, bureaucrats' political activities have costs and benefits other than those, such as policy costs, which are most commonly considered. Even if policy costs are small, allowing political activities is not necessarily beneficial as it may crowd out more effective ways of screening politicians. Moreover, even if campaigns *can* be beneficial in transmitting useful information to voters, it cannot always be guaranteed that they *will* be used effectively, as the quality of this communication can depend on coordination between politicians and voters (and bureaucrats). To the extent that such coordination reflects voters' "trust" that politicians will use the tools at their disposal (policies and campaigns) effectively, allowing campaigns may adversely affect public trust in the electoral process.[16]

Second, some of the considerations discussed in the policy debate also affect the effectiveness of campaigns in transmitting information. This suggests that certain nuances may be missing from existing arguments. For example, freedom of speech considerations would suggest that the more partisan bureaucrats there are (the more bureaucrats have an innate desire to engage in political activities), the more this should be allowed. However, more partisans also make bureaucrats' campaigns a more noisy way to transmit information to voters. All else equal, this makes allowing these campaigns less desirable. Or, consider policy costs. While policy costs directly lower the desirability of campaigns, in our model they can

[15]One difference is that a higher ρ can now make a ban relatively more or less attractive. Since in general impressionable voters now lose from campaigns, $\partial/\partial\rho \Delta W > 0$. However, in the full campaigning equilibrium $\partial/\partial\rho \Delta W < 0$ because here impressionable voters' screening benefit is the same with and without campaigns (while sophisticated voters are worse off with campaigns).

[16]This is complementary to policy arguments that Hatch Act type regulations increase public trust in government by avoiding the appearance of impropriety (e.g., Bloch (2004)).

also have an indirect effect. When all types of politicians use campaigns all the time (as can be the case in section 6) or when politicians never use them (in section 5), voters necessarily rely on policies for screening politicians. By making observed policies less likely to reflect the politician's choices, policy costs introduce noise in this screening mechanism, and this further lowers the desirability of allowing campaigns.

Finally, it is commonly argued that forbidding bureaucrats' political activities is particularly valuable in an environment where politicians may otherwise be able to coerce bureaucrats into such activities. This suggests that forbidding bureaucrats' political activities is more desirable when politicians have more control. Our results above suggest that this may or may not be the case. Some degree of politician control is *necessary* for bureaucrats' actions to transmit information to voters. If politicians had no influence on whether bureaucrats campaign, only partisan bureaucrats would do so, and in this model this has no information value to the voter. Thus, banning political activities would always be beneficial in this case. As shown in Section 5, some politician control (the ability to request campaigns) is necessary for political activities to be desirable. At the same time, when politicians have strong control over bureaucrats (in the sense of Section 6) banning political activities again becomes beneficial.

As discussed in Section 2, in the US the Hatch Act was introduced in the first half of the 20th century, an era with extensive political patronage and a highly politicized bureaucracy. More recently, reforms have tended to weaken the Act's provisions and give government employees more freedom to engage in political activities. Our "strong control" environment may be a good characterization of the patronage system, while the "weak control" environment could reflect the present state of a more independent and professional bureaucracy. To the extent that this is true, our model provides one rationale for the evolution of these regulations, showing that banning political activities is always optimal under strong political control but may be undesirable when political control is weak.

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A Appendix

Proof of Lemma 1. For a bad politician, choosing a bad policy is the least attractive when a bad policy results in no reelection while a good policy outcome results in reelection for sure. In this case, the payoff from $x = -S$ is 1, while the payoff from $x = S$ is $\Pr(X = S|x = S) \cdot \delta + (1 - \Pr(X = S|x = S))$, which is less.

For a good politician, choosing a good policy is the least attractive when a good policy outcome results in no reelection while a bad policy outcome results in reelection for sure. In this case, the payoff from $x = S$ is $\Pr(X = S|x = S) \cdot (1 + \delta\Pi) + (1 - \Pr(X = S|x = S))\delta$, while the payoff from $x = -S$ is δ, which is less. ■

The following lemma characterizes sophisticated voters' reelection strategies and politicians' campaign strategies, and is used extensively in the sequel.

Lemma 4 *Fix any equilibrium such that $c_S(G) = 1$ and $c_S(B) = 1$ for all S. Let $\tilde{\gamma}_S = \alpha + (1-\alpha)\gamma_S$ denote the probability that the bureaucrat campaigns in state S when the politician is good and let $\tilde{\beta}_S = \alpha + (1-\alpha)\beta_S$ be the corresponding probability when the politician is bad.*

1. *Given policy outcome X and campaign C, let $\eta(X, C) \in \{0, 1\}$ denote the voter's reelection strategy, with $\eta(X, C) = 1$ denoting reelection. We have that*

$$\eta(1,1) = \begin{cases} 1 \text{ if } p(1-\kappa)\tilde{\gamma}_1 + (1-p)\kappa\tilde{\gamma}_{-1} > (1-p)\tilde{\beta}_{-1}, \\ 0 \text{ if } p(1-\kappa)\tilde{\gamma}_1 + (1-p)\kappa\tilde{\gamma}_{-1} < (1-p)\tilde{\beta}_{-1}. \end{cases}$$

$$\eta(1,0) = \begin{cases} 1 \text{ if } p(1-\gamma_1) > (1-p)(1-\beta_{-1}), \\ 0 \text{ if } p(1-\gamma_1) < (1-p)(1-\beta_{-1}). \end{cases}$$

$$\eta(-1,1) = \begin{cases} 1 \text{ if } p\kappa\tilde{\gamma}_1 + (1-p)(1-\kappa)\tilde{\gamma}_{-1} > p\tilde{\beta}_1, \\ 0 \text{ if } p\kappa\tilde{\gamma}_1 + (1-p)(1-\kappa)\tilde{\gamma}_{-1} < p\tilde{\beta}_1. \end{cases}$$

$$\eta(-1,0) = \begin{cases} 1 \text{ if } (1-p)(1-\gamma_{-1}) > p(1-\beta_1), \\ 0 \text{ if } (1-p)(1-\gamma_{-1}) < p(1-\beta_1). \end{cases}$$

2. *Given a state S, the good politician's choices are such that*

$$\gamma_S = \begin{cases} 1 \text{ if } \delta(1-\Pi)\Big[\rho\big[\kappa\eta(-S,1) + (1-\kappa)\eta(S,1) - \eta(S,0)\big] + (1-\rho)\Big] > \kappa, \\ 0 \text{ if } \delta(1-\Pi)\Big[\rho\big[\kappa\eta(-S,1) + (1-\kappa)\eta(S,1) - \eta(S,0)\big] + (1-\rho)\Big] < \kappa. \end{cases} \quad (4)$$

3. *Given a state S, the bad politician's choices a such that*

$$\beta_S = \begin{cases} 1 \text{ if } \rho[\eta(-S,1) - \eta(-S,0)] + 1 - \rho > 0, \\ 0 \text{ if } \rho[\eta(-S,1) - \eta(-S,0)] + 1 - \rho < 0. \end{cases} \quad (5)$$

Proof of Lemma 4. Let $\Pr(X, C|G)$ denote the probability of a pair (X, C) under a good politician and $\Pr(X, C|B)$ the same probability under a bad politician. After observing (X, C), the voter reelects only if $\frac{\Pr(X,C|G)\Pi}{\Pr(X,C|G)\Pi + \Pr(X,C|B)(1-\Pi)} \geq \Pi$, which simplifies to $\Pr(X, C|G) \geq \Pr(X, C|B)$. The expressions for the voter's strategy then follow from computation, invoking Lemma 1.

To establish (4), fix state S. The payoff to a good politician from asking the bureaucrat to campaign is

$$C^G \equiv 1-\kappa+\delta\Big[\rho\Big[(1-\kappa)\big[\eta(S,c)+(1-\eta(S,c))\Pi\big]+\kappa\big[\eta(-S,c)+(1-\eta(-S,c))\Pi\big]\Big]+(1-\rho)\Big],$$

whereas her payoff from not asking the bureaucrat to campaign is

$$\alpha C^G+(1-\alpha)\Big[1+\delta\Big[\rho\big[\eta(S,0)+(1-\eta(S,0))\Pi\big]\Big]+(1-\rho)\Pi\Big].$$

Comparing the two expressions yields (4).

To establish (5), fix state S. The payoff to a bad politician from asking the bureaucrat to campaign is $C^B \equiv 1+\delta[\rho\eta(-S,1)+1-\rho]$. Her payoff from not asking for a campaign is $\alpha C^B+(1-\alpha)[1+\delta\rho\eta(-S,0)]$. Comparing the two expressions yields (5). ■

Proof of Proposition 2. From Lemma 2, non-partisan bureaucrats never campaign for bad politicians in any equilibrium with weak political control, so that we can set $\beta_S=0$ in all expressions in Part 1 of Lemma 4, and we can neglect the bad politicians' incentive constraint (5).

Consider an equilibrium in which good politicians never ask bureaucrats to campaign, i.e., such that $\gamma_{-1}=\gamma_1=0$. It follows from Lemma 4 that $\eta(1,1)=\eta(1,0)=1$ and $\eta(-1,1)=\eta(-1,0)=0$. If $S=1$, (4) reduces to $\kappa\geq\delta(1-\Pi)\big[-\rho\kappa+(1-\rho)\big]$, whereas for $S=-1$, (4) reduces to

$$\kappa\geq\delta(1-\Pi)\big[\rho\kappa+(1-\rho)\big]. \tag{6}$$

Therefore, such an equilibrium exists if and only if (6) is satisfied.

Consider an equilibrium in which good politicians always ask bureaucrats to campaign, i.e., such that $\gamma_{-1}=\gamma_1=1$. It follows that $\eta(1,1)=1$, $\eta(1,0)=\eta(-1,0)=0$ and $\eta(-1,1)=1$ if and only if

$$\alpha\leq\kappa+{}^{1-p}/_{p}(1-\kappa). \tag{7}$$

If (7) holds, then (4) is independent of S and reduces to $\kappa\leq\delta(1-\Pi)$. If (7) fails, then if $S=1$, (4) reduces to $\kappa\leq\delta(1-\Pi)\big[\rho(1-\kappa)+(1-\rho)\big]$, while if $S=-1$, (4) reduces to $\kappa\leq\delta(1-\Pi)\big[\rho\kappa+(1-\rho)\big]$. It follows that such an equilibrium exists if and only if

$$\kappa\leq\delta(1-\Pi)\big[\rho\min\{\kappa,1-\kappa\}+(1-\rho)\big],$$

Consider an equilibrium in which good politicians only ask bureaucrats to campaign if $S=1$, i.e., such that $\gamma_1=1$ and $\gamma_{-1}=0$. It follows that $\eta(1,1)=1$, $\eta(1,0)=\eta(-1,0)=0$

and that $\eta(-1,1) = 1$ if and only if

$$\alpha \leq \frac{\kappa}{1 - {}^{1-p}/_{p}(1-\kappa)} \tag{8}$$

If (8) holds, then if $S = 1$, (4) reduces to $\kappa \leq \delta(1-\Pi)$, whereas if $S = -1$, (4) reduces to $\kappa \geq \delta(1-\Pi)$. Clearly, in this case this type of equilibrium does not typically exist, so that we ignore it from now on. If (8) fails, then if $S = 1$, (4) reduces to $\kappa \leq \delta(1-\Pi)\big[\rho(1-\kappa)+(1-\rho)\big]$, whereas if $S = -1$, (4) reduces to $\kappa \geq \delta(1-\Pi)\big[\rho\kappa + (1-\rho)\big]$.

Finally, consider an equilibrium in which good politicians only ask bureaucrats to campaign if $S = -1$, i.e., such that $\gamma_1 = 0$ and $\gamma_{-1} = 1$. It follows that $\eta(1,1) = \eta(1,0) = 1$, $\eta(-1,0) = 0$ and that $\eta(-1,1) = 1$ if and only if

$$\alpha \leq \frac{1-p}{p}. \tag{9}$$

If (9) holds, then if $S = 1$, (4) reduces to $\kappa \geq \delta(1-\Pi)(1-\rho)$, whereas if $S = -1$, (4) reduces to $\kappa \leq \delta(1-\Pi)$. If (9) fails, then if $S = 1$, (4) reduces to $\kappa \geq \delta(1-\Pi)\big[-\rho\kappa + 1 - \rho\big]$, whereas if $S = -1$, (4) reduces to $\kappa \leq \delta(1-\Pi)\big[\rho\kappa + 1 - \rho\big]$.

If α is sufficiently small, then it follows that (7), (8) and (9) are all satisfied. ■

Proof of Proposition 3. Recall, from Proposition 1, that if campaigns are prohibited, we have that $Q^G_\emptyset = 1$, $\sigma^G_\emptyset = \rho p$ and $\sigma^B_\emptyset = \rho p + 1 - \rho$, so that

$$\sigma_\emptyset = 2\rho p + 1 - \rho. \tag{10}$$

When campaigns are allowed, the no-campaigning equilibrium ($\gamma_1 = \gamma_{-1} = 0$) is such that $\sigma^G_N = \rho[p(1-\alpha\kappa) + (1-p)\alpha\kappa] + (1-\rho)\alpha$, $\sigma^B_N = \rho p + (1-\rho)(1-\alpha)$ and $Q^G_N = 1 - \alpha\kappa$. It follows from (3) that in this case

$$\Delta W = \delta(1-\Pi)\rho\alpha\kappa(1-2p) - \alpha\kappa < 0.$$

Therefore, the voter strictly prefers to ban campaigns whenever she expects the no-campaigning equilibrium if campaigns were allowed.

The full-campaigning equilibrium ($\gamma_1 = \gamma_{-1} = 1$) is such that $\sigma^G_F = 1$, $\sigma^B_F = (1-\alpha)$ and $Q^G_F = 1 - \kappa$. It follows that in this case

$$\Delta W = \delta(1-\Pi)\left[1 - \alpha - \rho[2p-1]\right] - \kappa. \tag{11}$$

Therefore, if she expects the full-campaigning equilibrium, the voter prefers to allow campaigns if and only if

$$\kappa \leq \kappa_F \equiv \delta(1-\Pi)\left[1-\alpha-\rho[2p-1]\right].$$

The partial-campaigning equilibrium ($\gamma_1 = 0$, $\gamma_{-1} = 1$) is such that $\sigma_P^G = \rho + (1-\rho)[p\alpha + (1-p)]$, $\sigma_P^B = \rho p(1-\alpha) + (1-\rho)(1-\alpha)$ and $Q_P^G = 1 - \kappa[1-p(1-\alpha)]$. It follows that

$$\Delta W = \delta(1-\Pi)\left[(1-p)(1-\alpha) - \alpha\rho[2p-1]\right] - \kappa[1-p(1-\alpha)]. \tag{12}$$

Therefore, if she expects the partial-campaigning equilibrium, the voter prefers to allow campaigns if and only if

$$\kappa \leq \kappa_P \equiv \frac{\delta(1-\Pi)}{1-p(1-\alpha)}\left[(1-p)(1-\alpha) - \alpha\rho[2p-1]\right].$$

It can be computed that

$$[1-p(1-\alpha)](\kappa_P - \kappa_F) = \delta(1-\Pi)(1-\alpha)\left[\rho[2p-1](1-p) - \alpha p\right],$$

so that $\kappa_P > \kappa_F$ if α is sufficiently small.

Finally, we have that

$$\frac{W_P - W_F}{\Pi} = (1-\alpha)\left[\delta(1-\Pi)\left[\rho[2p-1] - p\right] + p\kappa\right],$$

so that the voter prefers partial to full campaigns if and only if

$$\kappa \geq \kappa^{PF} \equiv \delta(1-\Pi)\left[1 - {}^{\rho}\!/_{p}(2p-1)\right].$$

Note that ${}^1\!/_2 < p < 1$ implies that $\kappa^{PF} > 0$. We have that

$$\kappa^F - \kappa^{PF} = \delta(1-\Pi)\left[\rho(2p-1)\,{}^{1-p}\!/_{p} - \alpha\right],$$

so that $\kappa^F > \kappa^{PF}$ if α is sufficiently small.

Finally, note that $\kappa^P < \delta(1-\Pi)$ and that

$$\kappa^F - \delta(1-\Pi)(1-\rho) = \delta(1-\Pi)\left[2\rho(1-p) - \alpha\right],$$

so that $\kappa^F > \delta(1-\Pi)(1-\rho)$ if α is sufficiently small. Therefore, by Proposition 2, the full campaigning equilibrium exists for all $\kappa \leq \kappa^P$ and the partial campaigning equilibrium exists for all $\kappa^F \leq \kappa \leq \kappa^P$. ■

Proof of Corollary 1. For the full-campaigning equilibrium, the welfare impact of allowing campaigns is given by (11). This expression is decreasing in α, p, κ and ρ.

For the partial-campaigning equilibrium, the welfare impact of allowing campaigns is given by (12). This expression is decreasing in α, κ and ρ. For p, note that the derivative can be written as $[\kappa - \delta(1-\Pi)](1-\alpha) - \delta(1-\Pi)2\alpha\rho$. From Part 3 of Proposition 2, the partial campaigning equilibrium only exists if $\delta(1-\Pi) > \kappa$, therefore this derivative is negative. ■

Proof of Lemma 3. Suppose that $\beta_{-1} = 0$. Then from Lemma 4 we have $\eta(1,1) = 1$, because $p > 1/2$ and $\tilde{\gamma}_S \geq \alpha$. But then in (5) the term $[\eta(1,1) - \eta(1,0)]$ is non-negative, and therefore $\rho[\eta(1,1) - \eta(1,0)] + 1 - \rho > 0$. This contradicts $\beta_{-1} = 0$.

Similarly, suppose that $\beta_1 = 0$. Then from Lemma 4 we have $\eta(-1,0) = 0$ because $p > 1/2$. But then in (5) the term $[\eta(-1,1) - \eta(-1,0)]$ is non-negative, and therefore $\rho[\eta(-1,1) - \eta(-1,0)] + 1 - \rho > 0$. This contradicts $\beta_1 = 0$. ■

Proof of Proposition 4. From Lemma 3, non-partisan bureaucrats always campaign for bad politicians in any equilibrium with strong political control, so that we can set $\beta_S = 1$ in all expressions from Part 1 of Lemma 4. Let $\tilde{p} \equiv p(1-\kappa) + (1-p)\kappa$. Although the statement of Proposition 2 assumes that α is small, we included the equilibrium results for all values of α in our proof. In the case of strong political control, there are many cases to consider for arbitrary α, so that we prove our results for α small here, and describe equilibria for α high in Appendix A.1. To this end, assume that $\alpha < \min(\frac{1-p-p(1-\kappa)}{\kappa(1-p)}, \frac{1-p}{p})$.

Consider an equilibrium in which good politicians never ask bureaucrats to campaign, i.e., such that $\gamma_{-1} = \gamma_1 = 0$. It follows from Lemma 4 and $\alpha < \frac{1-p}{\tilde{p}}$ that $\eta(1,0) = \eta(-1,0) = 1$ and $\eta(1,1) = \eta(-1,1) = 0$. Therefore, both (4) and (5) are independent of S, and the former reduces to $\kappa \geq \delta(1-\Pi)[1-2\rho]$ while the latter reduces to $\rho \leq 1/2$.

Consider an equilibrium in which good politicians only ask bureaucrats to campaign following the unpopular policy, i.e., such that $\gamma_1 = 0$ and $\gamma_{-1} = 1$. It follows from Lemma 4 and $\alpha < \frac{1-p}{p} < \frac{1-p}{\tilde{p}}$ that $\eta(1,0) = 1$ and $\eta(1,1) = \eta(-1,1) = 0$, while $\eta(-1,0)$ is undetermined because the voter is indifferent. Suppose that $\eta(-1,0) = 1$. If $S = 1$, then (4) reduces to $\kappa \geq \delta(1-\Pi)[1-2\rho]$, while if $S = -1$, (4) reduces to $\kappa \leq \delta(1-\Pi)[1-2\rho]$. Clearly, this type of equilibrium does not typically exist, so that we ignore it from now on. Now suppose that $\eta(-1,0) = 0$. If $S = 1$, then (4) reduces to $\kappa \geq \delta(1-\Pi)[1-2\rho]$, while if $S = -1$, then (4) reduces to $\kappa \leq \delta(1-\Pi)[1-\rho]$. Furthermore, if $S = 1$ then (5) is always satisfied, while if $S = -1$, (5) reduces to $\rho \leq 1/2$.

Consider an equilibrium in which good politicians only ask bureaucrats to campaign following the popular policy, i.e., such that $\gamma_1 = 1$ and $\gamma_{-1} = 0$. It follows from Lemma 4 and $\alpha < \frac{1-p-p(1-\kappa)}{\kappa(1-p)}$ that $\eta(-1,0) = 1$ and $\eta(1,1) = \eta(-1,1) = 0$, while $\eta(1,0)$ is undetermined because the voter is indifferent. As above, an equilibrium typically does not exist if $\eta(1,0) = 1$, so suppose that $\eta(1,0) = 0$. If $S = 1$, then (4) reduces to $\kappa \leq \delta(1-\Pi)[1-\rho]$, while if $S = -1$, then (4) reduces to $\kappa \geq \delta(1-\Pi)[1-2\rho]$. Furthermore, if $S = -1$ then (5) is always satisfied, while if $S = 1$, (5) reduces to $\rho \leq 1/2$.

Consider an equilibrium in which good politicians always ask bureaucrats to campaign, i.e., such that $\gamma_1 = \gamma_{-1} = 1$. It follows from Lemma 4 that $\eta(1,1) = 1$ and $\eta(-1,1) = 0$, while $\eta(1,0)$ and $\eta(-1,0)$ are undetermined because the voter is indifferent. First, suppose that $\eta(1,0) = \eta(-1,0) = 1$. If $S = -1$, then (4) reduces to $\rho \leq \frac{\delta(1-\Pi)-\kappa}{\delta(1-\Pi)}\frac{1}{2-\kappa}$ and if $S = 1$ then (4) reduces to $\rho \leq \frac{\delta(1-\Pi)-\kappa}{\delta(1-\Pi)}\frac{1}{1+\kappa}$. Note that the first condition guarantees $\rho < \frac{1}{2}$, so that (5) is satisfied for all S. Second, suppose that $\eta(1,0) = 1$ and $\eta(-1,0) = 0$. If $S = -1$, then (4) reduces to $\rho \leq \frac{\delta(1-\Pi)-\kappa}{\delta(1-\Pi)}\frac{1}{1+\kappa}$, which implies that if $S = 1$ then (4), which reduces to $\rho \leq \frac{\delta(1-\Pi)-\kappa}{\delta(1-\Pi)}\frac{1}{1-\kappa}$, is also satisfied. Also, (5) is satisfied for all S. Third, suppose that $\eta(-1,0) = 1$ and $\eta(1,0) = 0$. If $S = -1$, then (4) reduces to $\rho \leq \frac{\delta(1-\Pi)-\kappa}{\delta(1-\Pi)}\frac{1}{2-\kappa}$, which implies that if $S = 1$ then (4), which reduces to $\rho \leq \frac{\delta(1-\Pi)-\kappa}{\delta(1-\Pi)}\frac{1}{\kappa}$, is satisfied, and that further (5) is satisfied for all S because $\rho < \frac{1}{2}$. Finally, suppose that $\eta(-1,0) = \eta(1,0) = 0$. If $S = -1$, then (4) reduces to $\rho \leq \frac{\delta(1-\Pi)-\kappa}{\delta(1-\Pi)}\frac{1}{1-\kappa}$ and if $S = 1$, then (4) reduces to $\rho \leq \frac{\delta(1-\Pi)-\kappa}{\delta(1-\Pi)}\frac{1}{\kappa}$, and furthermore (5) is satisfied for all S. Because $\min\{\frac{1}{1-\kappa}, \frac{1}{\kappa}\} < \frac{1}{2-\kappa}, \frac{1}{1+\kappa}$, these final conditions are the weakest among all four cases, which explains the condition in Part 4 of Proposition 4. ∎

Proof of Proposition 5. When campaigns are allowed, $Q_A^G = 1 - \kappa[\alpha + (1-\alpha)(p\gamma_1 + (1-p)\gamma_{-1})]$. When they are prohibited, $Q_\emptyset^G = 1$, so that

$$Q_A^G - Q_\emptyset^G = -\kappa[\alpha + (1-\alpha)(p\gamma_1 + (1-p)\gamma_{-1})] < 0. \tag{13}$$

The policy impact of campaigns is always negative. For the impact of selection, start by observing that, when political activities are allowed, bad politicians always campaign (Lemma 3) and are therefore always reelected by impressionable voters. Thus, the likelihood of successful electoral screening under a bad politician is given by

$$\sigma_A^B = \rho[p(1-\eta(-1,1)) + (1-p)(1-\eta(1,1))] \tag{14}$$

Good politicians are reelected by impressionable voters when there is a campaign, which has probability $\Gamma \equiv p\tilde{\gamma}_1 + (1-p)\tilde{\gamma}_{-1}$. Using this observation, the likelihood of successful electoral screening under a good politician is as follows.

For $\eta(1,0)=\eta(-1,0)=\eta(1,1)=1$ and $\eta(-1,1)=0$,

$$\sigma_A^G=\rho[p(1-\tilde{\gamma}_1\kappa)+(1-p)(1-\tilde{\gamma}_{-1}(1-\kappa))]+(1-\rho)\Gamma \tag{15}$$

For $\eta(1,0)=\eta(-1,0)=1$ and $\eta(1,1)=\eta(-1,1)=0$,

$$\sigma_A^G=\rho(1-\alpha)[p(1-\gamma_1)+(1-p)(1-\gamma_{-1})]+(1-\rho)\Gamma \tag{16}$$

For $\eta(1,0)=1$ and $\eta(1,1)=\eta(-1,0)=\eta(-1,1)=0$,

$$\sigma_A^G=\rho p(1-\alpha)(1-\gamma_1)+(1-\rho)\Gamma \tag{17}$$

For $\eta(1,1)=\eta(1,0)=1$ and $\eta(-1,0)=\eta(-1,1)=0$,

$$\sigma_A^G=\rho[p(1-\tilde{\gamma}_1\kappa)+(1-p)\tilde{\gamma}_{-1}\kappa]+(1-\rho)\Gamma \tag{18}$$

For $\eta(1,1)=\eta(-1,0)=1$ and $\eta(1,0)=\eta(-1,1)=0$,

$$\sigma_A^G=\rho[p\tilde{\gamma}_1(1-\kappa)+(1-p)(\tilde{\gamma}_{-1}\kappa+(1-\alpha)(1-\gamma_{-1}))]+(1-\rho)\Gamma \tag{19}$$

For $\eta(-1,0)=1$ and $\eta(1,1)=\eta(1,0)=\eta(-1,1)=0$,

$$\sigma_A^G=\rho(1-\alpha)(1-p)(1-\gamma_{-1})+(1-\rho)\Gamma \tag{20}$$

For $\eta(1,1)=1$ and $\eta(-1,0)=\eta(1,0)=\eta(-1,1)=0$,

$$\sigma_A^G=\rho[p\tilde{\gamma}_1(1-\kappa)+(1-p)\tilde{\gamma}_{-1}\kappa]+(1-\rho)\Gamma \tag{21}$$

We now consider each of the equilibria in Proposition 4 in turn.

1. Consider $\gamma_{-1}=\gamma_1=0$. For, $\eta(1,0)=\eta(-1,0)=1$ and $\eta(1,1)=\eta(-1,1)=0$, the likelihood of successful screening under a good politician is given by (16). This becomes

$$\sigma_A^G=\rho(1-\alpha)+(1-\rho)\alpha,$$

while $\sigma_A^B=\rho$ from (14). From (3), (13), and (10), we find

$$\Delta W=(1-\Pi)\delta\left[\rho(2(1-p)-\alpha)+(1-\rho)(\alpha-1)\right]-\alpha\kappa. \tag{22}$$

The first term inside the brackets is positive because $2(1-p)>\frac{1-p}{\tilde{p}}\geq\alpha$, where the last inequality is necessary for this equilibrium to exist (Proposition 4). Thus, sophisticated voters' ability to screen always improves in this case. Clearly, the second term in the brackets is negative: impressionable voters always lose from campaigns. Since $\rho 2(1-p) < \rho$, the term in brackets is less than $(1-\alpha)(2\rho-1)$, which is negative as $\rho < 1/2$ in this equilibrium. The overall welfare effect of campaigns is negative.

2. Consider $\gamma_{-1} = 1$, $\gamma_1 = 0$. When $\eta(1,0) = 1$ and $\eta(-1,0) = \eta(1,1) = \eta(-1,1) = 0$, (17) yields

$$\sigma_A^G = \rho p(1-\alpha) + (1-\rho)(1-p+\alpha p)$$

and (14) yields $\sigma_A^B = \rho$. Using (3), (13), and (10), we get

$$\Delta W = (1-\Pi)\delta[\rho(1-p-\alpha p) + (1-\rho)p(\alpha-1)] - \kappa(1-p(1-\alpha)). \tag{23}$$

Because $1 - p > \alpha p$ (Proposition 4), the first term in brackets is positive: sophisticated voters' ability to screen always improves. The second term is negative: campaigns hurt impressionable voters. Since $\rho < 1/2$, the term in brackets is less than $\frac{1}{2}(1-p-\alpha p-p(1-\alpha)) = \frac{1}{2}(1-2p) < 0$. Thus, $\Delta W < 0$.

3. Consider $\gamma_{-1} = 0$ and $\gamma_1 = 1$. For $\eta(-1,0) = 1$ and $\eta(1,0) = \eta(1,1) = \eta(-1,1) = 0$, (20) gives

$$\sigma_A^G = \rho(1-\alpha)(1-p) + (1-\rho)(\alpha + (1-\alpha p)$$

and (14) gives $\sigma_A^B = \rho$. Using (3), (13), and (10), we get

$$\Delta W = (1-\Pi)\delta[\rho(1+(1-p)(1-\alpha)-2p) + (1-\rho)(\alpha-1)(1-p)] - \kappa(\alpha+(1-\alpha)p) \tag{24}$$

The first term in brackets may be positive or negative. The second term in brackets is negative: campaigns hurt impressionable voters. Collecting terms, the expression in brackets is $[1-2p+(2\rho-1)(1-\alpha)(1-p)] < 0$, the overall welfare effect of campaigns is therefore negative.

4. Finally, consider $\gamma_{-1} = \gamma_1 = 1$.(i) If the voter sets $\eta(1,1) = \eta(1,0) = \eta(-1,0) = 1$ and $\eta(-1,1) = 0$, (15) gives

$$\sigma_A^G = \rho\tilde{p} + 1 - \rho$$

and (14) gives $\sigma_A^B = \rho p$. Using (3), (13), and (10), we get

$$\Delta W = (1-\Pi)\delta\rho(\tilde{p}-p) - \kappa < 0. \tag{25}$$

Here sophisticated voters lose from the possibility of campaigns, while impressionable voters' welfare is unchanged.

(ii) Suppose the voter sets $\eta(1,1) = \eta(1,0) = 1$ and $\eta(-1,1) = \eta(-1,0) = 0$. Then because (18) is the same as (15), the same argument yields $\Delta W < 0$.

(iii) Suppose the voter sets $\eta(1,1) = \eta(-1,0) = 1$ and $\eta(-1,1) = \eta(1,0) = 0$. Then because (19) is the same as (15), the same argument yields $\Delta W < 0$.

(iv) Suppose the voter sets and $\eta(1,1) = 1$ and $\eta(-1,1) = \eta(-1,0) = \eta(1,0) = 0$. Then because (21) is the same as (15), the same argument yields $\Delta W < 0$. ■

Proof of Corollary 2. For the no-campaigning equilibrium, (22) is increasing in ρ and decreasing in κ and p. For α, note that the derivative is $(1-\Pi)\delta(1-2\rho)-\kappa$ which is negative in this equilibrium (Proposition 4 part 1).

For the equilibrium with $\gamma_{-1} = 1$ and $\gamma_1 = 0$, (23) is increasing in ρ and decreasing in κ. For p, the derivative is $(1-\Pi)\delta(\alpha-1-2\rho\alpha)+\kappa(1-\alpha)$, which is negative in this equilibrium (Proposition 4 part 2). For α, the derivative is $(1-\Pi)\delta p(1-2\rho) - \kappa p$ which is negative in this equilibrium.

For the equilibrium with $\gamma_{-1} = 0$ and $\gamma_1 = 1$, (24) is increasing in ρ and decreasing in κ and p. For α, the derivative is $(1-\Pi)\delta(1-p)(1-2\rho) - \kappa(1-p)$, which is negative in this equilibrium (Proposition 4 part 3).

For the full-campaigning equilibrium, (25) is unaffected by α, and decreasing in κ, p, and ρ. ■

A.1 Equilibria with strong political control when α is not small

We show that the result from Proposition 5 that banning campaigns is optimal under strong political control holds even if we relax the restriction that α is small. We begin by describing the new equilibria that arise in this case.

Proposition 6 *Consider the model with strong political control. In addition to the equilibria from Proposition 4, the following equilibria can exist.*

1. *If $\alpha \geq \frac{1-p}{\tilde{p}}$, then an equilibrium with no campaigns ($\gamma_{-1} = \gamma_1 = 0$) exists if and only if $\rho \leq 1/2$ and $\kappa \geq \delta(1-\Pi)\max\left\{\frac{1-2\rho}{1-\rho\delta(1-\Pi)}, \frac{1-\rho}{1+\rho\delta(1-\Pi)}\right\}$. In this equilibrium, the voter sets $\eta(1,1) = \eta(1,0) = \eta(-1,0) = 1$ and $\eta(-1,1) = 0$.*

2. *If $\alpha \geq \frac{1-p}{\tilde{p}}$, then an equilibrium with campaigns following the unpopular policy only ($\gamma_{-1} = 1$, $\gamma_1 = 0$) exists if and only if $\rho \leq 1/2$ and either*

   (a) *$\frac{\delta(1-\Pi)(1-\rho)}{1+\rho\delta(1-\Pi)} \leq \kappa \leq \frac{\delta(1-\Pi)(1-2\rho)}{1-\rho\delta(1-\Pi)}$. In this case the voter sets $\eta(1,0) = \eta(1,1) = \eta(-1,0) = 1$ and $\eta(-1,1) = 0$.*

(b) $\frac{\delta(1-\Pi)(1-\rho)}{1+\rho\delta(1-\Pi)} \leq \kappa \leq \frac{\delta(1-\Pi)(1-\rho)}{1-\rho\delta(1-\Pi)}$. *In this case the voter sets* $\eta(1,0) = \eta(1,1) = 1$ *and* $\eta(-1,0) = \eta(-1,1) = 0$.

3. *If* $\alpha \geq \frac{1-p-p(1-\kappa)}{\kappa(1-p)}$, *then an equilibrium with campaigns following the popular policy only* ($\gamma_{-1} = 0$, $\gamma_1 = 1$) *exists if and only if* $\rho \leq 1/2$ *and either*

   (a) $\frac{\delta(1-\Pi)(1-2\rho)}{1-\rho\delta(1-\Pi)} \leq \kappa \leq \frac{\delta(1-\Pi)}{1+\rho\delta(1-\Pi)}$. *In this case the voter sets* $\eta(-1,0) = \eta(1,1) = 1$ *and* $\eta(-1,1) = \eta(1,0) = 0$.

   (b) $\frac{\delta(1-\Pi)(1-2\rho)}{1-\rho\delta(1-\Pi)} \leq \kappa \leq \frac{\delta(1-\Pi)(1-\rho)}{1+\rho\delta(1-\Pi)}$. *In this case the voter sets* $\eta(-1,0) = \eta(1,1) = \eta(1,0) = 1$ *and* $\eta(-1,1) = 0$.

Proof. Suppose that $\gamma_{-1} = \gamma_1 = 0$. It follows from Lemma 4 and $\alpha \geq \frac{1-p}{\tilde{p}}$ that $\eta(1,0) = \eta(-1,0) = \eta(1,1) = 1$ and $\eta(-1,1) = 0$. If $S = 1$, (4) reduces to $\kappa \geq \frac{\delta(1-\Pi)(1-\rho)}{1+\rho\delta(1-\Pi)}$, while if $S = -1$, (4) reduces to $\kappa \geq \frac{\delta(1-\Pi)(1-2\rho)}{1-\rho\delta(1-\Pi)}$. Finally, if $S = 1$, (5) reduces to $\rho \leq 1/2$, while if $S = -1$, (5) is always satisfied.

Suppose that $\gamma_{-1} = 1$ and $\gamma_1 = 0$. It follows from Lemma 4 and $\alpha \geq \frac{1-p}{\tilde{p}}$ that $\eta(1,0) = \eta(1,1) = 1$ and $\eta(-1,1) = 0$, while $\eta(-1,0)$ is undetermined. First, suppose further that $\eta(-1,0) = 1$. If $S = 1$, (4) reduces to $\kappa \geq \frac{\delta(1-\Pi)(1-\rho)}{1+\rho\delta(1-\Pi)}$, while if $S = -1$, (4) reduces to $\kappa \leq \frac{\delta(1-\Pi)(1-2\rho)}{1-\rho\delta(1-\Pi)}$. Finally, if $S = 1$, (5) reduces to $\rho \leq 1/2$, while if $S = -1$, (5) is always satisfied. Second, suppose further that $\eta(-1,0) = 0$. If $S = 1$, (4) reduces to $\kappa \geq \frac{\delta(1-\Pi)(1-\rho)}{1+\rho\delta(1-\Pi)}$, while if $S = -1$, (4) reduces to $\kappa \leq \frac{\delta(1-\Pi)(1-\rho)}{1-\rho\delta(1-\Pi)}$. Finally, (5) is independent of the state and is always satisfied.

Suppose that $\gamma_{-1} = 0$ and $\gamma_1 = 1$. It follows from Lemma 4 and $\alpha \geq \frac{1-p-p(1-\kappa)}{\kappa(1-p)}$ that $\eta(-1,0) = \eta(1,1) = 1$ and $\eta(-1,1) = 0$, while $\eta(1,0)$ is undetermined. First, suppose further that $\eta(1,0) = 0$. If $S = 1$, (4) reduces to $\kappa \leq \frac{\delta(1-\Pi)}{1+\rho\delta(1-\Pi)}$, while if $S = -1$, (4) reduces to $\kappa \geq \frac{\delta(1-\Pi)(1-2\rho)}{1-\rho\delta(1-\Pi)}$. Finally, if $S = 1$, (5) reduces to $\rho \leq 1/2$, while if $S = -1$, (5) is always satisfied. Second, suppose further that $\eta(1,0) = 1$. If $S = 1$, (4) reduces to $\kappa \leq \frac{\delta(1-\Pi)(1-\rho)}{1+\rho\delta(1-\Pi)}$, while if $S = -1$, (4) reduces to $\kappa \geq \frac{\delta(1-\Pi)(1-2\rho)}{1-\rho\delta(1-\Pi)}$. Finally, if $S = 1$, (5) reduces to $\rho \leq 1/2$, while if $S = -1$, (5) is always satisfied. ■

We now show that for those new equilibria uncovered by Proposition 6, the welfare effects of allowing bureaucratic campaigns are identical to those of Proposition 5.

Proposition 7 *Allowing bureaucrats to campaign always hurts impressionable voters. It may benefit or hurt sophisticated voters. Overall, banning campaigns is always optimal.*

Proof. The policy impact of campaigns is given by (13), and it is still negative. For the impact of selection, we consider each of the equilibria in Proposition 6 in turn.

1. Consider $\gamma_{-1} = \gamma_1 = 0$. When $\eta(1,0) = \eta(-1,0) = \eta(1,1) = 1$ and $\eta(-1,1) = 0$, the likelihood of successful screening under a good politician is given by (15). We get

$$\sigma_A^G = \rho[p(1-\alpha\kappa) + (1-p)(1-\alpha(1-\kappa))] + (1-\rho)\alpha,$$

while (14) reduces to $\sigma_A^B = \rho p$. From (3), (13), and (10), we find

$$\Delta W = (1-\Pi)\delta[\rho((1-p)(1-\alpha) - \alpha\kappa(2p-1)) + (1-\rho)(\alpha-1)] - \alpha\kappa.$$

The first term inside the brackets may be positive or negative. The second term is negative: allowing campaigns hurts impressionable voters. Combining the terms inside the brackets yields $[(1-\alpha)(\rho(2-p)-1) + \rho\alpha\kappa(1-2p)] < 0$, where the inequality follows because $\rho < 1/2$. Overall, campaigns hurt voters.

2 Consider $\gamma_{-1} = 1$, $\gamma_1 = 0$.

2(a). When $\eta(1,1) = \eta(-1,0) = \eta(1,0) = 1$ and $\eta(-1,1) = 0$, (15) yields

$$\sigma_A^G = \rho[p(1-\alpha\kappa) + (1-p)\kappa] + (1-\rho)[1-p(1-\alpha)],$$

and (14) yields $\sigma_A^B = \rho p$. Using (3), (13), and (10), we get

$$\Delta W = (1-\Pi)\delta[\rho\kappa(1-p-\alpha) + (1-\rho)p(\alpha-1)] - \kappa(1-p(1-\alpha)).$$

The first term inside the brackets is negative, because $1-p-\alpha < 1-p-\alpha p < 0$, where the last inequality holds by assumption. Here, sophisticated voters lose from allowing campaigns. The second term in the brackets is negative as well: impressionable voters also lose, and $\Delta W < 0$.

2(b). When $\eta(1,1) = \eta(1,0) = 1$ and $\eta(-1,1) = \eta(-1,0) = 0$, we use the fact that (18) is the same as (15). Therefore, the same reasoning as for 2(a) above shows that both sophisticated and impressionable voters are hurt by campaigns in this case.

3 Consider $\gamma_{-1} = 0$ and $\gamma_1 = 1$.

3(a). When $\eta(1,1) = \eta(-1,0) = 1$ and $\eta(1,0) = \eta(-1,1) = 0$, (19) gives

$$\sigma_A^G = \rho(1-\alpha)(1-p) + (1-\rho)(\alpha + (1-\alpha p))$$

and (14) gives $\sigma_A^B = \rho p$. Using (3), (13), and (10), we get

$$\begin{aligned}\Delta W &= (1-\Pi)\delta[\rho(1+(1-p)(1-\alpha)-2p) + (1-\rho)(\alpha-1)(1-p)] - \kappa(\alpha+(1-\alpha)p) \\ &= (1-\Pi)\delta[1-2p+(2\rho-1)(1-\alpha)(1-p)] - \kappa(\alpha+(1-\alpha)p) < 0.\end{aligned}$$

Sophisticated voters may gain or lose, impressionable voters lose, and the overall welfare effect of campaigns is negative.

3(b). When $\eta(1,0) = \eta(-1,0) = \eta(1,1) = 1$ and $\eta(-1,1) = 0$, (15) gives

$$\sigma_A^G = \rho[p(1-\kappa) + (1-p)(1-\alpha+\alpha\kappa)] + (1-\rho)(\alpha+p-\alpha p)$$

and (14) gives $\sigma_A^B = \rho p$. Using (3), (13), and (10), we get

$$\Delta W = (1-\Pi)\delta[\rho\{-p\kappa+(1-p)\alpha\kappa+(1-p)(1-\alpha)\}+(1-\rho)(\alpha-1)(1-p)] - \kappa(\alpha+(1-\alpha)p)$$

The second term inside the brackets is negative: impressionable voters always lose from campaigns. Collecting terms in the brackets yields $[\rho\kappa(-p+(1-p)\alpha)-(1-2\rho)(1-\alpha)(1-p)]$, which is negative since $p > 1/2$ and $1/2 > \rho$. Thus, $\Delta W < 0$. ■