

# Signaling Ability Through Policy Change

Benjamin Shaver\*

*Northwestern University*

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## Abstract

An incumbent policymaker has a signature reform—a reform voters closely associate with her. The incumbent develops a reform, observes its quality, and decides whether to implement it. The voter observes this decision but not the quality of her reform and decides whether to reelect the incumbent. I show that the incumbent sometimes engages in ability signaling: she implements her reform even if it is of lower quality than what she would implement under complete information about her ability. Whether she does depends on the interaction between her ideological preferences, which shape what the voter infers, and the electoral context, which determines her primary signaling concern. I then show that requiring the incumbent to secure the agreement of a second policymaker with whom she is electorally competing may create the opposite distortion: the second policymaker blocks reforms he would allow under complete information. Whether this distortion arises also depends on the interaction between ideological preferences and the electoral context. Finally, I demonstrate an informational logic for ideological moderation or extremism.

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# 1 Introduction

In politics, voters often associate a policymaker with a “signature reform”—a proposed change to existing policy that the policymaker has directed voters’ attention towards. Examples include President Bill Clinton’s push for healthcare reform, President Donald Trump’s promise to build a wall between the United States and Mexico, Wisconsin Governor Scott Walker’s commitment to require public employees to pay more for insurance and pensions, or New York City mayoral candidate Zohran Mamdani’s plan for fare-free buses. Yet turning a signature reform into actual policy requires more than just rhetoric. In office, the policymaker must develop their signature reform from an idea into actual legislation or a formal policy before it can be implemented. During this process, the policymaker learns more about the quality of the signature reform—its costs, its benefits, how well it can be executed, etc.—and then must decide whether to move forward with implementation or instead preserve the status quo. Sometimes, as with Scott Walker, the policymaker makes good on their signature reform. In other cases, like Clinton’s healthcare plan, they do not. What do voters infer from the policymaker’s decision? How do these beliefs shape the policymaker’s incentives? What distortions arise, and under what conditions?

In this paper, I develop a game-theoretic model to answer these questions. In the model, policies have two dimensions: ideology and quality. An incumbent policymaker (she), driven by policy goals and the prospect of reelection, decides whether to implement her signature reform, which moves policy to her ideal point along the ideological dimension, or retain an inherited policy of publicly known ideology and quality. Before deciding whether to implement her reform, the incumbent privately learns its quality, which is drawn from a distribution that depends on her unobserved ability. Notably, a higher-quality reform is more likely to be developed by a high-ability policymaker. A voter observes the incumbent’s decision but not the quality of her reform and reelects her if the probability that she has high ability is sufficiently high.

In equilibrium, the incumbent implements her signature reform if its quality exceeds her *quality threshold*, and the voter updates positively about the incumbent’s ability when she implements her signature reform and updates negatively when she does not. As a result, the incumbent sometimes engages in *ability signaling*—relative to a benchmark where the voter knows the incumbent’s ability, the incumbent adopts a lower quality threshold, implementing additional, lower-quality reforms because it is electorally advantageous to do so.

The central insight of this paper is that whether the incumbent engages in ability signaling depends on the interaction between her ideological preferences and the status of the competition between her and the voter’s other choice in the election, the challenger. The

mechanism driving this insight is the way the incumbent’s ideological preferences affect what the voter infers about her ability based on whether she implements her signature reform or not. On the one hand, when the incumbent’s ideological benefit from reform is large (i.e., she is very ideologically opposed to the status quo), the voter recognizes she will only retain the status quo if her signature reform is *particularly* low quality. Thus, retention is a very negative signal about her ability. Conversely, when the incumbent’s ideological benefit from reform is small, the voter understands that if she implements her reform, it is because it is high quality, making implementation an *especially* positive signal about her ability.

How the incumbent’s ideological preferences relate to ability signaling depends on the electoral context, which determines her primary signaling concern: does she want to send a positive signal about her ability, or avoid sending a negative one? When the incumbent *ex ante* trails the challenger, her primary signaling concern is to send a positive signal about her ability. She will lose the election if she retains the status quo, but can win if she implements her reform—if doing so is a sufficiently strong signal of her ability. Since the smaller her ideological benefit from reform, the more positive a signal reform is, she wins when she implements her reform when her ideological benefit is sufficiently small. This illustrates one strategic logic for ability signaling: a trailing incumbent whose signature reform is ideologically similar to the status quo engages in ability signaling to appear like the type of incumbent who produces a reform high-quality enough to implement.

In contrast, when the incumbent *ex ante* leads, her primary signaling concern is to avoid sending a negative signal about her ability. She wins the election regardless of her decision unless retaining the status quo is a sufficiently negative signal, in which case she loses when she retains the status quo. Because retention is a more negative signal when her ideological benefit from reform is large, this concern arises when that benefit is sufficiently high. Thus, this illustrates a second strategic logic for ability signaling: a leading incumbent whose signature reform is ideologically far from the status quo engages in ability signaling to avoid appearing like the type of incumbent who produces a reform so low-quality that she prefers the status quo despite her ideological opposition.

To see this insight more clearly, consider congressional Republicans in 2017, who won a majority in the Senate and the House in part by campaigning on repealing and replacing the Affordable Care Act (ACA). Once in office, some GOP legislators raised the alarm that the policies on the table to repeal and replace would lead to significant problems. Republican Senator Susan Collins, for instance, feared one of the policies considered would “have a substantially negative impact on the number of people covered by insurance” (Collins 2017). Nonetheless, congressional Republicans pushed forward to implement their signature reform.<sup>1</sup>

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<sup>1</sup>By using the budget reconciliation process, Senate Republicans could have passed the repeal despite

Why did they persist despite the concerns of some in their caucus?

My analysis suggests that, given congressional Republicans' strong ideological opposition to the status quo, failure to follow through on their signature reform was a very negative signal about their ability. If congressional Republicans feared sending such a negative signal—and comments like Senator Tim Scott's warning that he "would anticipate that there [will] be significant blowback for not finishing what we started several years ago" suggest they did—they would have distorted their behavior by engaging in ability signaling (Bowman 2017). Specifically, they would have adopted a lower quality threshold for reform to avoid appearing like the types of incumbents who produced a reform so low quality that they preferred the status quo despite their ideological opposition to it.

In the telling of Republican Senator Chuck Grassley, something like this was at play. Precisely because American voters knew just how badly Republicans disliked the ACA, it was imperative to pass the reform:

"You know, I could maybe give you 10 reasons why this bill shouldn't be considered, but Republicans campaigned on this so often that you have a responsibility to carry out what you said in the campaign. That's pretty much as much of a reason as the substance of the bill."<sup>2</sup>

My analysis also suggests that if congressional Republicans were less ideologically opposed to the ACA, their failure to implement repeal and replace would have been a weaker negative signal. This, in turn, would have removed their incentive to engage in ability signaling, making them more discerning about the quality of their signature reform.

Like the incumbent's ideological preferences, the quality of the status quo affects what the voter learns about the incumbent's ability based on her reform decision: a high-quality status quo means reform is a stronger signal of high ability, while a low-quality status quo means retaining the status quo is a stronger signal of low ability. This interacts with the state of the electoral context to determine the relationship between the quality of the status quo and distorted policymaking. When the incumbent trails, ability signaling arises when the status quo is high-quality. But when the incumbent leads, ability signaling arises when the status quo is low-quality, a prediction reversing the insight of related work like Judd (2017).

In many cases, an incumbent policymaker cannot unilaterally implement her signature reform; instead, she must secure agreement from another policymaker with potentially different ideological preferences. Moreover, these negotiations often occur under the shadow of an

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lacking a filibuster-proof majority.

<sup>2</sup>Noble (2017)

upcoming election in which the policymakers compete. For instance, consider Bill Clinton’s attempts to implement universal healthcare. Having chosen not to use budget reconciliation, and without a filibuster-proof majority in the Senate, he needed to secure some Republican support to advance his signature reform. What did voters learn from his failure to do so? What would they have learned had he succeeded? And how did this shape congressional Republicans’ incentives to agree to his proposed reform?

I study an extension of the baseline model where the incumbent chooses whether to propose her signature reform, which is implemented if and only if the challenger (he) agrees to it. Before deciding, the challenger observes the quality of the incumbent’s reform. In equilibrium, the challenger sometimes engages in *ability blocking*: he adopts a higher quality threshold than he would if the voter knew the incumbent’s ability, thereby blocking some additional reforms.

As in the baseline model, the central insight is that whether the challenger engages in ability blocking depends on the interaction between his ideological preferences and the status of the electoral competition between him and the incumbent. A similar informational mechanism drives this insight. The more ideologically opposed the challenger is to the incumbent’s proposed reform, the more positively the voter updates about the incumbent’s ability when the challenger agrees to it. And the less ideologically opposed he is, the more negatively the voter updates when he blocks it.

This mechanism interacts with the state of the electoral competition, which determines the challenger’s primary signaling concern: does he want to send a negative signal about the incumbent’s ability to the voter, or prevent the incumbent from sending a positive signal? In the former case, which is when the challenger trails the incumbent, he engages in ability blocking when blocking the incumbent’s proposed reform is a sufficiently negative signal about her ability—when his ideological cost of reform is sufficiently small. In the latter case, which is when the challenger leads the incumbent, he engages in ability blocking when agreeing to the incumbent’s proposed reform is a sufficiently positive signal about her ability, which is when the challenger’s ideological cost is sufficiently large. Thus, two distinct strategic logics drive ability blocking: (i.) a trailing challenger who is not ideologically opposed to the incumbent’s signature reform engages in ability blocking to make the incumbent look like the type of incumbent whose reform is so low-quality that even an amenable challenger will not agree to it, and (ii.) a leading challenger who is ideologically opposed to the incumbent’s signature reform engages in ability blocking to prevent the incumbent from looking like the type of incumbent whose reform is so high-quality that an ideologically opposed challenger is willing to agree to it.

Unsurprisingly, introducing the challenger’s veto decreases the probability that the in-

cumbent’s signature reform is implemented relative to when the incumbent can act unilaterally—due ability blocking and his ideological disagreement with the incumbent. However, I show that the presence of the challenger’s veto can be electorally beneficial for the incumbent. Because the challenger blocks some reforms that the incumbent would make if she could act unilaterally, securing the challenger’s agreement is a stronger signal of high ability, and failing to secure the challenger’s agreement is a weaker signal of low ability. Hence, this model provides a micro-foundation for the conventional wisdom that voters have a preference for bipartisanship (e.g., Friedman 2012).

The mechanism at the core of this model is that ideological preferences affect the information conveyed about the incumbent’s ability depending on whether her signature reform is implemented or not. To conclude, I ask whether this means the incumbent ever wants to develop a reform that is not at her ideological ideal point, and show the answer is “yes.” Specifically, I study an extension of the baseline model where the incumbent publicly chooses the ideology of her reform before privately learning its quality. One could think of this as the incumbent campaigning on a signature reform and then taking a different ideological approach to that reform once in office. Despite being able to implement her signature reform unilaterally, for some regions of the parameter space, she develops a reform with an ideology that differs from her ideological ideal point. Importantly, she does not do this to move the ideology of her reform closer to the voter’s ideological ideal point but to affect the information conveyed by her decision whether to implement her reform. As a result, she sometimes wins reelection with a higher probability than if she develops a reform with her preferred ideology. The model thus highlights an informational logic for ideological moderation or ideological extremism in unilateral policymaking.

## 1.1 Related Literature

**Policy Quality** This paper formalizes the decision of an incumbent policymaker whether to implement her signature reform after learning its quality, as well as a veto player’s decision whether to agree to a reform, when the policymakers care about the quality of the reform as well as its ideological content. To do this, I model policy as having two dimensions—quality and ideology—building on a small but growing literature in which policy has distinct ideological and valence components (e.g., Hirsch and Shotts 2012; Hirsch and Shotts 2015; Hirsch and Shotts 2018; Hitt, Volden, and Wiseman 2017; Londregan 2000). These models consider settings where a policymaker can invest in improving a policy proposal along the quality dimension to increase the likelihood that a veto player accepts it. However, with the exception of Hitt, Volden, and Wiseman (2017), who also allow for heterogeneous poli-

cymaking ability in a complete information setting, these models assume policymakers have equal ability to develop high-quality policies. My core contribution to this literature is that I extend their setup to explore what happens when there is uncertainty about a policymaker’s ability to develop high-quality policies in an electoral accountability framework.

**Electoral Accountability and Ideological Preferences** At its core, this paper speaks to a classic problem in the electoral accountability literature, that of uncertainty about an incumbent policymaker’s type leading her to distort her behavior to increase her probability of winning reelection. Much of the existing work on this topic focuses on settings where the incumbent’s type is the precision of her signal (e.g., Canes-Wrone, Herron, and Shotts 2001; Ashworth and Shotts 2010; Maskin and Tirole 2004; Levy 2004; Fu and M. Li 2014). In contrast, I study a setting where this uncertainty is about her ability to develop high-quality policies.

Beyond exploring a less-studied source of uncertainty, my primary contribution to the electoral accountability literature is twofold. First, I show that the incumbent policymaker’s ideological preferences affect what voters learn from her decision whether to implement a signature reform.<sup>3</sup> Second, I show how this mechanism interacts with the electoral context to determine when an often-discussed policymaking distortion arises: excessive reform. While others have explored how ideological congruence between policymakers and voters determines whether distortions arise (Fox and Shotts 2009; Lee and Hwang 2022; Bils 2023), I illustrate a purely informational path connecting a policymaker’s ideological preferences to whether she distorts her policymaking by pushing through excessive, low-quality reforms.

Judd (2017) studies a model that is similar to mine in which an incumbent chooses between unilaterally implementing a reform, which reveals her type, and retaining the status quo. In Judd (2017), the incumbent and challenger are ex-ante symmetric, and the incumbent does not care about ideology. My model can be seen as a generalization in that I study a richer electoral environment and introduce additional, substantively relevant considerations. These generalizations are crucial since, when combined with the assumption in my model that the quality of the incumbent’s reform is not revealed before the election, they reveal that the incumbent’s ideological preferences have an important effect on the voter’s beliefs, and interact with the electoral context to drive when the incumbent implements excessive, low-quality reforms. In fact, these generalizations reveal that the key insight in Judd (2017),

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<sup>3</sup>This is similar to the way that expected citizen coproduction affects what voters learn from policy failure and success in Ma, Schnakenberg, and Turner (2025). In turn, this affects whether an incumbent implements a risky reform. However, in Ma, Schnakenberg, and Turner (2025), coproduction only affects the informativeness of policy failure, whereas in my model, it affects the informativeness of the decision to implement a reform or not.

that distorted policymaking only occurs when the status quo is of sufficiently high quality, is reversed in some cases. Moreover, in my model, I can explore the incumbent’s incentives to moderate or choose a more ideologically extreme reform, uncovering a novel informational mechanism behind such decisions.

**Electoral Accountability with a Veto Player** When the challenger can veto the incumbent’s proposed reform, my model is related to work on electoral accountability and veto players. While others focus on vetoes as a potential solution to distorted policymaking (Fox and Stephenson 2011; Buisseret 2016), I focus on how electoral competition between a proposer and a veto player impacts the veto player’s use of his veto.

The veto player’s considerations in my model resemble those of a potential policy saboteur (e.g., Gieczewski and C. Li 2022). In particular, my model shares some similarities with Hirsch and Kastellec (2022), who study how electoral competition affects whether a saboteur publicly sabotages an incumbent policymaker’s policy. In their model, sabotage completely eliminates the probability of policy success, and the saboteur has more information than the voter about the incumbent’s type, which affects the probability of policy success. However, in addition to substantively different focuses, there are other important differences between our models. In their model, they focus on a region of the parameter space where the incumbent is willing to sabotage a high-quality incumbent. This means that sabotaging the incumbent’s policy may be a positive or negative signal about her ability. In fact, which of the two it is critically determines whether sabotage arises in equilibrium. In contrast, in my model, vetoing the incumbent’s proposed reform is always a negative signal about her ability, while agreeing to it is a positive signal. As a result, equilibrium behavior is determined by the extent to which other factors affect the strength of these signals, as well as whether the veto player fears the voter updating positively about the incumbent, or wants the voter to update negatively about her.

Furthermore, there is a key difference between how I model the effect of a veto versus how they model the effect of sabotage. In my model, when the veto player vetoes, the status quo is retained. In their model, when the saboteur sabotages, the incumbent’s policy is maintained, but it fails. This means that in my model, the veto player’s ideological preferences affect his incentive to veto in a way that the saboteur’s preferences do not in their model. This difference is crucial since the veto player’s ideological preferences affect what the voter infers from his decision whether to veto, which, in turn, affects when the veto player distorts his behavior by blocking additional reforms. Thus, my model complements Hirsch and Kastellec (2022) by showing how ideology differently affects the equilibrium use of a veto versus policy sabotage. Moreover, this difference means that the presence of the veto player may make



the incumbent better off electorally, which is not the case in Hirsch and Kastellec (2022).

## 2 Model

There are three players: an incumbent policymaker ( $I$ , “she”), a challenger ( $C$ , “he”), and a voter ( $V$ , “he”). Each policymaker,  $j \in \{I, C\}$ , either has high ability ( $\tau_j = 1$ ) or low ability ( $\tau_j = 0$ ), and their types are unknown to all players.<sup>4</sup> At the start of the game, the policymakers’ types are independently and identically drawn from a Bernoulli distribution such that the prior probability that policymaker  $j$  has high ability is  $p \in (0, 1)$ .

There is a publicly observed status quo,  $\pi_{sq} = (x_{sq}, q_{sq})$ , which consists of ideology,  $x_{sq} \in \mathbb{R}$ , and quality,  $q_{sq} \in \mathbb{R}$ . The incumbent has the option to retain the status quo,  $\pi = \pi_{sq}$ , or implement her reform,  $\pi_I$ , which has an exogenously determined ideology,  $x_I \in \mathbb{R}$ , and quality,  $q_I \in \mathbb{R}$ . While all players know  $x_I$ , only the incumbent knows  $q_I$ , which she privately learns before publicly deciding whether to implement her reform. Observing this decision, but without observing  $q_I$ , the voter chooses between reelecting the incumbent ( $e = 1$ ) and replacing her with the challenger ( $e = 0$ ).

The quality of the incumbent’s reform,  $q_I$ , is drawn from one of two distributions depending on her type. Let  $f$  be the prior distribution of  $q_I$  if the incumbent has high ability, and let  $g$  be the prior distribution of  $q_I$  if the incumbent has low ability. I assume  $f(q_I) > 0$  and  $g(q_I) > 0$  for  $q_I \in \mathbb{R}$  and  $f(q_I)$  and  $g(q_I)$  have the strict monotone likelihood ratio property (MLRP) (Milgrom 1981).<sup>5</sup>

The timing of the model is summarized below:

1. Nature privately draws the policymakers’ types and  $q_I$ .
2. The incumbent privately learns  $q_I$ .
3. The incumbent chooses whether to implement her reform.
4. The voter observes the incumbent’s decision but not  $q_I$ .
5. The voter chooses whether to elect the incumbent or challenger.

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<sup>4</sup>The assumption that the incumbent does not know her type is made to avoid additional notation, but it is of no consequence to my results. In Appendix B, I show my results do not change if the incumbent learns her type at the start of the game.

<sup>5</sup>Assuming  $f(q_I)$  and  $g(q_I)$  have the strict MLRP means  $\frac{f(q_I)}{g(q_I)}$  is strictly increasing in  $q_I$ .

**Payoffs** The incumbent cares about policy quality, ideology, and winning reelection. Her utility from a policy with ideology  $x$  and quality  $q$  is

$$u_I(x, q) = -(\hat{x} - x)^2 + q + er,$$

where  $\hat{x}$  is her ideological ideal point and  $r > 0$  represents office rents.<sup>6</sup> I assume  $x_I = \hat{x}$ ; that is, the ideology of the incumbent's reform matches her ideological ideal point. However, I relax this assumption in Section 6.

The voter cares about the policymakers' ability and may have an ex-ante preference for the incumbent or challenger represented by  $\eta \in \mathbb{R}$ :

$$u_V = e\tau_I + (1 - e)(\tau_C + \eta).$$

The parameter  $\eta$  captures a notion of ex-ante electoral competition; it may represent factors such as the incumbency advantage, the voter's partisan preference for one of the policymakers, or even an expectation about the ideological content of the policies that the incumbent or challenger will enact in the future. If  $\eta > 0$ , the incumbent ex-ante *trails* the challenger, and if  $\eta < 0$ , the incumbent ex-ante *leads* the challenger.

I make the following parameter assumption.

**Assumption 1.**  $\eta \in (\underline{\eta}, \bar{\eta})$ , where  $\underline{\eta} < 0 < \bar{\eta}$ .

This assumption means that the incumbent never ex-ante leads or trails by a sufficient margin that the election's outcome is predetermined. The thresholds  $\underline{\eta}$  and  $\bar{\eta}$  depend on  $p$ ,  $f$ , and  $g$ , and are defined in Appendix A.

**Equilibrium** The incumbent's strategy is a function  $\sigma_I(\cdot) : \mathbb{R} \rightarrow \Delta\{\pi, \pi_I\}$ , and the voter's strategy is a function  $\sigma_V(\cdot) : \{\pi, \pi_I\} \rightarrow \Delta\{0, 1\}$ .<sup>7</sup> A perfect Bayesian equilibrium, referred to in the paper as an "equilibrium," satisfies the following:

- (i.) Each player's strategy is sequentially rational given their beliefs and the other player's strategy.
- (ii.) The voter's belief about the incumbent's ability satisfies Bayes' rule on the equilibrium path.

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<sup>6</sup>The particular functional form of the incumbent's ideological preferences is not critical to my results. Suppose the incumbent's utility from a policy with ideology  $x$  and quality  $q$  is given by  $l(\hat{x}, x, q)$ , where  $l(\hat{x}, x, q)$  is continuous and strictly increasing in  $q$ . If  $l(\hat{x}, x, q)$  is weakly decreasing in the distance between  $\hat{x}$  and  $x$ , my qualitative results survive.

<sup>7</sup>In both cases,  $\Delta(X)$  denotes the space of lotteries over  $X$ . Slightly abusing notation, I denote the probability the voter chooses  $e = 1$  as function of  $\pi$  as  $\sigma_V(\pi)$ .

### 3 Discussion of the Model

**Signature Reforms** In this model, a policymaker decides whether to implement a reform after learning its quality. This decision is observed by a voter who knows the incumbent’s ideological stance vis-à-vis the status quo. This setup captures a common scenario in politics. An incumbent policymaker enters office with a “signature reform,” a change to existing policy that voters closely associate her with. Once in office, the incumbent must develop this signature reform into a piece of legislation or a formal policy. During this process, she learns more about the quality of her signature reform. She then must decide whether to implement the reform or not.

For example, during the 2024 Presidential Debate, Donald Trump discussed his campaign’s efforts to develop an alternative to the ACA:

Obamacare was lousy health care. Always was. It’s not very good today. We’re looking at different plans. If we can come up with a plan that’s going to cost our people, our population less money and be better health care than Obamacare, then I would absolutely do it. But until then I’d run it as good as it can be run.<sup>8</sup>

Taken at face value, this quote illustrates how after developing her signature reform, a policy-maker evaluates its quality before choosing whether to implement it. In another healthcare-related example, then-candidate Bill Clinton campaigned heavily on healthcare reform during the 1992 presidential election. Once in office, he established the Task Force on National Health Care Reform with the express purpose of preparing healthcare reform legislation to submit to Congress. When the legislation was complete, he had to decide whether to move ahead with trying to implement it.

In the model, I assume the ideology of the incumbent’s signature reform matches her ideological ideal point. One can interpret this as the incumbent having run on her ideal policy and, in doing so, committed to it—perhaps because there is a large reputational cost associated with flip-flopping. In Section 6, I relax this assumption and allow the incumbent to publicly choose the ideology of her reform before learning its quality. Moreover, in Appendix B, I relax this assumption differently by allowing the incumbent to privately choose the ideology of her reform before learning its quality, and I show there are no equilibria of this model in which the incumbent develops a reform that is not at her ideological ideal point.<sup>9</sup>

**Policy Quality** I model policy as having two dimensions: ideology and quality. The ideological dimension represents aspects of the policy over which people disagree, and the

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<sup>8</sup>Hoffman (2024)

<sup>9</sup>Thank you to an anonymous reviewer at the *Journal of Politics* for noticing this.

quality dimension represents aspects of the policy everyone values, such as cost-effectiveness, lack of susceptibility to fraud, and the extent to which the policy achieves agreed-upon goals like economic growth. Consider the Paycheck Protection Program (PPP), which provided low-interest loans to business owners during the COVID-19 pandemic. The ideology of the PPP can be represented by a point along the left-right policy dimension. There are also aspects of the PPP that are separate from ideology that contribute to the quality of the policy. For example, the PPP was highly susceptible to fraud—by some estimates, 10 percent of the money dispersed was for fraudulent claims—due partly to the way applications were screened (Griffin, Kruger, and Mahajan 2023; Brooks 2023).<sup>10</sup>

In the model, policymakers differ in their ability to develop high-quality policies. Policymakers may differ in this regard because of their personal characteristics—their intelligence, experience, or knowledge of a particular issue—or because of factors like the quality of the policymaker’s staff or her ability to utilize lobbyists and interest groups to help craft the policy.

**Learning about Quality** I assume the incumbent knows the quality of her reform when deciding whether to implement it, but the voter never observes it. This asymmetry reflects that the incumbent is a policy expert, but the voter needs time to observe an implemented reform to learn its quality. This model represents a situation where there is insufficient time for the voter to learn about the reform’s quality before the election.

In Appendix B, I examine a variation of the model in which the quality of the incumbent’s reform is revealed before the election if she chooses to implement it. In this alternative setup, a qualitatively similar distortion arises. However, the mechanism driving the major insights of this paper—the relationship between the incumbent’s ideological preferences and what the voter infers from reform or retention of the status quo—disappears.

**Voter’s Preferences** I assume the voter has a preference for policymakers with high ability. This assumption represents that a policymaker with high ability will be more likely to develop high-quality policies in the future. There is empirical evidence that voters care about legislator effectiveness or ability in elections (Treul et al. 2022).

The voter may also have additional considerations when choosing between the incumbent and challenger, represented by the parameter  $\eta$ , which captures the voter’s ex-ante preference for or against the incumbent. For example,  $\eta$  may represent the voter’s ideological preferences for the incumbent or challenger based upon an expectation about the ideological content of

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<sup>10</sup>The Small Business Administration used outside lenders to screen applications and to make loans. Because these lenders collected a processing fee but were not liable for the loss on bad loans, they had little incentive to scrutinize applications closely. See Brooks (2023) for more information.

policies they will enact in an unmodeled future. Or,  $\eta$  might represent the incumbent's partisan preference for one policymaker versus the other.

## 4 Analysis

Given the incumbent's choice whether to implement her reform,  $\pi \in \{\pi_{sq}, \pi_I\}$ , it is a best response for the voter to reelect the incumbent if  $\Pr(\tau_I = 1|\pi) \geq p + \eta$ .<sup>11</sup>

### 4.1 Benchmark: No Uncertainty about the Incumbent's Ability

I begin with the complete information benchmark, where all players know the incumbent's type. Denote this game by  $\Gamma^K$ . When the voter knows whether the incumbent has high ability, his voting decision is unrelated to the incumbent's decision whether to implement her reform. Therefore, the incumbent implements her reform if and only if:

$$q_I \geq q_{sq} - (\hat{x} - x_{sq})^2. \quad (1)$$

It is clear that as long as the incumbent has a strict ideological preference for her reform, she is willing to implement some reforms that are relatively lower quality than the status quo.

### 4.2 Full Model: Uncertainty about the Incumbent's Ability

I now turn to the model described in Section 2 where the incumbent's type is unknown. Denote this game by  $\Gamma^U$ . When the voter chooses whether to reelect the incumbent, his strategy is a mapping from the incumbent's decision to a vote choice. Consequently, there are three possible types of equilibria. In the first, the voter's choice does not depend on the incumbent's decision.

In the remaining possible types of equilibria, the incumbent's probability of reelection depends on whether she implements her reform. One possibility is that the incumbent's probability of reelection is strictly greater when she retains the status quo than when she implements her reform. Suppose such an equilibrium exists. In it, the incumbent's utility from retaining the status quo does not depend on  $q_I$ . Yet, her utility from implementing her reform does; it is increasing in  $q_I$ . Accordingly, she must use a threshold strategy where she implements her reform if and only if it is sufficiently high quality.

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<sup>11</sup>Slightly abusing notation, here  $\pi$  represents the incumbent's decision rather than the policy itself since the voter does not observe  $q_I$ .

Yet, the fact that  $f(q_I)$  and  $g(q_I)$  satisfy strict MLRP means that if the incumbent uses a threshold strategy, the voter updates positively about the incumbent's ability if she implements her reform, and updates negatively if she retains the status quo.<sup>12</sup> As a result, there cannot be an equilibrium where the incumbent's probability of reelection is strictly higher when she retains the status quo than when she implements her reform.

The remaining possibility is that the incumbent's probability of reelection is strictly greater when she implements her reform than when she retains the status quo. I refer to this as an *equilibrium with consequential policy change*.

**Definition 1.** *An **equilibrium with consequential policy change** is an equilibrium in which  $\sigma_V(\pi_I)^* > \sigma_V(\pi)^*$ .*<sup>13</sup>

The same argument about the necessity of the incumbent using a threshold strategy applies here. Hence, she uses a threshold strategy and implements her reform if and only if it is sufficiently high quality.

The following lemma summarizes the preceding discussion and states an implication of the fact that  $f(q_I)$  has full support on  $\mathbb{R}$ .

**Lemma 1.** *In any equilibrium,*

- (a) *the incumbent uses a threshold strategy and implements her reform if and only if  $q_I \geq q_{sq} + y^*$ , where  $y^* \in (-\infty, \infty)$ ,*
- (b) *and  $\Pr(\tau_I|\pi_I) > p > \Pr(\tau_I|\pi_{sq})$*

I refer to  $y^*$  as the incumbent's *quality threshold*. The higher the incumbent's quality threshold, the more discerning she is about how high quality her reform must be to warrant implementing it.

Part (b) is a critical piece of this model. When the incumbent implements her signature reform, the voter updates positively about her ability. In contrast, when she retains the status quo, the voter updates negatively. This feature of the model also provides a micro-foundation for empirical work showing a loss confidence in parties who do not fulfill their campaign promises (e.g., Matthieß 2022; Naurin, Royed, and Thomson 2019).

The discussion so far has shown that there are at most two types of equilibria: an equilibrium with consequential policy change, where the voter reelects the incumbent with strictly higher probability when she implements her reform, and an equilibrium where the voter's strategy does not depend on the incumbent's decision. The following proposition shows there is a tight connection between the type of equilibria and the incumbent's behavior.

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<sup>12</sup>This and additional properties of the voter's posterior belief when the incumbent uses a threshold strategy are derived in Appendix A.

<sup>13</sup>Recall, I denote the probability the voter chooses  $e = 1$  as a function of  $\pi$  as  $\sigma_V(\pi)$ .

**Proposition 1.** *Relative to  $\Gamma^K$ , in an equilibrium with consequential policy change,*

- (a) the probability of reform is strictly higher,*
- (b) expected reform quality is strictly lower,*
- (c) and expected policy quality is strictly lower.*

*In any other equilibrium, the incumbent's strategy coincides with her strategy in  $\Gamma^K$ .*

In an equilibrium where the voter's strategy does not depend on the incumbent's decision, her decision has no bearing on the voter's choice. As such, the incumbent's strategy coincides with her strategy in the complete information benchmark.

In contrast, relative to the complete information benchmark, in an equilibrium with consequential policy change, the incumbent has an additional incentive to implement her reform. To see why, consider an incumbent in the complete information benchmark who, given the quality of her reform, is essentially indifferent between implementing it and retaining the status quo. If implementing it strictly increases her probability of reelection, she has an extra incentive to do so. This leads her to adopt a lower quality threshold, leading to the implementation of additional reforms. I refer to this distortion as *ability signaling*.

Ability signaling reduces expected reform quality—the expected quality of the incumbent's reform given it is implemented—and expected policy quality—the expected quality of policy overall. The former is because the incumbent uses a lower quality threshold, pooling additional lower-quality reforms with the reforms she implements in the complete information benchmark; the latter because the additional reforms are lower quality than the status quo.

Proposition 1 shows that reelection incentives make the incumbent willing to implement lower quality versions of her signature reform. This formalizes a folk wisdom that policymakers sometimes act not because they have a good idea but because voters will reward them if they do so. But when should one expect this concern to be realized? The following proposition describes a central insight of this paper: whether ability signaling arises in equilibrium depends critically on the interaction between the incumbent's ideological preferences and the electoral context.

**Proposition 2.** *An equilibrium with consequential policy change exists if and only if*

- (a)  $\eta > 0$  and  $-\gamma(\hat{x}) > \bar{y}(q_{sq}, \eta)$ ;*
- (b)  $\eta = 0$ ;*
- (c) or  $\eta < 0$  and  $-\gamma(\hat{x}) < \underline{y}(q_{sq}, \eta) + r$ ,*

where  $\gamma(\hat{x}) = (\hat{x} - x_{sq})^2$ , and  $\bar{y}(q_{sq}, \eta)$  and  $\underline{y}(q_{sq}, \eta)$  solve  $\Pr(\tau_I = 1 | \pi = \pi_I, \bar{y}(q_{sq}, \eta)) = p + \eta$  and  $\Pr(\tau_I = 1 | \pi = \pi_{sq}, \underline{y}(q_{sq}, \eta)) = p + \eta$ .

The mechanism driving this proposition is the way the incumbent's ideological preferences influence how the voter updates about her ability based on her decision whether to implement her reform. Let  $\gamma(\hat{x})$  be the incumbent's *ideological benefit from reform*. If this is large yet she chooses to retain the status quo, the voter infers that her reform must be of *particularly* low quality, leading him to update more negatively about her ability. If this is small but she implements her reform, the voter concludes that her reform is of *especially* high quality and updates more positively about her ability. Thus, one sees that the incumbent's ideological preferences play a fundamental role in what the voter learns: the larger the incumbent's ideological benefit from reform, the more negatively the voter updates about her ability when she retains it, and the smaller her ideological benefit, the more positively the voter updates about her ability when she implements it.

The connection between this mechanism and the existence of an equilibrium with consequential policy change depends on the incumbent's primary signaling concern: does she want to send a positive signal about her ability, or avoid sending a negative one? Suppose the incumbent trails the challenger (i.e.,  $\eta > 0$ ). Because retaining the status quo is a negative signal about the incumbent's ability, she will not be reelected if she retains it. So, her primary signaling concern is to send a positive signal about her ability. In this case, an equilibrium with consequential policy change only exists if there is an equilibrium where the voter reelects the incumbent with a positive probability when she implements her reform (i.e.,  $\sigma_V(\pi_I)^* > 0$ ). For this to be sequentially rational, it must be that the incumbent's quality threshold satisfies  $y^* \geq \bar{y}(q_{sq}, \eta)$ , where  $\bar{y}(q_{sq}, \eta)$  is the quality threshold such that the voter is indifferent between the incumbent and challenger when the incumbent implements her reform. Fixing  $\sigma_V(\pi_I)^*$ , that is:

$$\underbrace{-\gamma(\hat{x}) - \sigma_V(\pi_I)^* r}_{y^*} \geq \bar{y}(q_{sq}, \eta). \quad (2)$$

A  $\sigma_V(\pi_I)^* > 0$  satisfying (2) exists as long as the incumbent's ideological benefit from reform is not too large (i.e.,  $-\gamma(\hat{x}) > \bar{y}(q_{sq}, \eta)$ ).<sup>14</sup>

Now consider the opposite case where the incumbent leads the challenger (i.e.,  $\eta < 0$ ). She wins reelection if she implements her reform since it is a positive signal about her ability. In this case, her primary signaling concern is to avoid sending a negative signal about her ability. For an equilibrium with consequential policy change to exist, there must be an

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<sup>14</sup>If  $\bar{y}(q_{sq}, \eta) \in (-\gamma(\hat{x}) - r, -\gamma(\hat{x})^2)$ , there is a unique equilibrium where  $\sigma_V^*(\pi_I) \in (0, 1)$ , and if  $\bar{y}(q_{sq}, \eta) \leq -\gamma(\hat{x}) - r$ , there is a unique equilibrium where  $\sigma_V^*(\pi_I) = 1$



equilibrium where the voter elects the incumbent with a probability less than one when she retains the status quo (i.e.,  $\sigma_V(\pi)^* < 1$ ). Sequential rationality requires the incumbent's quality threshold to satisfy  $y^* \leq \underline{y}(q_{sq}, \eta)$ , where  $\underline{y}(q_{sq}, \eta)$  is the quality threshold such that the voter is indifferent between the incumbent and challenger when the incumbent retains the status quo. Fixing  $\sigma_V(\pi)^*$ , that is:

$$\underbrace{-\gamma(\hat{x}) - \sigma_V(\pi)^* r}_{y^*} \leq \underline{y}(q_{sq}, \eta). \quad (3)$$

A  $\sigma_V(\pi)^* < 1$  exists satisfying (3) as long as the incumbent's ideological benefit from reform is large enough (i.e.,  $-\gamma(\hat{x}) < \underline{y}(q_{sq}, \eta) + r$ ).<sup>15</sup>

Proposition 2 reveals distinct strategic logics for ability signaling. The first explains ability signaling when the incumbent's primary signaling concern is to send a positive signal about her ability—like when she trails. A trailing incumbent whose signature reform is ideologically similar to the status quo engages in ability signaling to appear like the type of incumbent who develops a reform high-quality enough to implement. The second explains ability signaling when the incumbent's primary signaling concern is to avoid sending a negative signal about her ability. A leading incumbent whose signature reform is ideologically far from the status quo engages in ability signaling to avoid being perceived as the type of incumbent who develops a version of her signature reform that is so low-quality that she prefers to retain the status quo despite her ideological opposition.

The latter logic provides an explanation for why congressional Republicans doggedly pursued ACA repeal despite some legislators within the caucus acknowledging that the reform legislation had significant issues. Having campaigned aggressively against the ACA, congressional Republicans had made their ideological opposition to the status quo clear to voters. Against that backdrop, failing to implement their signature reform would have sent a particularly negative signal about their ability. If they feared the electoral effect of a negative signal about their ability say, because they perceived themselves as leading congressional democrats—and comments legislators and party leaders suggest that was the case—the preceding analysis suggests they'd have adopted a lower quality threshold, thereby engaging in ability signaling.<sup>16</sup>

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<sup>15</sup>When the incumbent leads the challenger and  $-\gamma(\hat{x}) \in (\underline{y}(q_{sq}, \eta), \underline{y}(q_{sq}, \eta) + r)$ , multiple equilibria exist. There are two pure strategy equilibria: one with consequential policy change and one where the voter's strategy does not depend on the incumbent's decision, as well as a mixed strategy equilibrium with consequential policy change. Everywhere else, there is a unique equilibrium. See Appendix A for more details.

<sup>16</sup>See the quote in the introduction from Senator Tim Scott as well as Ronna McDaniel, the RNC Chairwoman, warning “We could lose the [2018] midterm elections” if legislators did not follow through on ACA repeal (Neuman 2017).

Like the ideological preferences, the quality of the status quo affects the incumbent's incentive to implement her reform. In turn, this affects what the voter infers from the incumbent's decision. In light of this, one might wonder what the relationship is between the quality of the status quo and whether ability signaling arises in equilibrium. The next result, which follows from the fact that  $\underline{y}(q_{sq}, \eta)$  and  $\bar{y}(q_{sq}, \eta)$  are decreasing in  $q_{sq}$ , answers this question.

**Corollary 1.** *The incumbent engages in ability signaling if and only if*

- (a)  $\eta > 0$  and  $q_{sq}$  is sufficiently high;
- (b)  $\eta = 0$ ;
- (c)  $\eta < 0$  and  $q_{sq}$  is sufficiently low.

Like the incumbent's ideological preferences, the quality of the status quo affects how the voter updates about the incumbent's ability. The higher the quality of the status quo, the more positively the voter updates when the incumbent implements her reform; the lower the quality of the status quo, the more negatively the voter updates when she retains the status quo. In practice, this means that depending on the electoral context. When the incumbent's primary signaling concern is to send a positive signal about her ability, ability signaling arises when the status quo is of high quality. When the incumbent's primary signaling concern is to avoid sending a negative signal about her ability, ability signaling arises when the status quo is of low quality.

Corollary 1 tells a different story about the relationship between the quality of existing policy and distorted policymaking than existing work. In Judd (2017), where the quality of an implemented reform is revealed before the election, distorted policymaking only arises when the status quo is of sufficiently high quality. Only then does the policymaker face a tradeoff between signaling her ability and maximizing her immediate policy payoff.<sup>17</sup> When the status quo is of low quality, any reform implemented to maximize her immediate policy payoff also leads to her reelection, eliminating the incentive to distort policymaking.

In contrast, in my model, where the quality of her reform is not revealed before the election and the incumbent and challenger are not necessarily ex-ante symmetric, the quality of the status quo affects the strength of the signal conveyed by the incumbent's decision whether to retain or implement her reform. When the incumbent trails and her primary signaling concern is to send a positive signal about her ability, this leads to a qualitatively similar prediction with Judd (2017)—distorted policymaking when the status quo is high

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<sup>17</sup>The import of these assumptions is that the incumbent is never reelected if she retains the status quo, and is reelected if she implements a sufficiently high-quality reform.

quality. On the other hand, when the incumbent leads and her primary signaling concern is to avoid sending a negative signal about her ability, my model reverses the prediction of Judd (2017): distorted policymaking arises when the status quo is low quality.<sup>18</sup>

### 4.3 Voter Welfare

Empirical work on electoral accountability provides evidence that policymakers’ desire for reelection incentivizes action (e.g. Alt, Bueno de Mesquita, and Rose 2011; Fourniaies and Hall 2022). Often, this is interpreted as being good for voters. For instance, Volden and Wiseman (2018) find that in the two years before running for reelection, U.S. senators are more effective.<sup>19</sup> The previous analysis showed that the incumbent’s desire for reelection leads her to distort her behavior by implementing lower-quality versions of her signature reform. Is this good for the voter?

Suppose the voter has preferences over policy of a similar form to the incumbent, has an ideological ideal point of zero, and that the incumbent’s ideological benefit from reform is weakly larger than the voter’s (i.e.,  $\gamma(\hat{x}) \geq x_{sq}^2$ ).

**Proposition 3.** *In any equilibrium, the voter’s welfare is weakly lower in  $\Gamma^U$  than it is in  $\Gamma^K$ .*

If the incumbent has a weakly larger ideological benefit from reform than the voter, in the complete information benchmark, the incumbent’s quality threshold is weakly lower than the quality threshold the voter would use if he were in charge of the decision whether to implement the incumbent’s reform. Under incomplete information, the incumbent’s quality threshold is weakly lower still—strictly in an equilibrium with consequential policy change—decreasing the voter’s welfare.

### 4.4 Comparative Statics

**Extent of Ability Signaling** Proposition 4 explains how the extent of ability signaling depends on ex-ante electoral competition and office rents.

**Definition 2.** *Let  $y_{\Gamma^U}^*$  be the incumbent’s quality threshold in the equilibrium of  $\Gamma^U$ . If*

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<sup>18</sup>In Appendix B, I show that if the quality of the incumbent’s reform is revealed if she implements her reform, the incumbent engages in ability signaling if and only if the status quo is of sufficiently high quality.

<sup>19</sup>Effectiveness is measured using legislative effectiveness scores, which measure a legislator’s “proven ability to advance a member’s agenda items through the legislative process and into law.” For more information about the scores, see Volden and Wiseman’s website: <https://thelawmakers.org/faq>.

$y_{\Gamma U}^* < \gamma(\hat{x})$ , the incumbent engages in ability signaling. Moreover,

$$D(y_{\Gamma}^*) = \gamma(\hat{x}) - y_{\Gamma}^*$$

is the *extent of ability signaling*.

Since multiple equilibria exist in some regions of the parameter space, I restrict attention when analyzing the comparative statics of the model to the *voter-welfare-maximizing equilibrium*, which is the equilibrium where the probability of reform is lowest.<sup>20</sup> The comparative statics in this equilibrium are the same as if I focus on the *voter-welfare-minimizing equilibrium*.<sup>21</sup>

**Proposition 4.** *In the voter-welfare-maximizing equilibrium, the extent of ability signaling is*

- (a) *weakly increasing in ex-ante electoral competition (i.e. as  $\eta$  approaches zero),*
- (b) *and weakly increasing in the office rents.*

Increasing ex-ante electoral competition and the office rents have the same effect on the extent of ability signaling, but for different reasons. On the one hand, increasing ex-ante electoral competition increases the extent of ability signaling because as the degree of ex-ante electoral competition increases, policy change *becomes* consequential, leading to the incumbent engaging in ability signaling. When there is little ex-ante electoral competition, the voter either always reelects the incumbent or never does, so the incumbent has no incentive to distort her behavior. However, once there is sufficient ex-ante electoral competition, policy change becomes consequential, and an incentive to engage in ability emerges.

On the other hand, increasing the office rents increases the extent of ability signaling because, fixing the quality of the incumbent's reform, it increases her incentive to implement her reform, *given* policy change is consequential. In the region of the parameter space where the voter's strategy does not depend on the incumbent's choice, increasing the office rents does not affect the incumbent's incentive to implement her reform. Whereas, in a region of the parameter space where there is an equilibrium with consequential policy change, increasing the office rents increases the incumbent's incentive to implement her reform. This leads her to adopt a strictly lower quality threshold when she leads or when she trails and

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<sup>20</sup>In the voter-welfare-maximizing equilibrium, the incumbent implements her reform if and only if  $q_I > q_{sq} - (\hat{x} - x_{sq})^2$  when  $-\gamma(\hat{x}) \in (\underline{y}(q_{sq}, \eta), \underline{y}(q_{sq}, \eta) + r)$ , which is the region of the parameter space where multiple equilibria exist.

<sup>21</sup>In the region of the parameter space where multiple equilibria exist, there is a third equilibrium with mixed strategies in which the comparative static results differ.

the office rents are not too large, and a weakly lower threshold when she trails and the office rents are sufficiently large.<sup>22</sup>

## 5 Veto Institutions

So far, I have assumed the incumbent can unilaterally implement her signature reform. What happens if she cannot? In many policymaking institutions, a policymaker must secure the agreement of other policymakers to change the status quo. Moreover, it is common for policymakers to interact under the shadow of future electoral competition. For example, when Bill Clinton pursued healthcare reform, congressional Democrats lacked a filibuster-proof majority in the Senate.<sup>23</sup> This would have required them to secure bipartisan support to implement Clinton’s signature reform. To examine this type of setting, I study an extended version of the baseline model, denoted  $\Gamma^V$ , where:

1. Nature draws the policymakers’ types and  $q_I$ .
2. The incumbent privately learns  $q_I$ .
3. The incumbent chooses whether to propose her reform,  $\tilde{\pi} = (x_I, q_I)$ .
4. If the incumbent proposes her reform, the challenger observes  $q_I$  and chooses whether to block her reform,  $\pi = \pi_{sq}$ , or agree to it,  $\pi = \tilde{\pi}$ .
5. The voter observes the incumbent and challenger’s decisions but not  $q_I$ .
6. The voter chooses whether to elect the incumbent or challenger.

In this extension, the incumbent’s and voter’s utility functions are the same as in the baseline model. The challenger cares about the quality and ideology of policy and winning reelection. Given a policy with ideology  $x$  and quality  $q$ , the challenger’s utility function is

$$u_C(x, q) = -(\hat{x}_C - x)^2 + q + (1 - e)r,$$

where  $\hat{x}_C$  is the challenger’s ideological ideal point.

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<sup>22</sup>When the incumbent trails, the office rents are sufficiently large, and policy change is consequential, the voter randomizes between electing the incumbent and challenger when the incumbent implements her reform. The probability she randomizes decreases as the office rents increase to maintain a constant quality threshold.

<sup>23</sup>Democrats potentially could have passed the reform using budget reconciliation, as Clinton initially planned. However, Democratic Senator Robert Byrd of the “Byrd rule” opposed this plan, leading Clinton to abandon it Johnson and Broder (1996).

I make the following assumption about the location of the challenger's and incumbent's ideological ideal points relative to the ideology of the status quo.

**Assumption 2.**  $\hat{x}_C \leq x_{sq} \leq \hat{x}$ .

This assumption—that the ideology of the status quo is on the Pareto frontier—implies the challenger incurs an ideological cost from reform.<sup>24</sup>

I begin with a lemma that establishes the structure of any equilibrium.

**Lemma 2.** *In any equilibrium,*

- (a) *the challenger uses a threshold strategy and agrees to a proposed reform if and only if  $q_I \geq q_{sq} + z^*$ , where  $z^* \in (-\infty, \infty)$ ,*
- (b) *the incumbent proposes her reform for all  $q_I \geq q_{sq} + z^*$ ,*
- (c) *and the probability the incumbent is reelected if she proposes her reform and the challenger blocks it is the same as the probability she is reelected if she does not propose her reform.*

Part (a) implies the voter's updating has the same critical feature as the baseline model. When the challenger agrees to a proposed reform, the voter updates positively about the incumbent's ability, and when the challenger blocks a proposed reform, the voter updates negatively about the incumbent's ability.

Part (a) and Assumption 2 together imply that if the challenger prefers accepting a proposed reform to blocking it, the incumbent prefers proposing it to retaining the status quo. As a result, the challenger's quality threshold determines how high quality the incumbent's reform must be to be implemented in equilibrium. This means that given  $z^*$ , the incumbent can employ a multitude of proposal strategies in equilibrium. However, any proposal strategy must have the property that the beliefs induced by it lead the incumbent to be reelected with the same probability whether she retains the status quo or proposes her reform and is blocked.

In light of part (c), and to streamline the analysis, I make the following restriction.

**Equilibrium** In addition to equilibrium conditions (i.) and (ii.), I focus on equilibria satisfying the following:

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<sup>24</sup>Stated differently, this assumption means the ideology of the status quo is in the gridlock interval. This means that if the incumbent and challenger only care about ideology, they will never agree to change the status quo. Callander and Martin (2017) show that the addition of policy quality means there can be policy change despite the status quo beginning in the gridlock interval.

- (iii.) On the equilibrium path, the incumbent proposes her reform for all  $q_I$ , and if the incumbent deviates, the voter's belief survives the D1-criterion from Banks and Sobel (1987).

## 5.1 Analysis

The first part of equilibrium condition (iii.) implies that the voter's strategy will be a mapping from the challenger's decision,  $\pi \in \{\pi_{sq}, \tilde{\pi}\}$ , to a vote choice. An equilibrium with consequential policy change when the challenger can veto can be defined analogously to an equilibrium with consequential policy change in the baseline model.

**Definition 3.** *An **equilibrium with consequential policy change** is an equilibrium in which  $\sigma_V(\tilde{\pi})^* > \sigma_V(\pi_{sq})^*$ .*

Let  $\Gamma^{KV}$  be the complete information benchmark of  $\Gamma^V$  where the incumbent's type is known. Relative to this benchmark, policymaking is distorted in an equilibrium with consequential policy change.

**Proposition 5.** *Relative to  $\Gamma^{KV}$ , in an equilibrium with consequential policy change,*

- (a) *the probability of reform is strictly lower,*
- (b) *expected reform quality is strictly higher,*
- (c) *and expected policy quality is strictly lower.*

*In any other equilibrium, the challenger's strategy coincides with his strategy in  $\Gamma^{KV}$ .*

In an equilibrium with consequential policy change, uncertainty about the incumbent's ability—combined with the challenger's desire to win the election—provides an additional incentive for the challenger to block the incumbent's proposed reform. Suppose there is no uncertainty about the incumbent's ability, and given the incumbent's proposed reform, the challenger is essentially indifferent between agreeing to it and blocking it. If blocking it strictly increases the challenger's probability of winning the election, she has an additional incentive to do so. This increases his quality threshold, leading to additional proposed reforms being blocked. I refer to this distortion as *ability blocking*.<sup>25</sup>

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<sup>25</sup>If  $x_{sq}$  is not on the Pareto frontier, there are two possibilities. First, the challenger's ideological benefit from reform is still weakly smaller than the incumbent's. In this case, the challenger still engages in ability blocking. Second, the challenger's ideological benefit from reform is strictly greater than that of the incumbent. This case requires a different assumption about the incumbent's proposal behavior since it cannot be an equilibrium for her to propose a reform the challenger will agree to if the incumbent prefers retaining the status quo over implementing her reform. However, if I focus on equilibria where the incumbent never proposes a reform that is not accepted, there may be ability signaling or ability blocking in equilibrium.

The effect of ability blocking on policy quality is ambiguous. On the one hand, ability blocking increases expected reform quality because it increases the challenger's quality threshold; ability blocking makes the challenger more discerning. On the other hand, ability blocking decreases expected policy quality overall since the additional reforms that are blocked are higher quality than the status quo.

The following proposition describes the second central insight of the paper: whether ability blocking arises in equilibrium depends critically on the challenger's ideological preferences.

**Proposition 6.** *An equilibrium with consequential policy change exists if and only if*

$$(a) \ \eta > 0 \text{ and } \phi(\hat{x}_C) > \bar{y}(q_{sq}, \eta) - r;$$

$$(b) \ \eta = 0;$$

$$(c) \ \eta < 0 \text{ and } \phi(\hat{x}_C) < \underline{y}(q_{sq}, \eta),$$

where  $\phi(\hat{x}_C) = -(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2$ .

The mechanism at the core of this proposition mirrors the mechanism at the core of Proposition 2. In particular, when the challenger can veto the incumbent's proposed reform, the challenger's ideological preferences affect how the voter updates about the incumbent's ability. Let  $\phi(\hat{x}_c)$  be the challenger's *ideological cost from reform*.<sup>26</sup> The higher this cost, the more favorably the voter updates about the incumbent if the challenger accepts the reform; the lower the cost, the more negatively the voter updates if the challenger blocks it.

This mechanism interacts with the electoral context to determine whether ability signaling arises. When the incumbent leads the challenger, the challenger never wins the election if he agrees to the incumbent's proposed reform. So his primary signaling concern is to send a negative signal to the voter about the incumbent's ability. So an equilibrium with consequential policy change only exists if there is an equilibrium where the voter elects the challenger with a positive probability if he blocks the incumbent's proposed reform (i.e.,  $\sigma_V(\pi_{sq})^* < 1$ ). Fixing  $\sigma_V(\pi_{sq})^*$ , this requires

$$\phi(\hat{x}_C) + (1 - \sigma_V(\pi_{sq})^*)r \leq \underline{y}(q_{sq}, \eta). \quad (4)$$

A  $\sigma_V(\pi_{sq})^* < 1$  exists satisfying (5) as long as the challenger's ideological cost from reform is not too large (i.e.,  $\phi(\hat{x}_C) < \underline{y}(q_{sq}, \eta)$ ).

When the incumbent trails the challenger, the challenger always wins the election if he blocks the incumbent's proposed reform. Hence, the challenger's primary signaling incentive

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<sup>26</sup> Assumption 2 implies this is non-negative and weakly decreasing in  $\hat{x}_C$ .



is to prevent the incumbent from sending a positive signal about her ability. For an equilibrium with consequential policy change to exist, there must be an equilibrium where the voter elects the challenger with a probability less than one if he agrees to the incumbent's proposed reform (i.e.,  $\sigma_V(\tilde{\pi})^* > 0$ ). Fixing  $\sigma_V(\tilde{\pi})^*$ , this requires

$$\phi(\hat{x}_C) + (1 - \sigma_V(\tilde{\pi})^*)r \geq \underline{y}(q_{sq}, \eta). \quad (5)$$

A  $\sigma_V(\pi_{sq})^* < 1$  exists satisfying (5) as long as the challenger's ideological cost from reform is large enough (i.e.,  $\phi(\hat{x}_C) > \underline{y}(q_{sq}, \eta) - r$ ).

Paralleling the baseline model, there are two distinct strategic logics driving ability blocking: (i.) a trailing challenger who is not ideologically opposed to the incumbent's signature reform engages in ability blocking to make the incumbent look like the type of incumbent whose reform is so low-quality that even an amenable challenger will not agree to it, and (ii.) a leading challenger who is ideologically opposed to the incumbent's signature reform engages in ability blocking to prevent the incumbent from looking like the type of incumbent whose reform is so high-quality that an ideologically opposed challenger is willing to agree to it.

Between his ideological disagreement with the incumbent and his incentive to engage in ability blocking, the challenger blocks some reforms the incumbent would enact if she could act unilaterally. Yet, introducing the challenger's veto may be good for the incumbent electorally.

**Proposition 7.** *If  $\hat{x}_C \neq \hat{x}$ , there is a region of the parameter space where the probability the incumbent is reelected in  $\Gamma^V$  is higher than the probability she is reelected in  $\Gamma^U$ .*

Since the challenger's quality threshold is higher than the incumbent's, getting the challenger to agree to a proposed reform is a stronger signal of ability than the incumbent unilaterally changing the status quo. This means that in some regions of the parameter space, the incumbent is reelected with a higher probability when the challenger can veto than she is when she can implement her reform unilaterally. This provides an explanation for the folk wisdom that voters reward bipartisanship (e.g., Friedman 2012); implementing a reform with bipartisan support is a stronger signal of the incumbent's ability to develop high-quality reforms than enacting a reform unilaterally.

## 6 Endogenous Choice of Ideology

The mechanism driving the main insights of this paper is that the incumbent's and challenger's ideological preferences shape what the voter infers from policymaking. I conclude by

exploring a final question. If the voter knows the incumbent's ideological ideal point, does she ever have an incentive to develop a signature reform that differs from this ideological ideal point? To answer this question, I return to the baseline model but allow the incumbent to publicly choose  $x_I \in \mathbb{R}$ , then privately learn  $q_I$ , and then choose whether to implement her reform.<sup>27</sup> I focus attention on the baseline model to highlight a purely informational logic for the incumbent to propose a reform that differs from her ideal point.

**Proposition 8.** *When  $\eta < 0$  and  $-\gamma(\hat{x}) < \underline{y}(q_{sq}, \eta)$ , there is a region of the parameter space where, in equilibrium, the incumbent develops a reform with ideology  $x_I \in \{\underline{x}_I^*, \overline{x}_I^*\}$ , where  $\underline{x}_I^* = \hat{x} - \sqrt{\underline{y}(q_{sq}, \eta) + (\hat{x} - x_{sq})^2}$  and  $\overline{x}_I^* = \hat{x} + \sqrt{\underline{y}(q_{sq}, \eta) + (\hat{x} - x_{sq})^2}$ .*

Suppose the incumbent trails, and if she develops a reform at her ideological ideal point, she only wins reelection if she implements it. By developing a reform that differs from her ideological ideal point, the incumbent reduces her incentive to implement it because doing so yields a smaller ideological benefit.<sup>28</sup> That is, by developing a reform that differs from her ideological ideal point, the incumbent commits to a higher quality threshold. This commitment makes retaining the status quo a weaker signal of low ability. If she develops a reform with an ideology sufficiently far from her ideological ideal point, retaining it will be such a weak signal that she will win reelection even if she retains the status quo. Of course, making such a commitment comes at a cost: fixing  $q_I$ , implementing her reform yields a lower payoff. But, in some cases, the electoral benefit outweighs the ideological cost.<sup>29</sup>

When the incumbent develops a reform with an ideology that differs from her ideological ideal point, she chooses the ideology that is sufficiently far from her ideological ideal point to make the voter indifferent between electing the incumbent and challenger when she retains the status quo. There are two such ideologies, one to the right of the incumbent's ideological ideal point and one to the left. Both choices will affect the voter's inference in the same way. However, there are many reasons why one might expect the incumbent to break her indifference between the two ideologies by choosing the one that is more moderate than her ideological ideal point. For example, if there is a small amount of uncertainty about the incumbent's ideological ideal point, she is incentivized to choose the ideology close to the

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<sup>27</sup>A critical assumption is that policy quality is not transferable (Hirsch and Shotts 2012). That is, the incumbent cannot develop a reform with ideology  $x_I$  and then transfer the quality to a different reform with ideology  $x'_I$ .

<sup>28</sup>The model assumes the incumbent's utility from quality does not depend on the ideology of the policy. That is not necessary for this result. It is sufficient that fixing quality, the incumbent's utility from a policy is lower the farther the ideology of the policy is from her ideological ideal point.

<sup>29</sup>When the incumbent trails, there is also a region of the parameter space where she develops a reform with ideology that differs from her ideological ideal point. However, she does this when there is a mixed strategy equilibrium in the baseline. Moreover, the mixed strategy equilibrium continues to exist. Hence, I focus on the case where the ability to choose  $x_I$  destroys some of the baseline equilibria.

voter’s ideological ideal point as in Fearon (1999). Hence, Proposition 8 can be interpreted as saying the incumbent has an incentive to moderate.

It is illustrative to juxtapose this result with Hirsch and Shotts (2012), Hirsch and Shotts (2018), and Hitt, Volden, and Wiseman (2017), who also study models where policy has quality and ideology, and moderation emerges in equilibrium. However, it emerges because a policymaker needs to secure agreement from another player with a different ideological ideal point. That is, moderation emerges from a Downsian logic—by moving the ideology of a policy closer to the other player’s ideological ideal point, the policymaker makes her policy more attractive. The moderation in this model emerges for a reason entirely unrelated to Downsian logic. The policymaker moderates because it affects the information her decision conveys.

## 7 Conclusion

I analyzed a model in which an incumbent policymaker chooses whether to implement a signature reform, one closely associated with her, after learning its quality. When the incumbent can unilaterally implement her reform, she sometimes distorts her behavior by adopting a lower quality threshold than she does when there is no uncertainty about her type, leading to additional, lower-quality reforms that are lower quality than the status quo. Whether this distortion arises in equilibrium depends on the interaction between her ideological preferences, which shape what the voter infers about her ability from her decision whether to implement her reform, and the electoral context—whether her primary signaling concern is to send a positive signal about her ability or to avoid sending a negative signal.

I then show that when the incumbent must secure a veto player’s agreement to implement her reform—a veto player she competes electorally with—the veto player sometimes distorts his behavior by adopting a higher-quality threshold than he does when there is no uncertainty about the incumbent’s type, leading to less reform and inefficient retention of the status quo. Whether this distortion arises depends on the interaction between his ideological preferences and the electoral context. Thus, in both versions of the model, the way ideological preferences shape what the voter infers plays a fundamental role in determining whether policymaking is distorted.

I conclude by showing that the underlying mechanism of the model—the way in which the ideological preferences shape what the voter infers from policymaking has implications for the incumbent’s incentive to moderate the ideological content of her signature reform. In particular, she sometimes chooses to moderate the ideology of her reform not because she wants to appeal to the voter, but to shape what the voter learns about her from her decision

whether to implement her reform.

One of the contributions of this paper is extending a literature in which policy has distinct ideological and valence characteristics to the electoral accountability setting by developing a tractable model where there is uncertainty about the incumbent's ability to develop high-quality policies. Thus, there are many natural extensions to this model. For example, one could endogenize the status quo in a model with two periods. In the first period, the incumbent chooses whether to implement her signature reform. Then, the voter chooses whether to reelect the incumbent or replace her with a challenger without observing the quality of the incumbent's reform. In the second period, the election winner chooses whether to retain the status quo inherited from the previous period or to change it after learning the quality of their reform. Or, one could introduce uncertainty about the players' ideological preferences. I leave the formal examination of these ideas to future work.

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# Online Appendix: Signaling Ability Through Policy Change



# A Proofs of Results in the Main Text

## Proof of Lemma 1

*Proof.* Suppose an equilibrium exists where the voter reelects the incumbent with probability  $\sigma_V(\pi)^* \in [0, 1]$  if she retains the status quo and with probability  $\sigma_V(\pi_I)^* \in [0, 1]$  if she implements her reform. In this PBE, the incumbent must implement her reform if and only if  $q_I \geq q_{sq} + y^*$ , where  $y^* = -(\hat{x} - x_{sq})^2 - (\sigma_V(\pi_I)^* - \sigma_V(\pi)^*)r$ . ■

**Proof of Propositions 1 and 2** I prove Lemmas A and B and then use them to characterize all PBE of  $\Gamma^U$  in Propositions A, B, and C.

Since the incumbent uses a threshold strategy and  $f(q_I) > 0$  and  $g(q_I) > 0$  for all  $q_I \in \mathbb{R}$ , retaining the status quo and implementing her reform are both on the equilibrium path. Thus, I do not need to consider off the equilibrium path beliefs.

**Lemma A.** *If the incumbent implements her reform if and only if  $q_I \geq q_{sq} + y$ , for  $y \in (-\infty, \infty)$ ,*

(a)  $\Pr(\tau_I = 1 | \pi = \pi_I, y) > p$  for all  $y$  and is increasing in  $y$ ,

(b) and  $\Pr(\tau_I = 1 | \pi = \pi_{sq}, y) < p$  for all  $y$  and is increasing in  $y$ .

*Proof.* Suppose the incumbent uses a threshold strategy such that she implements her reform if and only if  $q_I \geq q_{sq} + y$ , for  $y \in (-\infty, \infty)$ .

(a)  $\Pr(\tau_I = 1 | \pi = \pi_I, y) = \frac{(1-F(q_{sq}+y))p}{(1-F(q_{sq}+y))p+(1-G(q_{sq}+y))(1-p)} > p$  if  $(1-F(q_{sq}+y)) > p(1-G(q_{sq}+y)) + (1-p)(1-G(q_{sq}+y))$ , which is immediate due to MLRP implying FOSD. Rearranging,  $\Pr(\tau_I = 1 | \pi = \pi_I, y) = \frac{1}{1+\frac{1-p}{p} \frac{(1-G(q_{sq}+y))}{(1-F(q_{sq}+y))}}$ . Differentiating the ratio of the CDFs in the denominator with respect to  $y$ ,

$$\frac{\partial}{\partial y} = \frac{-(1-F(q_{sq}+y))g(q_{sq}+y) - (-(1-G(q_{sq}+y))f(q_{sq}+y))}{(1-F(q_{sq}+y))^2}.$$

This is negative if  $\frac{f(q_{sq}+y)}{1-F(q_{sq}+y)} < \frac{g(q_{sq}+y)}{1-G(q_{sq}+y)}$ , which is the monotone hazard rate property implied by MLRP.

(b)  $\Pr(\tau_I = 1 | \pi = \pi_{sq}, y) = \frac{F(q_{sq}+y)p}{F(q_{sq}+y)p+G(q_{sq}+y)(1-p)} < p$  if  $F(q_{sq}+y) < F(q_{sq}+y)p+G(q_{sq}+y)(1-p)$ . This is immediate due to MLRP implying FOSD. Rearranging,  $\Pr(\tau_I = 1 | \pi = \pi_{sq}, y) = \frac{1}{1+\frac{1-p}{p} \frac{G(q_{sq}+y)}{F(q_{sq}+y)}}$ . Differentiating the ratio of the CDFs in the denominator:

$$\frac{\partial}{\partial y} = \frac{F(q_{sq}+y)g(q_{sq}+y) - G(q_{sq}+y)f(q_{sq}+y)}{F(q_{sq}+y)^2}.$$

This is negative if  $\frac{f(q_{sq}+y)}{g(q_{sq}+y)} > \frac{F(q_{sq}+y)}{G(q_{sq}+y)}$ , which is a well-known property of strict MLRP. ■

**Lemma B.** (a) If  $\eta < 0$ , there exists a unique  $\underline{y}(q_{sq}, \eta) \in (-\infty, \infty)$  such that  $\Pr(\tau_I = 1 | \pi = \pi_{sq}, \underline{y}(q_{sq}, \eta)) = p + \eta$  and for all  $y > \underline{y}(q_{sq}, \eta)$ ,  $\Pr(\tau_I = 1 | \pi = \pi_{sq}, y) > p + \eta$ .

(b) If  $\eta > 0$ , there exists a unique  $\bar{y}(q_{sq}, \eta) \in (-\infty, \infty)$  such that for  $\Pr(\tau_I = 1 | \pi = \pi_I, \bar{y}(q_{sq}, \eta)) = p + \eta$  and for all  $y > \bar{y}(q_{sq}, \eta)$ ,  $\Pr(\tau_I = 1 | \pi = \pi_I, y) > p + \eta$ .

*Proof.* (a) Suppose  $\eta < 0$ . By Lemma A,  $\Pr(\tau_I = 1 | \pi = \pi_{sq}, y)$  is strictly increasing in  $y$ . Moreover,  $\Pr(\tau_I = 1 | \pi = \pi_{sq}, y)$  is a probability so it is bounded below by zero. Hence, there is a greatest lower bound of  $\Pr(\tau_I = 1 | \pi = \pi_{sq}, y)$  and this is the limit as  $y \rightarrow -\infty$ . Call this greatest lower bound  $\underline{L}$ . If  $\eta > \underline{L} + p \equiv \underline{\eta}$ , there exists a unique  $\underline{y}(q_{sq}, \eta)$  such that  $\Pr(\tau_I = 1 | \pi = \pi_{sq}, \underline{y}) = p + \eta$ , and for all  $y > \underline{y}(q_{sq}, \eta)$ ,  $\Pr(\tau_I = 1 | \pi = \pi_{sq}, y) > p + \eta$ .

(b) Suppose  $\eta > 0$ . By Lemma A,  $\Pr(\tau_I = 1 | \pi = \pi_I, y)$  is strictly increasing in  $y$ . Moreover,  $\Pr(\tau_I = 1 | \pi = \pi_I, y)$  is a probability so it is bounded above by one. Hence, there is a least upper bound of  $\Pr(\tau_I = 1 | \pi = \pi_I, y)$ , and this is the limit as  $y \rightarrow \infty$ . Call this least upper bound  $\bar{L}$ . If  $\eta < \bar{L} - p \equiv \bar{\eta}$ , there exists a unique  $\bar{y}(q_{sq}, \eta)$  such that  $\Pr(\tau_I = 1 | \pi = \pi_I, \bar{y}) = p + \eta$  for all  $y > \bar{y}(q_{sq}, \eta)$ .

■

**Proposition A.** Suppose  $\eta < 0$ .

(a) If  $-(\hat{x} - x_{sq})^2 < \underline{y}(q_{sq}, \eta) + r$ , there is a PBE where  $\pi = \pi_I$  if and only if (6) is satisfied and  $e = 1$  if and only if  $\pi = \pi_I$ .

(b) If  $-(\hat{x} - x_{sq})^2 \in [\underline{y}(q_{sq}, \eta), \underline{y}(q_{sq}, \eta) + r]$ , there is a PBE where  $\pi = \pi_I$  if and only if (8) is satisfied and  $e = 1$  with probability one if  $\pi = \pi_I$  and with probability  $\rho^* \in [0, 1]$  if  $\pi = \pi_{sq}$ .

(c) If  $-(\hat{x} - x_{sq})^2 > \underline{y}(q_{sq}, \eta)$ , there is a PBE where  $\pi = \pi_I$  if and only if (7) is satisfied and  $e = 1$ .

*Proof.* Suppose  $\eta < 0$ . By Lemma A, the incumbent is reelected when she implements her reform in any PBE. By Lemma B,  $\underline{y}(q_{sq}, \eta)$  exists. Hence, there are three possibilities:  $\underline{y}(q_{sq}, \eta) > y^*$ ,  $\underline{y}(q_{sq}, \eta) < y^*$ , and  $\underline{y}(q_{sq}, \eta) = y^*$ .

If  $y^* < \underline{y}(q_{sq}, \eta)$ , the incumbent is reelected if and only if she implements her reform. Therefore, the incumbent implements her reform if and only if

$$q_I \geq q_{sq} - (\hat{x} - x_{sq})^2 - r. \quad (6)$$

For this PBE to exist, it must be that  $-(\hat{x} - x_{sq})^2 - r < \underline{y}(q_{sq}, \eta)$ . This proves (a).

If  $y^* > \underline{y}(q_{sq}, \eta)$ , the incumbent is reelected whether she retains or implements her reform. Therefore, she implements her reform if and only if

$$q_I > q_{sq} - (\hat{x} - x_{sq})^2. \quad (7)$$

For this PBE to exist, it must be that  $-(\hat{x} - x_{sq})^2 > \underline{y}(q_{sq}, \eta)$ . This proves (c).

Finally, suppose  $y^* = \underline{y}(q_{sq}, \eta)$ . Then, the voter reelects the incumbent if she implements her reform and is indifferent between the incumbent and challenger when the incumbent retains the status quo. Given this indifference, suppose the voter reelects the incumbent with probability  $\rho$  when the incumbent retains. For a particular  $\rho$ , the incumbent implements her reform if and only if

$$q_I \geq q_{sq} - (\hat{x} - x_{sq})^2 + (\rho - 1)r. \quad (8)$$

For the voter to be indifferent, it must be that  $-(\hat{x} - x_{sq})^2 + (\rho - 1)r = \underline{y}(q_{sq}, \eta)$ , which implies that in equilibrium  $\rho^* \equiv \frac{\underline{y}(q_{sq}, \eta) + (\hat{x} - x_{sq})^2}{r} + 1$ . For this PBE to exist, it must be that  $\underline{y}(q_{sq}, \eta) \in [-(\hat{x} - x_{sq})^2 - r, -(\hat{x} - x_{sq})^2]$ . This proves (b). ■

**Proposition B.** *Suppose  $\eta > 0$ .*

- (a) *If  $-(\hat{x} - x_{sq})^2 \leq \bar{y}(q_{sq}, \eta)$ , there is a unique PBE where  $\pi = \pi_I$  if and only if (7) is satisfied, and  $e = 0$ .*
- (b) *If  $-(\hat{x} - x_{sq})^2 > \bar{y}(q_{sq}, \eta)$ , there is a unique PBE where  $\pi = \pi_I$  if and only if (9) is satisfied and  $e = 1$  with probability  $\rho^* \in (0, 1]$  if  $\pi = \pi_I$  and  $e = 0$  if  $\pi = \pi_{sq}$ .*

*Proof.* Suppose  $\eta > 0$ . By Lemma A, the incumbent is not reelected when she retains the status quo in any PBE. By Lemma B,  $\bar{y}(q_{sq}, \eta)$  exists. Hence, there are three possibilities:  $\bar{y}(q_{sq}, \eta) > y^*$ ,  $\bar{y}(q_{sq}, \eta) < y^*$ , and  $\bar{y}(q_{sq}, \eta) = y^*$ .

If  $y^* < \bar{y}(q_{sq}, \eta)$ , the incumbent is never reelected. Then the incumbent implements her reform if and only if (7) is satisfied. For this PBE to exist, it must be that  $-(\hat{x} - x_{sq})^2 < \bar{y}(q_{sq}, \eta)$ . This proves (a).

If  $y^* > \bar{y}(q_{sq}, \eta)$ , the incumbent is reelected with probability one when she implements her reform but is not reelected if she retains the status quo. Then the incumbent implements her reform if and only if (6) is satisfied. For this PBE to exist, it must be that  $-(\hat{x} - x_{sq})^2 - r > \bar{y}(q_{sq}, \eta)$ .

Finally, suppose  $y^* = \bar{y}(q_{sq}, \eta)$ . In this case, the voter is indifferent between electing the challenger and the incumbent when the incumbent implements her reform and, hence,

reelects the incumbent with probability  $\rho \in [0, 1]$ . Given a particular  $\rho$ , the incumbent implements her reform if and only if

$$q_I \geq q_{sq} - (\hat{x} - x_{sq})^2 - \rho r. \quad (9)$$

For the voter to be indifferent, it must be that  $-(\hat{x} - x_{sq})^2 - \rho r = \bar{y}(q_{sq}, \eta)$ , which implies that in equilibrium  $\rho^* \equiv \frac{-(\hat{x} - x_{sq})^2 - \bar{y}(q_{sq}, \eta)}{r}$ . For this PBE to exist it must be that  $\bar{y}(q_{sq}, \eta) \in [-(\hat{x} - x_{sq})^2 - r, -(\hat{x} - x_{sq})^2]$ . This shows (b). ■

**Proposition C.** *Suppose  $\eta = 0$ . There is a unique PBE where  $\pi = \pi_I$  if and only if (6) is satisfied, and  $e = I$  if and only if  $\pi = \pi_I$ .*

*Proof.* Suppose  $\eta = 0$ . By Lemma A, the incumbent is reelected when she implements her reform and is not reelected if she retains the status quo. Hence, the incumbent implements her reform if and only if (6) is satisfied. ■

By Propositions A, B, and C, the incumbent's quality threshold is always weakly smaller than  $-(\hat{x} - x_{sq})^2$ , which proves (a) in Proposition 1. Result (b) in Proposition 1 is implied by (a) in Proposition 1 and Lemma 1.

### Proof of Proposition 3

*Proof.* The voter's welfare as a function of  $y^*$  is

$$\int_{-\infty}^{q_{sq} + y^*} (q_{sq} - x_{sq}^2) h(q_I) dq_I + \int_{q_{sq} + y^*}^{\infty} (q_I - \hat{x}^2) h(q_I) dq_I,$$

where  $h(q_I) = pf(q_I) + (1-p)g(q_I)$ . This is maximized when  $y^{wf} = -x_{sq}^2 + \hat{x}^2$ . Moreover, the voter's welfare is increasing in  $y^*$  for  $y^* < -x_{sq}^2 + \hat{x}^2$ , and is decreasing in  $y^*$  for  $y^* > -x_{sq}^2 + \hat{x}^2$ .

In  $\Gamma^K$ ,  $y^* = -(\hat{x} - x_{sq})^2$ . Hence,  $-(\hat{x} - x_{sq})^2 \leq y^{wf}$  by the assumption that  $(x_I - x_{sq})^2 \geq x_{sq}^2$ . By Proposition 1, in  $\Gamma^U$   $y^* \leq -(\hat{x} - x_{sq})^2$ . Hence, the voter's welfare is weakly lower. ■

**Proof of Proposition 4** To prove Proposition 4, I restrict attention to the PBE where the voter's welfare is maximized. When  $\eta < 0$ , if  $\bar{y}(q_{sq}, \eta) \in (-(\hat{x} - x_{sq})^2 - r, -(\hat{x} - x_{sq})^2)$ , there are three PBEs. Proposition 3 implies that the PBE in which the voter's welfare is maximized is the PBE where  $\pi = \pi_I$  if and only if (7) is satisfied. In all other regions of the parameter space, there is a unique PBE.

*Proof.* (a) I first prove the following lemma.

**Lemma C.**  $\underline{y}(q_{sq}, \eta)$  and  $\bar{y}(q_{sq}, \eta)$  are increasing in  $\eta$ .

*Proof.*  $y = \bar{y}(q_{sq}, \eta)$  solves

$$\frac{p(1 - F(q_{sq} + y))}{p(1 - F(q_{sq} + y)) + (1 - p)(1 - G(q_{sq} + y))} = p + \eta. \quad (10)$$

By Lemma A, the LHS of (10) is increasing in  $y$ . Hence, if  $\eta$  increases,  $\bar{y}(q_{sq}, \eta)$  increases to maintain equality. Using an identical argument, the same can be shown for  $\underline{y}(q_{sq}, \eta)$ . ■

Propositions A, B, and C imply the following:

- (1) If  $\eta < 0$ ,  $D(y_\Gamma^*)$  is weakly increasing in  $\underline{y}(q_{sq}, \eta)$  and is always weakly smaller than  $q_{sq} - (\hat{x} - x_{sq}^2)$
- (2) If  $\eta = 0$ ,  $D(y_\Gamma^*) = q_{sq} - (\hat{x} - x_{sq}^2)$
- (3) If  $\eta > 0$ ,  $D(y_\Gamma^*)$  is weakly decreasing in  $\underline{y}(q_{sq}, \eta)$  and is always weakly smaller than  $q_{sq} - (\hat{x} - x_{sq}^2)$ .

These results, combined with Lemma C imply that  $D(y_\Gamma^*)$  is weakly increasing as  $\eta$  approaches zero.

- (b) In equilibrium the incumbent's strategy is of the form that she implements her reform if and only if  $q_I \geq q_{sq} - (\hat{x} - x_{sq}) - \sigma_V^* r$ , where  $\sigma_V^* \in \{0, 1, \frac{-(\hat{x} - x_{sq})^2 - \bar{y}(q_{sq}, \eta)}{r}\}$ . If, in equilibrium,  $\sigma_V^*$  is not a function of  $r$ , as is the case when the voter uses a pure strategy, the quality threshold is weakly decreasing in  $r$ , and hence  $D(y_\Gamma^*)$  is weakly increasing. If, in equilibrium, the incumbent uses a mixed strategy,  $\sigma_V^* = \frac{-(\hat{x} - x_{sq})^2 - \bar{y}(q_{sq}, \eta)}{r}$ . In this case, the incumbent's strategy simplifies to her changing the status quo if and only if  $q_I \geq q_{sq} + \bar{y}(q_{sq}, \eta)$ , which is constant in  $r$ . Hence  $D(y_\Gamma^*)$  is constant in  $r$ .

It remains to consider what happens when increasing  $r$  leads the incumbent to discontinuously switch her threshold. Propositions A, B, and C imply the incumbent's quality threshold is only discontinuous in  $r$  when  $\eta < 0$ . In particular, there is a discontinuity in the incumbent's quality threshold at  $\underline{y}(q_{sq}, \eta) - r = -(\hat{x} - x_{sq})^2$ . When  $\underline{y}(q_{sq}, \eta) \leq -(\hat{x} - x_{sq})^2 - r$ ,  $D(y_\Gamma^*) = 0$  and when  $\underline{y}(q_{sq}, \eta) > -(\hat{x} - x_{sq})^2 - r$ ,  $D(y_\Gamma^*) = r$ . Hence  $D(y_\Gamma^*)$  is weakly increasing for all  $r$ . ■

## Proof of Lemma 2

*Proof.* (a) The first part of this proof follows the logic of the proof of Lemma 1.

- (b) Suppose a PBE exists where the challenger accepts a proposed reform if and only if  $q_I \geq q_{sq} + z^*$ . Abusing notation, denote the probability the voter elects the incumbent in this PBE if her proposed reform is accepted as  $\sigma_V(\tilde{\pi}|\tilde{\pi})^*$ , the probability she is reelected if her proposed reform is blocked as  $\sigma_V(\pi_{sq}|\tilde{\pi})^*$ , and the probability she is reelected if she retains the status quo as  $\sigma_V(\pi_{sq})^*$ . Since the incumbent's payoff from policy is the same whether her proposed reform is blocked or she does not propose a reform, the probability she is reelected if she proposes a reform and is blocked must be the same as the probability she is reelected if she does not propose a reform. Otherwise, she would have a profitable deviation. Moreover, Lemma A implies  $\sigma_V(\tilde{\pi}|\tilde{\pi})^* \geq \sigma_V(\pi_{sq}|\tilde{\pi})^* = \sigma_V(\pi_{sq})^*$ .

Now suppose a PBE exists in which there is a  $q'_I$  such that the challenger prefer a reform of  $q'_I$  to blocking her reform but incumbent prefers not proposing a reform of quality  $q'_I$  to proposing it and having the challenger accept it. That is

$$-(\hat{x}_C - x_I)^2 + (1 - \lambda^*)r + (\hat{x}_C - x_{sq})^2 - (1 - \vartheta^*)r > (x_I - x_{sq})^2 + \lambda^*r - \gamma^*r$$

Assumption 2 and the fact that  $\lambda^* \geq \vartheta^* = \gamma^*$  imply this is a contradiction. This implies that if  $q_I \geq q_{sq} + z^*$ , the incumbent proposes her reform.

Suppose next that is a PBE where the incumbent proposes a reform for all  $q_I$ . This means not proposing a reform is off the equilibrium path. Suppose in response to the incumbent not proposing a reform, the voter elects her with probability  $\varphi \in [0, 1]$ . The incumbent weakly prefers to deviate if she otherwise would have proposed a reform the challenger blocks if

$$\begin{aligned} q_{sq} - (x_I - x_{sq})^2 + \varphi^*r &\geq q_{sq} - (\hat{x} - x_{sq})^2 + \vartheta^*r \\ \Leftrightarrow \varphi^* &\geq \vartheta^*, \end{aligned}$$

and the incumbent weakly prefers to deviate if she otherwise would have proposed a reform the challenger accepts if

$$\begin{aligned} q_{sq} - (\hat{x} - x_{sq})^2 + \varphi^*r &\geq q_I + \lambda^*r \\ \Leftrightarrow \varphi &\geq \lambda^* + \frac{q_I + (\hat{x} - x_{sq})^2}{r}. \end{aligned} \tag{11}$$

The RHS of 11 is increasing in  $q_I$  and is always larger than  $\vartheta^*$ . Hence, D1 forces

the voter's belief to be that the incumbent is the type that has a reform with quality  $q_I < q_{sq} + z^*$  if she deviates. This is the same belief if did not deviate. Hence, she is indifferent between deviating if her reform will be blocked and strictly prefers not to deviate otherwise. Hence, such a PBE exists.

Finally suppose there is a PBE where the incumbent proposes a reform if and only if  $q_I \geq q_{sq} + z^*$ . Then on the path the challenger never blocks a proposed reform. Suppose in response to the challenger deviating off the path the

■

**Proof of Proposition 5** In Propositions E, D, and F I characterize all PBE in which the incumbent proposes a policy for all  $q_I$  assuming that if the incumbent deviates, the voter believes

$$\mu = \frac{1}{1 + \frac{1-p}{p} \frac{\int_{-\infty}^{q_{sq}+z^*} g(q_I) dq_I}{\int_{-\infty}^{q_{sq}+z^*} f(q_I) dq_I}}.$$

Since the challenger uses a threshold strategy and  $f(q_I) > 0$  and  $g(q_I) > 0$  for all  $q_I$ , accepting a proposed reform and blocking a proposed reform are both on the equilibrium path. I then show in Lemma D that D1 forces the voter to believe that if the incumbent deviates,  $\Pr(\tau_I = 1 | deviation) = \mu$ .

**Proposition D.** *Suppose  $\eta < 0$ .*

- (a) *If  $-(\hat{x}_C - x_{sq})^2 \leq \underline{y}(q_{sq}, \eta) - (\hat{x}_C - \hat{x})^2 - r$ , there is a unique PBE where  $\pi = \tilde{\pi}$  if and only if (13) is satisfied, and  $e = 1$  if and only if  $\pi = \tilde{\pi}$ .*
- (b) *If  $-(\hat{x}_C - x_{sq})^2 \in (\underline{y}(q_{sq}, \eta) - (\hat{x}_C - \hat{x})^2 - r, \underline{y}(q_{sq}, \eta) - (\hat{x}_C - \hat{x})^2)$ , there is a unique PBE where  $\pi = \tilde{\pi}$  if and only if (14) is satisfied, and the  $e = 1$  with probability one if  $\pi = \tilde{\pi}$  and with probability  $\rho^* \in (0, 1)$  if  $\pi = \pi_{sq}$ .*
- (c) *If  $-(\hat{x}_C - x_{sq})^2 \geq \underline{y}(q_{sq}, \eta) - (\hat{x}_C - \hat{x})^2$ , there is a unique PBE where  $\pi = \tilde{\pi}$  if and only if (12) is satisfied, and  $e = 1$ .*

*Proof.* Suppose  $\eta < 0$ . Recall that by assumption the incumbent proposes her reform for all  $q_I$ . By Lemma B, in any PBE, the incumbent is reelected if the challenger accepts the proposed reform. By Lemma B,  $\underline{y}(q_{sq}, \eta)$  exists. Hence, there are three cases:  $z^* > \underline{y}(q_{sq}, \eta)$ ,  $z^* < \underline{y}(q_{sq}, \eta)$ , and  $z^* = \underline{y}(q_{sq}, \eta)$ .

First, suppose  $\underline{y}(q_{sq}, \eta) < z^*$ , in which case the incumbent is reelected whether her proposed reform is accepted or blocked. Then the challenger accepts a proposed reform if and

only if

$$q_I \geq q_{sq} - (\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2. \quad (12)$$

For this PBE to exist, it must be that  $-(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 > \underline{y}(q_{sq}, \eta)$ . This shows (c) in the proposition.

Next, suppose  $\underline{y}(q_{sq}, \eta) > z^*$ . In this case the incumbent is reelected if her proposed reform is accepted but not if it is blocked. Then, the challenger accepts the incumbent's proposed reform if and only if

$$q_I \geq q_{sq} - (\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 + r. \quad (13)$$

For this equilibrium to exist, it must be that  $-(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 + r < \underline{y}(q_{sq}, \eta)$ . This shows (a).

Finally, suppose  $\underline{y}(q_{sq}, \eta) = z^*$ . The voter is indifferent when the challenger blocks a proposed reform, and reelects the incumbent with probability  $\rho$ . Hence, given  $\rho$ , the challenger accepts a proposed reform if and only if

$$q_I \geq q_{sq} - (\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 + (1 - \rho)r. \quad (14)$$

For the voter to be indifferent, it must be that  $\rho^* = \frac{-(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 + r - \underline{y}(q_{sq}, \eta)}{r}$ . For this equilibrium to exist it must be that  $\underline{y}(q_{sq}, \eta) \in [-(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2, -(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 + r]$ . This shows (b). ■

**Proposition E.** *Suppose  $\eta > 0$ .*

- (a) *If  $-(\hat{x}_C - x_{sq})^2 < \bar{y}(q_{sq}, \eta) - (\hat{x}_C - \hat{x})^2$ , there is a PBE where  $\pi = \tilde{\pi}$  if and only if (12) is satisfied, and  $e = 0$ .*
- (b) *If  $-(\hat{x}_C - x_{sq})^2 \in [\bar{y}(q_{sq}, \eta) - (\hat{x}_C - \hat{x})^2 - r, \underline{y}(q_{sq}, \eta) - (\hat{x}_C - \hat{x})^2]$ , there is a PBE where  $\pi = \tilde{\pi}$  if and only if (15) is satisfied, and  $e = 1$  with probability  $\rho^* \in [0, 1]$  if  $\pi = \tilde{\pi}$ .*
- (c) *If  $-(\hat{x}_C - x_{sq})^2 > \bar{y}(q_{sq}, \eta) - (\hat{x}_C - \hat{x})^2 - r$ , there is a PBE where  $\pi = \tilde{\pi}$  if and only if (13) is satisfied, and  $e = 1$  if  $\pi = \tilde{\pi}$ .*

*Proof.* Suppose  $\eta > 0$ . By Lemma B, in any PBE, the incumbent is replaced if the challenger blocks the proposed reform. By Lemma B,  $\bar{y}(q_{sq}, \eta)$  exists. Hence, there are three cases:  $z^* > \bar{y}(q_{sq}, \eta)$ ,  $z^* < \bar{y}(q_{sq}, \eta)$ , and  $z^* = \bar{y}(q_{sq}, \eta)$ .

First suppose  $z^* > \underline{y}(q_{sq}, \eta)$ , in which case the incumbent is reelected if the challenger accepts the proposed reform but not otherwise. Then, the challenger accepts a proposed



reform if (13) is satisfied. For this to be a PBE, it must be that  $-(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 + r > \underline{y}(q_{sq}, \eta)$ . This shows (c).

Next, suppose  $z^* < \underline{y}(q_{sq}, \eta)$ , in which case the challenger is reelected whether or not he accepts the proposed reform. Then, the challenger accepts a proposed reform if and only if (12) is satisfied. For this to be a PBE, it must be that  $-(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 < \underline{y}(q_{sq}, \eta)$ . This shows (a).

Finally, suppose  $z^* = \bar{y}(q_{sq}, \eta)$ , in which case the voter is indifferent between the incumbent and challenger when the challenger accepts a proposed reform. Hence, he reelects the incumbent with probability  $\rho$ . Given  $\rho$ , the challenger accepts a proposed reform if

$$q_I \geq q_{sq} - (\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 + \rho r. \quad (15)$$

For the voter to be indifferent, it must be that  $\rho^* = \frac{\bar{y}(q_{sq}, \eta) - (\hat{x}_C - x_{sq})^2 - (\hat{x}_C - \hat{x})^2}{r}$ . For this to be a PBE, it must be that  $\bar{y}(q_{sq}, \eta) \in [-(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2, -(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 + r]$ . This shows (b). ■

**Proposition F.** *Suppose  $\eta = 0$ . There is a unique PBE where  $\pi = \tilde{\pi}$  if and only if (13) is satisfied, and  $e = 1$  if and only if  $\pi = \tilde{\pi}$ .*

*Proof.* Suppose  $\eta = 0$ . The incumbent is reelected when the challenger accepts a proposed reform and is not reelected when the challenger blocks a proposed reform. Thus, the challenger will agree to a proposed reform if and only if  $q_I \geq q_{sq} - (\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 + r$ . ■

**Lemma D.** *D1 requires that in any PBE, if the incumbent deviates to not proposing a reform,*

$$\Pr(\tau_I = 1 | \text{deviation}) = \frac{1}{1 + \frac{1-p}{p} \frac{\int_{-\infty}^{q_{sq}+z^*} g(q_I) dq_I}{\int_{-\infty}^{q_{sq}+z^*} f(q_I) dq_I}}.$$

*Proof.* Let  $\sigma$  be a PBE surviving D1 in which on the path the implements her reform for all  $q_I$ . Let  $\chi \in \mathbb{R}$  be this arbitrary incumbent's type. Define  $D(\chi)$  as the set of reelection probabilities for which type  $\chi$  strictly prefers retaining the status quo over receiving her payoff under  $\sigma$ , and define  $D_0(\chi)$  as the set of reelection probabilities for which type  $\chi$  is indifferent between retaining the status quo and receiving her payoff under  $\sigma$ . D1 requires the voter putting probability zero on a type  $\chi$  deviating if there exists another type  $\chi'$  such that  $D(\chi) \cup D_0(\chi) \subseteq D(\chi')$  (Cho and Kreps 1987).

Let  $\lambda^* \in [0, 1]$  be the probability the voter elects the incumbent under  $\sigma$  when she proposes a reform and the challenger accepts it and let  $\varrho^* \in [0, 1]$  be the probability the

voter elects the incumbent under  $\sigma$  when she proposes a reform and the challenger blocks it. Furthermore, let  $\omega \in [0, 1]$  be the probability the voter elects the incumbent when she deviates off the equilibrium path.

Suppose  $q_I < q_{sq} + z^*$ , in which case on the path the challenger will block the proposed reform. The incumbent weakly prefers to deviate if  $\omega \geq \varrho^*$ .

And suppose  $q_I < q_{sq} + z^*$ , in which case on the path the challenger accepts the proposed reform. The incumbent weakly prefers to deviate if  $\omega \geq \lambda^* + \frac{q_I - q_{sq} + (x_I - x_{sq})^2}{r}$ . Since  $\lambda^* \geq \varrho^*$  and  $q_{sq} + z^* \geq q_{sq}$ ,

$$\lambda^* + \frac{q_I - q_{sq} + (x_I - x_{sq})^2}{r} > \varrho^*$$

for all  $q_I > q_{sq} + z^*$ . Hence, D1 forces the voter to believe that a deviation came from an incumbent for whom  $q_I < q_{sq} + z^*$ . This implies that the voter's belief following a deviation must be that

$$\mu = \frac{1}{1 + \frac{1-p}{p} \frac{\int_{-\infty}^{q_{sq}+z^*} g(q_I) dq_I}{\int_{-\infty}^{q_{sq}+z^*} f(q_I) dq_I}}.$$

■

In  $\Gamma^{KV}$ , the challenger's quality threshold is  $-(\hat{x}_C - x_{sq}) + (\hat{x}_C - \hat{x})$ , which is weakly positive by Assumption 2. Comparing this to the quality thresholds in Propositions D, E, and F shows that the challenger's quality threshold is weakly higher in any equilibrium of  $\Gamma^V$  than in  $\Gamma^{KV}$ . This proves (a) from Proposition 5. Part (c) follows immediately from (a), and part (b) follows from (a) and Assumption 2.

**Proof of Proposition 7** Suppose  $\eta > 0$ . In  $\Gamma^U$ , in the unique equilibrium if  $-(\hat{x} - x_{sq})^2 \leq \bar{y}(q_{sq}, \eta)$ , the incumbent is never reelected. In  $\Gamma^V$ , in the unique equilibrium if  $-(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - x_{sq})^2 > \bar{y}(q_{sq}, \eta)$ , the incumbent is reelected with positive probability. Hence, if

$$-(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - x_{sq})^2 > -(\hat{x} - x_{sq})^2,$$

there is a region of the parameter space where the probability of reelection is lower in  $\Gamma^U$  than in  $\Gamma^V$ . This is guaranteed by Assumption 2 if  $\hat{x}_C \neq \hat{x}$ .

### Proof of Proposition 8

*Proof.* Suppose  $\eta < 0$  and  $-(\hat{x} - x_{sq})^2 \in (r - q_{sq}, \underline{y}(q_{sq}, \eta))$ . Hence, in the unique equilibrium

of  $\Gamma^U$ , the incumbent revises and retains on the equilibrium path and is not reelected if she retains the status quo.

Suppose the incumbent chooses  $x_I = \underline{x}^* \neq \hat{x}$ . There are four cases to consider. First, suppose she chooses  $\underline{x}^*$  sufficiently close to  $\hat{x}$  that

$$-(\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2 < \underline{y}(q_{sq}, \eta). \quad (16)$$

Then she is only reelected if she implements her reform. Hence, her expected utility is

$$\begin{aligned} & \int_{-\infty}^{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2 - r} (q_{sq} - (\hat{x} - x_{sq})^2) h(q_I) dq_I \\ & + \int_{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2 - r}^{\infty} (q_I - (\hat{x} - \underline{x}^*)^2 + r) h(q_I) dq_I. \end{aligned} \quad (17)$$

Differentiating,

$$\frac{\partial(17)}{\partial \underline{x}^*} = \int_{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2}^{\infty} 2(\hat{x} - \underline{x}^*) h(q_I) dq_I.$$

The derivative is negative when  $\hat{x} < \underline{x}^*$ , is positive when  $\hat{x} > \underline{x}^*$ , and equals zero when  $\underline{x}^* = \hat{x}$ . Hence, the incumbent has a profitable deviation from  $\underline{x}^*$  by moving  $\underline{x}$  closer to  $\hat{x}$ , which she can do for any  $\underline{x}^*$  satisfying (16).

Second, suppose that in equilibrium,  $\underline{x}^*$  is chosen to be sufficiently far from  $\hat{x}$  that

$$-(\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2 > \underline{y}(q_{sq}, \eta). \quad (18)$$

Then she is reelected whether she implements her reform or not. Hence, her expected utility is

$$\begin{aligned} & \int_{-\infty}^{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2} (q_{sq} - (\hat{x} - x_{sq})^2 + r) h(q_I) dq_I \\ & + \int_{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2}^{\infty} (q_I - (\hat{x} - \underline{x}^*)^2 + r) h(q_I) dq_I. \end{aligned} \quad (19)$$

Differentiating,

$$\frac{\partial(19)}{\partial \underline{x}^*} = \int_{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2}^{\infty} 2(\hat{x} - \underline{x}^*) h(q_I) dq_I.$$

The derivative is negative when  $\hat{x} < \underline{x}^*$ , is positive when  $\hat{x} > \underline{x}^*$ , and equals zero when

$\underline{x}^* = \hat{x}$ . Hence, the incumbent has a profitable deviation from  $\underline{x}^*$  by moving  $\underline{x}$  closer to  $\hat{x}$ , which can be done for any satisfying  $\underline{x}^*$  satisfying (18).

Third, suppose that in equilibrium, if indifferent, the voter reelects the incumbent with probability  $\rho^* < 1$ , and that  $\underline{x}^*$  is chosen such that  $-(\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2 + (\rho^* - 1)r = \underline{y}(q_{sq}, \eta)$ . That is,  $\underline{x}^* = \hat{x} \pm \sqrt{\underline{y}(q_{sq}, \eta) + (\hat{x} - x_{sq})^2 - (\rho^* - 1)r}$ . Then, the incumbent's expected utility is

$$\int_{-\infty}^{q_{sq} + \underline{y}(q_{sq}, \eta)} (q_{sq} - (\hat{x} - x_{sq})^2 + \rho^* r) h(q_I) dq_I + \int_{q_{sq} + \underline{y}(q_{sq}, \eta)}^{\infty} (q_I - (\hat{x} - \underline{x}^*)^2 + r) h(q_I) dq_I. \quad (20)$$

Suppose the incumbent deviates to  $\underline{x}$  sufficiently far from  $\hat{x}$  that  $-(\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x})^2 + (\rho^* - 1)r > \underline{y}(q_{sq}, \eta)$ . Then either  $\hat{x} < \underline{x}^* < \underline{x}$  or  $\hat{x} > \underline{x}^* > \underline{x}$ , and the incumbent's expected utility is

$$\begin{aligned} \int_{-\infty}^{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x})^2} (q_{sq} - (\hat{x} - x_{sq})^2 + r) h(q_I) dq_I \\ + \int_{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x})^2}^{\infty} (q_I - (\hat{x} - \underline{x})^2 + r) h(q_I) dq_I. \end{aligned} \quad (21)$$

As  $\underline{x} \rightarrow \underline{x}^*$ , the incumbent's expected utility converges to

$$\int_{-\infty}^{q_{sq} + \underline{y}(q_{sq}, \eta)} (q_{sq} - (\hat{x} - x_{sq})^2 + r) h(q_I) dq_I + \int_{q_{sq} + \underline{y}(q_{sq}, \eta)}^{\infty} (q_I - (\hat{x} - \underline{x}^*)^2 + r) h(q_I) dq_I, \quad (22)$$

which is larger than (20). Hence, there exist  $\underline{x}$  sufficiently close to  $\hat{x}$  that are profitable deviations.

Finally, suppose that in equilibrium, if indifferent, the voter reelects the incumbent with probability  $\rho^* = 1$ , and that  $\underline{x}^*$  is chosen such that  $-(\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2 = \underline{y}(q_{sq}, \eta)$ . Hence,  $\underline{x}^* = \hat{x} \pm \sqrt{\underline{y}(q_{sq}, \eta) + (\hat{x} - x_{sq})^2}$ . Such an equilibrium exists if

$$\begin{aligned} \int_{-\infty}^{q_{sq} + \underline{y}(q_{sq}, \eta)} (q_{sq} - (\hat{x} - x_{sq})^2 + r) h(q_I) dq_I + \int_{q_{sq} + \underline{y}(q_{sq}, \eta)}^{\infty} (q_I - (\hat{x} - \underline{x}^*)^2 + r) h(q_I) dq_I \\ \geq \int_{-\infty}^{q_{sq} - (\hat{x} - x_{sq})^2 - r} (q_{sq} - (\hat{x} - x_{sq})^2) h(q_I) dq_I + \int_{q_{sq} - (\hat{x} - x_{sq})^2 - r}^{\infty} (q_I + r) h(q_I) dq_I, \end{aligned} \quad (23)$$

where  $h(q_I) = pf(q_I) + (1 - p)g(q_I)$ . Rearranging, (23) is satisfied if

$$\int_{q_{sq} - (\hat{x} - x_{sq})^2 - r}^{q_{sq} + \underline{y}(q_{sq}, \eta)} (q_{sq} - (\hat{x} - x_{sq})^2 - q_I) h(q_I) dq_I - \int_{q_{sq} + \underline{y}(q_{sq}, \eta)}^{\infty} ((\hat{x} - \underline{x}^*)^2) h(q_I) dq_I + \int_{-\infty}^{q_{sq} - (\hat{x} - x_{sq})^2 - r} (r) h(q_I) dq_I \geq 0. \quad (24)$$

Suppose in particular that  $q_{sq}$  and  $\eta$  are such that  $\underline{y}(q_{sq}, \eta) = 0$ . Furthermore, suppose  $x_{sq} = 0$ . Substituting in  $\underline{x}^*$ , as  $\hat{x} \rightarrow x_{sq}$ , the LHS of (24) converges to  $\int_{q_{sq} - r}^{q_{sq}} (q_{sq} - q_I) h(q_I) dq_I + \int_{-\infty}^{q_{sq} - r} (r) h(q_I) dq_I$ , which is positive. Since the LHS of (24) is continuous in  $\hat{x}$ , for  $\hat{x}$  sufficiently close to  $x_{sq}$ , the incumbent chooses  $\underline{x}^*$ .

■

## B Robustness

**Incumbent Knows Her Type** Suppose the incumbent knows her type. Furthermore, suppose that in a PBE, the voter reelects the incumbent with probability  $\gamma^* \in [0, 1]$  if she retains the status quo, and with probability  $\lambda^* \in [0, 1]$  if she implements her reform. Then an incumbent of type  $\tau_j$  implements her reform if and only if  $q_I \geq q_{sq} - (\hat{x} - x_{sq})^2 + (\gamma - \lambda^*)r$ . Note, the incumbent's strategy does not depend on her type.

**Reform Quality is Revealed** Suppose that if the incumbent implements her reform, the voter observes her reform's quality before the election. Then, when the incumbent changes the status quo,  $\Pr(\tau_I = 1 | q_I) = \frac{1}{1 + \frac{1-p}{p} \frac{g(q_I)}{f(q_I)}}$ , which is increasing in  $q_I$  due to MLRP. Hence, there exists  $\hat{q}$  such that  $\Pr(\tau_I = 1 | q_I) = p + \eta$ . Define  $\hat{y} = \hat{q} - q_{sq}$ . This implies  $q_{sq} + \hat{y} = \hat{q}$ .

To preserve space, I begin by focusing on equilibria in which the incumbent uses a threshold strategy. It is simple albeit tedious to show that this is the case in any equilibrium.

**Proposition G.** *An equilibrium with ability signaling only exists if  $\hat{y} < -(\hat{x} - x_{sq})^2$ .*

*Proof.* Suppose  $\eta \geq 0$ , which implies the incumbent is not reelected if she retains the status quo. If  $q_I < q_{sq} + \hat{y}(q_{sq}, \eta)$ , it is a best response for the incumbent to implement her reform if  $q_I > q_{sq} - (\hat{x} - x_{sq})^2$ , and if  $q_I > q_{sq} + \hat{y}(q_{sq}, \eta)$ , it is a best response for the incumbent to implement her reform if  $q_I > q_{sq} - (\hat{x} - x_{sq})^2 - r$ . Hence, for ability signaling to occur in equilibrium, it must be that

$$q_{sq} - (\hat{x} - x_{sq}) - r < q_{sq} + \hat{y} < q_{sq} - (\hat{x} - x_{sq})^2.$$

Since  $r > 0$ , a necessary condition for existence of an equilibrium is that  $\hat{y} < -(\hat{x} - x_{sq})$ .

Now suppose  $\eta < 0$ . The definitions of  $\hat{y}$  and  $\underline{y}(q_{sq}, \eta)$  imply that  $\underline{y}(q_{sq}, \eta) > \hat{y}$ . Furthermore, this implies that if  $y^* \geq \underline{y}(q_{sq}, \eta)$ ,  $y^* > \hat{y}$ . As such, she will not engage in ability signaling.

Then, suppose further that  $y^* < \underline{y}$ . If  $q_I < q_{sq} + \hat{y}(q_{sq}, \eta)$ , it is a best response for the incumbent to implement her reform if  $q_I > q_{sq} - (\hat{x} - x_{sq})^2$ , and if  $q_I > q_{sq} + \hat{y}(q_{sq}, \eta)$ , it is a best response for the incumbent to implement her reform if  $q_I > q_{sq} - (\hat{x} - x_{sq})^2 - r$ . Hence, for ability signaling to occur in equilibrium, it must be that

$$q_{sq} - (\hat{x} - x_{sq}) - r < q_{sq} + \hat{y} < q_{sq} - (\hat{x} - x_{sq})^2.$$

Since  $r > 0$ , a necessary condition for existence of an equilibrium is that  $\hat{y} < -(\hat{x} - x_{sq})$ . ■

**Corollary 2.** *An equilibrium with ability signaling exists if and only if the status quo is sufficiently high quality.*

**Reform Ideology is Private Information** Suppose that before developing the quality of her reform, the incumbent chooses  $x_I \in \mathbb{R}$ , and  $x_I$  is never revealed to the voter.

**Proposition H.** *No equilibrium exists in which  $\hat{x} \neq x_I$ .*

*Proof.* Suppose not. Suppose further that in equilibrium the incumbent is not reelected regardless of whether she implements her reform or not. Then, her expected utility is

$$\int_{-\infty}^{q_{sq} - (\hat{x} - x_{sq})^2 + (x' - \hat{x})^2} (q_{sq} - (\hat{x} - x_{sq})^2) h(q_I) dq_I + \int_{q_{sq} - (\hat{x} - x_{sq})^2 + (x' - \hat{x})^2}^{\infty} (q_I + (x' - \hat{x})^2) h(q_I) dq_I$$

Differentiating, this function obtains its maximum with respect to  $x'$  when  $x' = \hat{x}$ . Hence, the incumbent has a profitable deviation. This is true when, in the conjectured equilibrium, the incumbent is always reelected.

Suppose now that in equilibrium the incumbent is reelected with a strictly higher probability when she implements her reform:  $\sigma_V(\pi)^* < \sigma_V(\pi_I)^*$ . Then her expected utility is

$$\begin{aligned} & \int_{-\infty}^{q_{sq} - (\hat{x} - x_{sq})^2 + (x' - \hat{x})^2 - (\sigma_V(\pi_I)^* - \sigma_V(\pi)^*)r} (q_{sq} - (\hat{x} - x_{sq})^2 + \sigma_V(\pi)^*) h(q_I) dq_I \\ & + \int_{q_{sq} - (\hat{x} - x_{sq})^2 + (x' - \hat{x})^2 - (\sigma_V(\pi_I)^* - \sigma_V(\pi)^*)r}^{\infty} (q_I + (x' - \hat{x})^2 + \sigma_V(\pi_I)^*) h(q_I) dq_I. \end{aligned}$$

This function also obtains its maximum with respect to  $x'$  when  $x' = \hat{x}$ . Hence, the incumbent has a profitable deviation. ■