

# Signaling Ability Through Policy Change

Benjamin Shaver\*

*Northwestern University*

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## Abstract

Voters are often aware that a policymaker is developing a reform to the status quo. During the development process, the policymaker learns more about the reform's quality and must then decide whether to implement it. What inferences do voters draw from the policymaker's decision? How do these beliefs shape the policymaker's incentives? I analyze a model that captures this strategic interaction. The incumbent sometimes engages in ability signaling, implementing lower-quality versions of her reform than she would under complete information about her ability. Whether she does depends on the interaction between her ideological preferences, which shape what the voter infers about her ability, and the electoral context, which shapes her primary signaling concern. Requiring the incumbent to secure the agreement of a second policymaker with whom she is electorally competing creates the opposite distortion: the veto player blocks some reforms that 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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\*benjamin.shaver@kellogg.northwestern.edu. This paper benefited from discussion with Dan Alexander, Scott Ashworth, Peter Bils, Ethan Bueno de Mesquita, Martin Castillo-Quintana, Álvaro Delgado-Vega, Wioletta Dziuda, Giorgio Farace, Anthony Fowler, Scott Gehlbach, Daniel Gibbs, Kun Heo, Will Howell, Federica Izzo, Gleason Judd, Barton Lee, Zhaotian Luo, Monika Nalepa, Spencer Pantoja, Jon Rogowski, Konstantin Sonin, Daniel Sonnenstuhl, and Adam Zelizer. Thank you to audiences at the University of Chicago, Washington University in St. Louis, MPSA, SIOE, and APSA.

# 1 Introduction

Shortly after winning the 1992 presidential election, Bill Clinton announced the formation of the President’s Task Force on National Health Care Reform, charging it with preparing “healthcare reform legislation [for him to] submit to Congress” later that year (Clinton 1993). Similarly, after winning the 2008 presidential election, Barack Obama convened a forum at the White House, where he promised to develop healthcare legislation by the end of 2009. These are examples of a common phenomenon. A policymaker publicly commits to pursue a reform—perhaps by establishing a task force or making a campaign pledge. After this announcement, the policymaker develops the reform, learning more about its quality—its costs, its benefits, whether it is feasible or not, etc.—before deciding whether to move forward with implementation. Sometimes, the policymaker follows through; other times, they do not. What inferences do voters draw from the policymaker’s decision? How do these beliefs shape the policymaker’s incentives? What policymaking distortions arise, and under what conditions?

To answer these questions, I develop a game-theoretic model in which policies vary along two dimensions: ideology and quality. Driven by policy and reelection concerns, an incumbent policymaker (she) decides whether to implement her reform, which moves policy to her ideal point along the ideological dimension, or retain the status quo policy of publicly known ideology and quality. Before this decision, the incumbent develops her reform, privately learning its quality, 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, aware that the incumbent is developing a reform, observes her decision but not the reform’s quality and reelects her if the probability that she has high ability is sufficiently high.

In equilibrium, the voter updates positively about the incumbent’s ability when she implements her reform, and negatively when she does not. When this means the voter reelects the incumbent with a strictly higher probability when she implements her reform,

she engages in *ability signaling*—relative to a benchmark where the voter knows her ability, she adopts a lower *quality threshold*, implementing additional, lower-quality versions of her reform because it is electorally advantageous to do so.

A central insight of the paper is that whether the incumbent engages in ability signaling depends on the interaction between her ideological preferences and the electoral context. The mechanism driving this insight is the way the incumbent’s ideological preferences affect what the voter infers about her ability from her decision. When the incumbent’s ideological benefit from reform is large (i.e., she is very ideologically opposed to the status quo), the voter recognizes that she will only retain the status quo if her reform turns out to be *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 turned out to be high quality, making implementation an *especially* positive signal about her ability.

How this mechanism relates to ability signaling depends on the electoral context, which determines the incumbent’s primary signaling concern. When the incumbent *ex ante* trails, 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 her ideological benefit is sufficiently small, meaning reform is a strong enough signal of ability for the voter to reelect her. This illustrates one strategic logic for ability signaling: a trailing incumbent whose potential reform is ideologically similar to the status quo engages in ability signaling to appear like the type of incumbent who produces a reform of high enough quality 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 her ideological benefit is sufficiently large, because this is when retaining the status quo is a negative enough signal that she loses. Thus, this illustrates a second strategic logic for ability signaling: a leading incumbent whose potential reform is ideologically far from the

status quo engages in ability signaling to avoid appearing like the type of incumbent who produces a reform of such low quality that she prefers the status quo despite her ideological opposition.

This insight is illustrated by congressional Republicans’ 2017 efforts to “repeal and replace” the Affordable Care Act (ACA). Having campaigned heavily on this reform, congressional Republicans confronted the reality of developing a replacement policy. During this process, some GOP legislators raised the alarm that their proposed reforms could 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).<sup>1</sup> Nevertheless, congressional Republicans pushed forward.<sup>2</sup> 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, failing to follow through was a very negative signal about their ability. Concerns about sending such a signal—reflected in Senator Tim Scott’s warning that he “would anticipate that there [will] be significant blowback for not finishing what we started several years ago”—might have led them to adopt a lower quality threshold (Bowman 2017). By doing so, party leadership might have hoped to avoid appearing like the types of incumbents who produced a reform of such 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 legislators 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

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<sup>1</sup>Republican Senator Shelley Moore Capito expressed a similar concern, saying ‘As I have said before, I did not come to Washington to hurt people. For months, I have expressed reservations about the direction of the bill to repeal and replace Obamacare’ Abramson (2017).

<sup>2</sup>By using the budget reconciliation process, Senate Republicans could have passed the repeal despite lacking a filibuster-proof majority.

reason as the substance of the bill” (Noble 2017).

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

When voters know the incumbent is developing a reform because she made a campaign promise—as was the case with repeal and replace—this model sheds light on the connection between campaign promises and policymaking, a connection of vital importance for theories of representative democracy (APSA 1950; Downs 1957; Mansbridge 2003). It does so in two ways. First, it microfound the empirical observation that voters punish policymakers who do not follow through on their campaign promises and reward those who do, by showing how these decisions reveal information about the policymaker’s ability (Naurin, Soroka, and Markwat 2019; Matthieß 2022). Second, it posits a novel connection between the incumbent’s ideological preferences and the probability she follows through on her campaign promise.

In many cases, an incumbent policymaker cannot implement her reform alone; instead, she must secure agreement from another policymaker with potentially different ideological preferences and with whom she will compete in the future. Consider, for instance, the Clinton administration’s attempts to implement universal healthcare. Having chosen not to use budget reconciliation and lacking a filibuster-proof majority in the Senate, the Clinton administration needed to secure some Republican support. What did voters learn from the administration’s failure to do so? What would voters have learned had the administration succeeded? And how did this shape congressional Republicans’ incentives to agree to the administration’s reform?

I extend the baseline model by allowing the voter’s other choice in the election, the challenger (he), to veto 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 versions of the incumbent’s

reform he would otherwise agree to.

As in the baseline model, a central insight is that whether the challenger engages in ability blocking depends on the interplay between his ideological preferences and the electoral context. The mechanism driving this insight is familiar. The more ideologically opposed the challenger is to the incumbent’s reform, the more positively the voter updates about her ability when he agrees to it. And the less ideologically opposed the challenger 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, when the challenger trails the incumbent, he engages in ability blocking when his ideological cost of reform is sufficiently small. In the latter case, when the challenger leads the incumbent, he engages in ability blocking when his 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 reform engages in ability blocking to make her look like the type of incumbent whose reform is of such low quality that even an amenable challenger could not agree to it, and (ii.) a leading challenger who is ideologically opposed to the incumbent’s reform engages in ability blocking to prevent her from looking like the type of incumbent whose reform is so high quality that an ideologically opposed challenger was willing to agree to it.

The core of this paper is the way ideological preferences shape what reform—or the lack of reform—conveys to the voter. To conclude, I ask whether the incumbent ever wants to develop a reform that is not at her ideological ideal point and show that 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. Despite being able to implement her 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 eventual decision. As a result, she sometimes wins reelection with a higher probability than if she develops a reform with her preferred ideology. The model thus provides an informational logic for ideological moderation or extremism in unilateral policymaking.

## 1.1 Related Literature

**Policy Quality** In this paper, I show how ideological preferences shape what a voter infers about a policymaker’s ability to develop high-quality policies from her decision whether to implement a reform. To do so, I model policy as having two dimensions—quality and ideology—building on a 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). The models in this literature 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 allow for heterogeneous policymaking ability in a complete information setting, these models assume policymakers have equal ability to develop high-quality policies. My core contribution is extending their setup to explore the effects of uncertainty about a policymaker’s ability to develop high-quality policies in an electoral accountability framework.

**Electoral Accountability and Ideological Preferences** This paper addresses a classic problem in the electoral accountability literature: uncertainty about an incumbent policymaker’s type, which may lead her to distort her behavior to increase her probability of winning reelection. Existing work largely 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 these models, incumbents may distort their behavior by choosing policies voters think are likely to be correct (pander-

ing) or by choosing policies that voters think are unlikely to be correct (anti-pandering or anti-herding). If the incumbent chooses between two policies, one interpreted as “reform,” the other interpreted as “retention of the status quo,” the effect of reelection concerns is ambiguous, and depends on the voter’s prior and other features of the information structure. In contrast, my model, where the uncertainty is about the incumbent’s ability to develop high-quality policies, offers a stark prediction: reelection concerns produce additional reform.

Beyond exploring a less-studied source of uncertainty, my contribution to this literature is twofold. First, I show that the incumbent policymaker’s ideological preferences affect what the voter learns from her decision whether to implement her reform.<sup>3</sup> Second, I show how this mechanism interacts with the electoral context to determine when policymaking distortions arise. 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 distorted policymaking.

Judd (2017) studies a similar model in which an incumbent chooses between unilaterally implementing a reform, which reveals her type, and retaining the status quo. My model generalizes Judd (2017) because I study an electoral environment where the incumbent and challenger are not necessarily *ex ante* symmetric, and I introduce ideological preferences. These generalizations are crucial because, combined with the assumption that the quality of the incumbent’s reform is not revealed before the election, they show that the incumbent’s ideological preferences shape the voter’s beliefs and, together with the electoral context, determine when policymaking distortions occur. Thus, this model reveals a connection between ideology and distorted policymaking that is absent from Judd (2017). Moreover, these generalizations reveal that the key insight in Judd (2017)—that distorted policymaking only

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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.



occurs when the status quo is of sufficiently high quality—is reversed in some cases. Finally, they allow me to explore the incumbent’s incentive to moderate or choose a more ideologically extreme reform, uncovering a novel informational mechanism behind such decisions.

**Campaign Promises and Policymaking** The voter might be aware that the incumbent is developing a reform because she made a campaign promise during the previous election. When this is the case, this model speaks to the connection between campaign promises and policymaking, a connection of vital importance for theories of representative democracy (APSA 1950; Downs 1957; Mansbridge 2003). This paper makes two contributions to this literature. First, it provides a microfoundation for the empirical observation that voters punish policymakers who do not follow through on their campaign promises and reward those who do, by showing how these decisions reveal information about the policymaker’s ability (Naurin, Soroka, and Markwat 2019; Matthieß 2022). This contrasts existing explanations, which point to anger or loss of trust (Matthieß 2022). Second, it posits a novel connection between the incumbent’s ideological preferences and the probability she follows through on her campaign promise.

**Electoral Accountability with a Veto Player** When the challenger can veto the incumbent’s reform, my model relates to work on electoral accountability and veto players. Whereas earlier work focuses on the possibility of vetoes as a potential safeguard against distorted policymaking (Fox and Stephenson 2011), I show how electoral considerations distort veto usage. In this way, my model is similar to Buisseret (2016), in which electoral considerations also distort veto usage.<sup>4</sup> My model complements Buisseret (2016) by showing a similar result in a setting that differs in two ways: the veto player reveals information about the incumbent’s type rather than his own, and the incumbent and veto player are engaged in zero-sum electoral competition, rather than competition in which the veto player’s fate is

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<sup>4</sup>In this respect, I am similar to Kang (2022). However, whereas electoral competition in Kang (2022) creates an incentive *not* to exercise veto power, in my model it creates an incentive to do so.

independent of or linked to the incumbent's.

The veto player's considerations in my model also resemble those of a policy saboteur (e.g., Gieczewski and C. Li 2022). My model shares some similarities with Hirsch and Kastellec (2022), who study how electoral competition affects whether a saboteur with private information about the incumbent's ability publicly sabotages the incumbent's policy, preventing its success. Beyond substantively different focuses, two important differences distinguish our models. First, vetoes and sabotage convey different information about the incumbent's ability. In my model, vetoing the incumbent's reform always conveys a negative signal about her ability. In contrast, in Hirsch and Kastellec (2022), the saboteur is willing to sabotage both types of incumbent. Consequently, sabotage can either be a positive or negative signal about the incumbent's ability. Second, vetoes and sabotage differently affect the policy outcome. In my model, a veto preserves the status quo. In theirs, a sabotaged reform remains in place, but it fails. Thus, in my model, the veto player's ideological preferences affect his incentive to veto and, in turn, what the voter infers about the incumbent's ability, whereas the saboteur's do not. The implication is that, in my model, equilibrium behavior depends on the strength of the signal about the incumbent's ability that vetoing and agreement convey—which depends on the veto player's ideological preferences. By contrast, equilibrium behavior in Hirsch and Kastellec (2022) depends on whether sabotage is a negative or positive signal about the incumbent—which does not depend on the veto player's ideological preferences. Hence, my model complements Hirsch and Kastellec (2022) by showing how ideology affects equilibrium veto usage differently than it affects equilibrium policy sabotage. Moreover, these differences mean that the presence of the veto player may improve the incumbent's electoral prospects, which is not the case in Hirsch and Kastellec (2022).

## 2 Model

### 2.1 Model Setup

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 his or her type is unknown to all players.<sup>5</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 implement her reform,  $\pi_I$ , which has an exogenously determined ideology,  $x_I \in \mathbb{R}$ , and quality,  $q_I \in \mathbb{R}$ , or retain the status quo,  $\pi = \pi_{sq}$ . 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 not  $q_I$ , 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 that  $f(q_I)$  and  $g(q_I)$  have the strict monotone likelihood ratio property (MLRP)(Milgrom 1981).<sup>6</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.

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<sup>5</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 that my results do not change if the incumbent learns her type at the start of the game.

<sup>6</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  $q_I$ .

4. The voter observes the incumbent's decision but not  $q_I$ .
5. The voter chooses whether to elect the incumbent or challenger.

**Payoffs** The incumbent cares about policy quality, ideology, and 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>7</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 5 and allow the incumbent to publicly choose the ideology of her reform before developing it.<sup>8</sup>

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. Additionally, I make the following parameter assumption.

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<sup>7</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>8</sup>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. Thank you to an anonymous reviewer at the *Journal of Politics* for noticing this.

**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 so great a 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>9</sup> A perfect Bayesian equilibrium, referred to as an “equilibrium,” satisfies the following:

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

## 2.2 Discussion of the Model

**Reform Development** 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 and knows that she is developing a reform. This setup captures a common scenario in politics. For example, during the 2024 presidential debate, Donald Trump discussed his plan 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”  
(Hoffman 2024).

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<sup>9</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 a function of  $\pi$  as  $\sigma_V(\pi)$ .

This quote announced Trump’s intention to develop a reform to the status quo. Moreover, it illustrates how the decision whether to implement his reform hinges on its quality.

**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 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.

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 who learns about the quality of her reform through the policy development process, but the voter needs time to observe an implemented reform to learn its quality. The 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 prefers policymakers with high ability, as they are 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 on an expectation about the ideological content of policies he or she will enact in an unmodeled future, or  $\eta$  might represent the voter’s partisan preference for one policymaker versus the other.

### 3 Analysis

Given the incumbent’s choice of whether to implement her reform,  $\pi \in \{\pi_{sq}, \pi_I\}$ , it is a best response for the voter to reelect her if  $\Pr(\tau_I = 1|\pi) \geq p + \eta$ .<sup>10</sup>

#### 3.1 Benchmark: No Uncertainty about the Incumbent’s Ability

I begin with the complete information benchmark, denoted  $\Gamma^K$ , where all players know the incumbent’s type. When the voter knows whether the incumbent has high ability, his voting decision is unrelated to her decision of whether to implement her reform. The incumbent, therefore, implements her reform if and only if:

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

As long as the incumbent has a strict ideological preference for her reform (i.e.,  $\hat{x} \neq x_{sq}$ ), she will implement some versions of her reform that are of relatively lower quality than the status quo.

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<sup>10</sup>Slightly abusing notation, here  $\pi$  represents the incumbent’s decision rather than the policy itself since the voter does not observe  $q_I$ .

### 3.2 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; denoted  $\Gamma^U$ . When the voter chooses whether to reelect the incumbent, his strategy is a mapping from her 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, the incumbent's probability of reelection depends on whether she implements her reform. One possibility is that her 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 is increasing in  $q_I$ . Accordingly, she must use a threshold strategy, implementing her reform if and only if it is of sufficiently high quality.

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 her ability if she implements her reform, and updates negatively if she retains the status quo.<sup>11</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  $\sigma_V(\pi_I)^* > \sigma_V(\pi_{sq})^*$ .<sup>12</sup>

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

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<sup>11</sup>This and additional properties of the voter's posterior belief when the incumbent uses a threshold strategy are derived in Appendix A.

<sup>12</sup>Recall, I denote the probability the voter chooses  $e = 1$  as a function of  $\pi$  as  $\sigma_V(\pi)$ .



The following lemma summarizes the preceding discussion and states an implication of  $f(q_I)$  and  $g(q_I)$  having 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 this is, the more discerning the incumbent is about the quality that her reform must be to warrant implementing it.

Part (b) is a crucial piece of this model. When the incumbent implements her reform, the voter updates positively about her ability. In contrast, when she retains the status quo, the voter updates negatively. When the voter knows the incumbent is developing a reform because the incumbent made a campaign promise—like congressional Republicans’ promise to repeal the ACA in 2017—uncertainty about the incumbent’s ability to develop high-quality policies provides a microfoundation for empirical work documenting voters’ loss of confidence in parties who do not fulfill their campaign promises (e.g., Matthieß 2022; Naurin, Soroka, and Markwat 2019).

The discussion so far has shown that there are at most two types of equilibria: an equilibrium with consequential policy change and one 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 equilibrium and the incumbent’s behavior.

**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, the incumbent's strategy coincides with her strategy in the complete information benchmark. In contrast, 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 and implement additional versions of her reform that are lower quality than what she would otherwise implement. 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 versions of her reform with the versions she implements in the complete information benchmark; the latter because the additional versions of the reform are of lower quality than the status quo.

Proposition 1 illustrates 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*

$$(a) \quad \eta > 0 \text{ and } -\gamma(\hat{x}) > \bar{y}(q_{sq}, \eta),$$

$$(b) \quad \eta = 0,$$

$$(c) \text{ or } \eta < 0 \text{ and } -\gamma(\hat{x}) < \underline{y}(q_{sq}, \eta) + r,$$

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*. The voter knows the incumbent is developing a reform. When her ideological benefit from implementing it is large yet she retains the status quo, the voter infers the reform she developed must be of low quality, leading him to update more negatively about her ability. If her ideological benefit is small but she implements her reform, the voter concludes the reform she developed is of high quality and updates more positively about her ability. Consequently, the incumbent's ideological preferences fundamentally shape what the voter learns.

The connection between this mechanism and the existence of an equilibrium with consequential policy change depends on the incumbent's primary signaling concern: to send a positive signal about her ability, or to 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 her ability, she will not be reelected if she does so. Thus, 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, the incumbent's quality threshold must satisfy  $y^* \geq \bar{y}(q_{sq}, \eta)$ , 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 if the incumbent's ideological benefit from reform is not too large (i.e.,  $-\gamma(\hat{x}) > \bar{y}(q_{sq}, \eta)$ ). In particular, if  $-\gamma(\hat{x}) \in (\underline{y}(q_{sq}, \eta), \underline{y}(q_{sq}, \eta) + r)$ , there is

a unique equilibrium where  $\sigma_V^*(\pi_I) \in (0, 1)$ , and if  $\bar{y}(q_{sq}, \eta) + r \leq -\gamma(\hat{x})$ , there is a unique equilibrium where  $\sigma_V^*(\pi_I) = 1$ .

Now consider the 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. Thus, 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 equilibrium where the voter elects the incumbent with a probability less than one when she retains the status quo (i.e.,  $\sigma_V(\pi_{sq})^* < 1$ ). 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  $\sigma_V(\pi_{sq})^*$ , that is:

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

A  $\sigma_V(\pi_{sq})^* < 1$  exists satisfying (3) if the incumbent's ideological benefit from reform is large enough (i.e.,  $-\gamma(\hat{x}) < \underline{y}(q_{sq}, \eta) + r$ ). If  $-\gamma(\hat{x}) \in (\underline{y}(q_{sq}, \eta), \underline{y}(q_{sq}, \eta) + r)$ , multiple equilibria with consequential policy change exist. In one  $\sigma_V(\pi_{sq})^* = 1$ ; in the other,  $\sigma_V(\pi_{sq})^* \in (0, 1)$ .<sup>13</sup> Otherwise, the equilibrium with consequential policy change is unique.

Proposition 2 illustrates two distinct strategic logics for ability signaling. The first explains ability signaling when the incumbent's primary signaling concern is to send a positive signal—like when she trails. A trailing incumbent whose reform is ideologically similar to the status quo engages in ability signaling to appear like the type of incumbent who develops a reform of high enough quality to implement.. The second explains ability signaling when the incumbent's primary signaling concern is to avoid sending a negative signal. A leading incumbent whose reform is ideologically far from the status quo engages in ability signaling

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<sup>13</sup>Moreover, if  $-\gamma(\hat{x}) \in (\underline{y}(q_{sq}, \eta), \underline{y}(q_{sq}, \eta) + r)$ , there is a third equilibrium where the voter always reelects the incumbent. Otherwise, when the incumbent leads, there is a unique equilibrium. See Appendix A for more details.

to avoid being perceived as the type of incumbent who develops a version of her reform that is of such low quality that she prefers to retain the status quo despite her ideological opposition.

The latter logic provides a potential 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 signaled to voters their intention to develop a reform and made their ideological opposition to the status quo clear to voters. Against that backdrop, failing to implement their 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 from 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>14</sup>

Like her 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) or  $\eta < 0$  and  $q_{sq}$  is sufficiently low.

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<sup>14</sup>See the quote in the introduction from Senator Tim Scott as well as Ronna McDaniel, the Republican National Committee Chairwoman, warning “We could lose the [2018] midterm elections” if legislators did not follow through on [ACA] repeal (Neuman 2017).

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 effect, this means that depending on the electoral context, ability signaling might arise when the status quo is of low quality or when it is of high 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 an incumbent's reform is her type, and 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>15</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 to Judd (2017)—distorted policymaking when the status quo is high 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>16</sup>

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<sup>15</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.

<sup>16</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.

### 3.3 Voter Welfare

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.,  $\gamma(\hat{x}) \geq x_{sq}^2$ ).<sup>17</sup>

**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.

### 3.4 Comparative Statics

I now explore how the extent of policymaking distortion depends on the incumbent’s ideological benefit from her reform, electoral competition, and the office rents.

**Definition 2.** *Let  $y_{\Gamma^U}^*$  be the incumbent’s quality threshold in the equilibrium of  $\Gamma^U$ . If  $y_{\Gamma^U}^* < \gamma(\hat{x})$ , 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, restrict attention to the *voter-welfare-maximizing equilibrium* when analyzing the comparative statics of the

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<sup>17</sup>Following others in the literature, I define the voter’s welfare entirely in terms of his utility from policy (e.g., Canes-Wrone, Herron, and Shotts 2001; Fox and Van Weelden 2012).

model.<sup>18</sup> This equilibrium has the lowest probability of reform. The comparative statics are the same when focusing on the *voter-welfare-minimizing equilibrium*.<sup>19</sup>

The first comparative statics result, which is a corollary of Proposition 2, illustrates the connection between the extent of ability signaling and the incumbent's ideological benefit from reform.

**Corollary 2.** *In the voter-welfare-maximizing equilibrium, the extent of ability signaling is*

- (a) *weakly increasing in the incumbent's ideological benefit from reform if  $\eta < 0$ ,*
- (b) *constant in the incumbent's ideological benefit from reform if  $\eta = 0$ ,*
- (c) *and weakly decreasing in the incumbent's ideological benefit from reform if  $\eta > 0$ .*

Suppose the incumbent leads and does not engage in ability signaling in the voter-welfare-maximizing equilibrium (i.e.,  $-\gamma(\hat{x}) \geq \bar{y}(q_{sq}, \eta)$ ). As her ideological benefit from reform increases, the voter interprets the decision to retain the status quo more negatively. Eventually, he will not reelect her if she does, leading the incumbent to engage in ability signaling since policymaking is consequential. This change is associated with an increase in the extent of ability signaling.

Now suppose the incumbent trails and engages in ability signaling in the voter-welfare-maximizing equilibrium. Suppose also that  $\sigma(\pi_I)^* = 1$  (i.e.,  $\bar{y}(q_{sq}, \eta) + r \leq -\gamma(\hat{x})$ ). As the incumbent's ideological benefit from reform increases, the voter updates less positively about her ability when she implements her reform. When the benefit increases to a sufficient degree (i.e.,  $-\gamma(\hat{x}) < \bar{y}(q_{sq}, \eta) + r$ ), the extent of ability signaling decreases because the voter reelects the incumbent with probability  $\sigma(\pi_I)^* < 1$ , where  $\sigma(\pi_I)^*$  is weakly decreasing in the incumbent's ideological benefit from reform. When the incumbent is less likely to be reelected if she implements her reform, she has less incentive to engage in ability signaling,

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<sup>18</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  $-\gamma(\hat{x}) \in (\underline{y}(q_{sq}, \eta), \bar{y}(q_{sq}, \eta) + r)$ , which is the region of the parameter space where multiple equilibria exist.

<sup>19</sup>In the region of the parameter space where multiple equilibria exist, a third equilibrium with mixed strategies yields different comparative static results.



leading to an associated decrease in the extent of ability signaling. This yields the following insight: sometimes the extent to which the incumbent distorts her policymaking by pushing through lower-quality versions of her reform is *decreasing* in her ideological preference for reform.

**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. Increasing *ex ante* electoral competition increases the extent of ability signaling because as electoral competition increases, policy change *becomes* consequential, leading the incumbent to engage in ability signaling. Increasing the office rents increases the extent of ability signaling because it increases the incumbent's incentive to implement her reform, *given* that policy change is consequential.

When the incumbent trails, there is some subtlety to this second result because, as the extent of ability signaling increases, the voter updates less positively when the incumbent implements her reform. In principle, the extent of ability signaling could increase to a degree that the voter no longer elects the incumbent when she implements her reform because implementing a reform is no longer a strong enough signal of ability.

However, if there is an equilibrium with consequential policy change (i.e.,  $-\gamma(\hat{x}) > \bar{y}(q_{sq}, \eta)$ ) and the office rents increase to a sufficient degree (i.e.,  $-\gamma(\hat{x}) < \bar{y}(q_{sq}, \eta) + r$ ), the voter-welfare-maximizing equilibrium is in mixed strategies where  $\sigma(\pi_I)^* < 1$  and  $\sigma(\pi_I)^*$  is decreasing in the office rents. This decrease in the probability the voter elects the incumbent given that she implements her reform offsets the increase in the office rents. As a result, in the mixed strategy equilibrium, the extent of ability signaling is constant.

## 4 Veto Institutions

So far, I have assumed the incumbent can unilaterally implement her 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 the Clinton administration pursued healthcare reform, congressional Democrats lacked a filibuster-proof majority in the Senate.<sup>20</sup> This required them to secure bipartisan support for the 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 try to implement her reform,  $\tilde{\pi} = (x_I, q_I)$ .
4. If the incumbent tries to implement her reform, the challenger observes  $q_I$  and chooses whether to veto it,  $\pi = \pi_{sq}$ , or agree to it,  $\pi = \tilde{\pi}$ .
5. The voter observes the incumbent's 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 policy quality, ideology, and reelection. Given a policy with ideology  $x$  and quality  $q$ , his utility is

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

where  $\hat{x}_C$  is his ideological ideal point.

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<sup>20</sup>Democrats potentially could have passed the reform using budget reconciliation, as Bill 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>21</sup>

Denote the probability the incumbent is reelected if the challenger agrees to her reform as  $\sigma_V(\tilde{\pi}|\tilde{\pi})^*$ , the probability the she is reelected if he blocks her reform as  $\sigma_V(\pi_{sq}|\tilde{\pi})^*$ , and the probability she is reelected if she retains the status quo as  $\sigma_V(\pi_{sq})^*$ . I begin with a lemma that establishes an important feature of any equilibrium of  $\Gamma^V$  in which, on the equilibrium path, the incumbent implements versions of her reform that the challenger blocks and retains the status quo.

**Lemma 2.** *In any equilibrium, if, on the equilibrium path, the incumbent implements versions of her reform that the challenger blocks and retains the status quo, then  $\sigma_V(\pi_{sq}|\tilde{\pi})^* = \sigma_V(\pi_{sq})^*$ .*

If, on the equilibrium path, the incumbent implements versions of her reform that the challenger blocks and retains the status quo, the voter must elect her with the same probability in both cases. This is because the incumbent retaining the status quo and the challenger vetoing the incumbent's reform produce the same policy outcome. If the probability of re-election differs between these cases, the incumbent will have a profitable deviation. Put differently, the distinction between the incumbent's decision to retain the status quo and her decision to implement a version of her reform that she knows will be blocked cannot be electorally consequential. Therefore, I make the following restriction to streamline the analysis.

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<sup>21</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.

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

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

## 4.1 Analysis

The following lemma establishes the challenger's strategy in any equilibrium.

**Lemma 3.** *In any equilibrium, the challenger uses a threshold strategy and agrees to the incumbent's reform if and only if  $q_I \geq q_{sq} + z^*$ , where  $z^* \in (-\infty, \infty)$ .*

The intuition for this lemma closely parallels the intuition for the incumbent's strategy in the baseline model. The challenger's expected utility from vetoing the incumbent's reform is constant in  $q_I$  while his expected utility from agreeing to the incumbent's reform is increasing in  $q_I$ ; ergo, he must use a threshold strategy, which depends on his *quality threshold*.

This lemma means that in any equilibrium, the voter updates similarly to how he updates in the baseline model: when the challenger agrees to the incumbent's reform, the voter updates positively about the incumbent's ability, and when the challenger blocks the incumbent's reform, the voter updates negatively about the incumbent's ability.

The first part of equilibrium condition (iii.) means that the voter's strategy will be a mapping from the challenger's decision,  $\pi \in \{\pi_{sq}, \tilde{\pi}\}$ , to a vote choice. As such, 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  $\sigma_V(\tilde{\pi}|\tilde{\pi})^* > \sigma_V(\pi_{sq}|\tilde{\pi})^*$ .*

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, the challenger has an additional incentive to block the incumbent's reform that is not present in the complete information benchmark. Suppose there is no uncertainty about the incumbent's ability, and given the quality of the incumbent's reform, the challenger is essentially indifferent between agreeing to it and blocking it. If blocking the reform strictly increases the challenger's probability of winning the election, he adopts a higher quality threshold, blocking some versions of the incumbent's reform he would otherwise agree to. I refer to this distortion as *ability blocking*.<sup>22</sup>

The effect of ability blocking on policy quality is ambiguous. On the one hand, ability blocking increases expected reform quality because the challenger adopts a higher quality threshold; that is, ability blocking makes the challenger more discerning, improving reform quality. On the other hand, ability blocking decreases expected policy quality overall since the versions of the incumbent's reform the challenger blocks are higher quality than the status quo.

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<sup>22</sup>If  $x_{sq}$  is not on the Pareto frontier, there are two possibilities. If the challenger's ideological benefit from reform is still weakly smaller than the incumbent's, the challenger still engages in ability blocking. If, however, the challenger's ideological benefit from reform is strictly greater than that of the incumbent, it is no longer an equilibrium for the incumbent to try to implement her reform for all  $q_I$  since the challenger will agree to some versions of her reform she likes less than the status quo. If, instead, I focus on equilibria where the incumbent never tries to implement her reform if the challenger will not agree to it, there may be ability signaling or ability blocking in equilibrium.

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

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

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

$$(b) \quad \eta = 0,$$

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

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. When the challenger can veto the incumbent's reform, his ideological preferences affect how the voter updates about her ability. Let  $\phi(\hat{x}_C)$  be the challenger's *ideological cost from reform*.<sup>23</sup> The higher this cost, the more favorably the voter updates about the incumbent if the challenger agrees to 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 blocking arises in equilibrium. When the incumbent leads the challenger, he never wins the election if he agrees to the incumbent's reform. So his primary signaling concern is to send a negative signal about the incumbent's ability. 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 reform (i.e.,  $\sigma_V(\pi_{sq})^* < 1$ ). Fixing  $\sigma_V(\pi_{sq})^*$ , this requires

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

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<sup>23</sup>Assumption 2 implies this is non-negative and weakly decreasing in  $\hat{x}_C$ .

A  $\sigma_V(\pi_{sq})^* < 1$  exists satisfying (4) 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, he always wins the election if he blocks the incumbent's reform. Hence, the challenger's primary signaling incentive 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 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  $\sigma_V(\tilde{\pi})^* < 1$  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, Proposition 6 illustrates two distinct strategic logics driving ability blocking: (i.) a trailing challenger who is not ideologically opposed to the incumbent's reform engages in ability blocking to make her 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 reform engages in ability blocking to prevent her from looking like the type of incumbent whose reform is so high-quality that an ideologically opposed challenger is willing to agree to it. The latter logic may explain why many Republican legislators' were reluctant to go along with the Clinton administration's efforts to implement healthcare reform.<sup>24</sup>

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

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<sup>24</sup>Senator John Chafee, a Republican, recalled that many Republican legislators counseled opposing the Clinton administration's efforts thinking "why should we help them and give Bill Clinton another ticket to the White House?" (Johnson and Broder 1996, p. 37). These electoral considerations were in addition to "substantive and profound policy differences" with the Clinton administration's proposed reform (Johnson and Broder 1996, p. 191) as described by House Minority Leader Bob Michel, a Republican.

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 her reform is a stronger signal of ability than 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.

## 5 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. Does the incumbent ever have an incentive to develop a reform that is not at her 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>25</sup> I focus on the baseline model to highlight a purely informational logic for the incumbent to propose a reform that differs from her ideal point.<sup>26</sup>

**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  $x_I \in \{\underline{x}_I^*, \bar{x}_I^*\}$ , where*

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<sup>25</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>26</sup>However, the same logic is present in the model where the challenger can veto.



$$\underline{x}_I^* = \hat{x} - \sqrt{\underline{y}(q_{sq}, \eta) + (\hat{x} - x_{sq})^2} \text{ and } \overline{x}_I^* = \hat{x} + \sqrt{\underline{y}(q_{sq}, \eta) + (\hat{x} - x_{sq})^2}.$$

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, she can improve her electoral fortunes. How is this possible?

By developing a reform that is not at her ideological ideal point, the incumbent reduces her incentive to implement it because doing so yields a smaller ideological benefit.<sup>27</sup> Put differently, by developing a reform that differs from her ideological ideal point, the incumbent commits to using 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, 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>28</sup>

When the incumbent develops a reform with an ideology that differs from her ideological ideal point, she chooses one sufficiently far from it to make the voter indifferent between electing her and the challenger when she retains the status quo. There are two such ideologies, one to the right and one to the left of the incumbent's ideological ideal point. Both choices will affect the voter's inference in the same way. However, there are many reasons to expect the incumbent to resolve her indifference between the two ideologies by choosing the more moderate one. For example, with even a small amount of uncertainty about the incumbent's ideological ideal point, she is incentivized to choose the ideology close to the voter's ideological ideal point, as in Fearon (1999). Hence, Proposition 8 can be interpreted as saying the incumbent is incentivized to moderate.

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<sup>27</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>28</sup>When the incumbent trails, there is also a region of the parameter space where she develops a reform with an 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.

It is illustrative to juxtapose this result with the models of 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 reasons entirely unrelated to Downsian logic. The policymaker moderates because it affects the information her decision conveys.

## 6 Conclusion

I analyzed a model in which an incumbent policymaker chooses whether to implement a reform, after learning its quality from the policy development process, ahead of an election. Importantly, the voter knows the incumbent is developing her reform—say, because the incumbent made a campaign promise or created a task force—and knows her ideological stance vis-à-vis the status quo. 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 her to implement lower-quality versions of her reform. 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—which determines 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. As a result, the challenger blocks some reforms he would otherwise allow. 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 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.

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 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 his or her 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 and Propositions 1 and 2** I prove Lemmas A, B, C, and D and then use them to characterize all equilibria of  $\Gamma^U$  in Propositions A, B, and C.

**Lemma A.** *In any equilibrium, the incumbent uses a threshold strategy and implements her reform if and only if  $q_I \geq q_{sq} + y^*$ , where  $y^* \in (-\infty, \infty)$ .*

*Proof.* Suppose an equilibrium exists where the voter reelects the incumbent with probability  $\sigma_V(\pi_{sq})^* \in [0, 1]$  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  $y^* = -(\hat{x} - x_{sq})^2 - (\sigma_V(\pi_I)^* - \sigma_V(\pi_{sq})^*)r$ . ■

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 B.** *In any equilibrium,*

- (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.* Lemma A implies that in any equilibrium the incumbent uses a threshold strategy and implements her reform if and only if  $q_I \geq q_{sq} + y^*$ .

(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  $1 - F(q_{sq} + y) > p(1 - F(q_{sq} + y)) + (1 - p)(1 - G(q_{sq} + y))$ , 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 C.** (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  $\Pr(\tau_I = 1|\pi = \pi_I, \bar{y}(q_{sq}, \eta)) = p + \eta$  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 B,  $\Pr(\tau_I = 1|\pi = \pi_{sq}, y)$  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 B,  $\Pr(\tau_I = 1|\pi = \pi_I, y)$  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  $\Pr(\tau_I = 1|\pi = \pi_I, y) > p + \eta$  for all  $y > \bar{y}(q_{sq}, \eta)$ .

■

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

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

$$\frac{p(1 - F(q_{sq} + y))}{p(1 - F(q_{sq} + y)) + (1 - p)(1 - G(q_{sq} + y))} = p + \eta. \quad (6)$$

By Lemma B, the LHS of (6) is increasing in  $y$ . Hence, if  $\eta$  increases,  $\bar{y}(q_{sq}, \eta)$  increases to maintain equality. Moreover, the LHS of (6) is increasing in  $q_{sq}$ . Hence, to maintain equality, if  $q_{sq}$  increases,  $\bar{y}(q_{sq}, \eta)$  decreases. Using identical arguments, the same can be shown for  $\underline{y}(q_{sq}, \eta)$ . ■

**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 (7) is satisfied,  $\sigma_V(\pi_I)^* = 1$ , and  $\sigma_V(\pi_{sq})^* = 0$ ,*
- (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 (9) is satisfied,  $\sigma_V(\pi_I)^* = 1$ , and  $\sigma_V(\pi_{sq})^* \in [0, 1]$ .*
- (c) *If  $-(\hat{x} - x_{sq})^2 > \underline{y}(q_{sq}, \eta)$ , there is a PBE where  $\pi = \pi_I$  if and only if (8) is satisfied,  $\sigma_V(\pi_I)^* = 1$ , and  $\sigma_V(\pi_{sq})^* = 1$ .*

*Proof.* Suppose  $\eta < 0$ . By Lemma B, the incumbent is reelected when she implements her reform in any PBE. By Lemma C,  $\underline{y}(q_{sq}, \eta)$  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

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

Sequential rationality requires 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

$$q_I > q_{sq} - (\hat{x} - x_{sq})^2. \quad (8)$$

Sequential rationality requires 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 remains indifferent between her and challenger when she retains the status quo. Given this indifference, suppose the voter reelects the incumbent with probability  $\sigma_V(\pi_{sq})^*$  when the incumbent retains. For a particular  $\sigma_V(\pi_{sq})^*$ , the incumbent implements her reform if and only if

$$q_I \geq q_{sq} - (\hat{x} - x_{sq})^2 + (\sigma_V(\pi_{sq})^* - 1)r. \quad (9)$$

For the voter to be indifferent, it must be that  $-(\hat{x} - x_{sq})^2 + (\sigma_V(\pi_{sq})^* - 1)r = \underline{y}(q_{sq}, \eta)$ , which implies that in equilibrium  $\sigma_V(\pi_{sq})^* \equiv \frac{\underline{y}(q_{sq}, \eta) + (\hat{x} - x_{sq})^2}{r} + 1$ . To ensure  $\sigma_V(\pi_{sq})^* \in [0, 1]$ , 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 (8) is satisfied,  $\sigma_V(\pi_I)^* = 0$ , and  $\sigma_V(\pi_{sq})^* = 0$ .*
- (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 (10) is satisfied,  $\sigma_V(\pi_I)^* \in (0, 1]$ , and  $\sigma_V(\pi_{sq})^* = 0$ .*

*Proof.* Suppose  $\eta > 0$ . By Lemma B, the incumbent is not reelected when she retains the status quo in any PBE. By Lemma C,  $\bar{y}(q_{sq}, \eta)$  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 (8) is satisfied. Sequential rationality requires 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 (7) is satisfied. Sequential rationality requires 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 the challenger and the incumbent when the incumbent implements her reform and, hence, reelects the incumbent with probability  $\sigma_V(\pi_I)^* \in [0, 1]$ . Given a particular  $\sigma_V(\pi_I)^*$ , the incumbent implements her reform if and only if

$$q_I \geq q_{sq} - (\hat{x} - x_{sq})^2 - \sigma_V(\pi_I)^* r. \quad (10)$$

For the voter to be indifferent, it must be that  $-(\hat{x} - x_{sq})^2 - \sigma_V(\pi_I)^* r = \bar{y}(q_{sq}, \eta)$ , which implies that in equilibrium  $\sigma_V(\pi_I)^* \equiv \frac{-(\hat{x} - x_{sq})^2 - \bar{y}(q_{sq}, \eta)}{r}$ . To ensure that  $\sigma_V(\pi_I)^* \in [0, 1]$ , it must be that  $\bar{y}(q_{sq}, \eta) \in [-(\hat{x} - x_{sq})^2 - r, -(\hat{x} - x_{sq})^2]$ . This proves (b). ■

**Proposition C.** *Suppose  $\eta = 0$ . There is a unique PBE where  $\pi = \pi_I$  if and only if (7) is satisfied,  $\sigma_V(\pi_I)^*$ , and  $\sigma_V(\pi_{sq})^*$ .*

*Proof.* Suppose  $\eta = 0$ . By Lemma B, 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 (7) 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  $(\hat{x} - x_{sq})^2 \geq x_{sq}^2$ . 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 voter-welfare-maximizing equilibrium. When  $\eta < 0$ , if  $\underline{y}(q_{sq}, \eta) \in (-(\hat{x} - x_{sq})^2 - r, -(\hat{x} - x_{sq})^2)$ , there are three equilibria. Proposition 3 implies that the equilibrium in which the voter's welfare is maximized is the one where  $\pi = \pi_I$  if and only if (8) is satisfied. In all other regions of the parameter space, there is a unique equilibrium.

*Proof.* Propositions A, B, and C imply that in the voter-welfare-maximizing equilibrium:

- (1) If  $\eta < 0$ ,  $D(y_\Gamma^*) = 0$  for  $\underline{y}(q_{sq}, \eta) \leq -(\hat{x} - x_{sq})^2$  and  $D(y_\Gamma^*) = r$  for  $\underline{y}(q_{sq}, \eta) > -(\hat{x} - x_{sq})^2$ .
- (2) If  $\eta = 0$ ,  $D(y_\Gamma^*) = r$
- (3) If  $\eta > 0$ ,  $D(y_\Gamma^*) = r$  for  $\bar{y}(q_{sq}, \eta) \leq -(\hat{x} - x_{sq})^2 - r$ ,  $D(y_\Gamma^*) = -(\hat{x} - x_{sq})^2 - \bar{y}(q_{sq}, \eta)$  for  $\bar{y}(q_{sq}, \eta) \in (-(\hat{x} - x_{sq})^2 - r, -(\hat{x} - x_{sq})^2)$ , and  $D(y_\Gamma^*) = 0$  for  $\bar{y}(q_{sq}, \eta) \geq -(\hat{x} - x_{sq})^2$ .  
Hence,  $D(y_\Gamma^*)$  is weakly decreasing in  $\bar{y}(q_{sq}, \eta)$ .

(a) If  $\eta < 0$ ,  $D(y_\Gamma^*)$  is weakly increasing in  $\underline{y}(q_{sq}, \eta)$ ; if  $\eta > 0$ ,  $D(y_\Gamma^*)$  is weakly decreasing in  $\bar{y}(q_{sq}, \eta)$ . Lemma D implies that  $D(y_\Gamma^*)$  is weakly increasing as  $\eta$  approaches zero, and, hence  $D(y_\Gamma^*)$  is weakly increasing as  $\eta$  approaches zero.

(b) If  $\eta < 0$ ,  $D(y_\Gamma^*)$  is weakly increasing in  $r$ ; if  $\eta = 0$ ,  $D(y_\Gamma^*)$  is weakly increasing in  $r$ ; if  $\eta > 0$ ,  $D(y_\Gamma^*)$  is weakly increasing in  $r$ . Hence,  $D(y_\Gamma^*)$  is weakly increasing in  $r$ . ■

## Proof of Lemma 2

*Proof.* Suppose an equilibrium exists in which, on the equilibrium path, the incumbent tries to implement some versions of her reform that the challenger blocks and retains the status quo. Since the incumbent's payoff from policy is the same in both cases, the probability she is reelected must also be the same. Otherwise, she has a profitable deviation. ■

## Proof of Lemma 3

*Proof.* This proof follows the logic of the proof of Lemma A. ■

**Proof of Proposition 5** In Propositions E, D, and F I characterize all equilibria in which the incumbent tries to implement her reform 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  $q_I$ , the challenger agreeing to implement the incumbent's reform and the challenger blocking the incumbent's reform are both on the equilibrium path. I then show in Lemma E 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 equilibrium where  $\pi = \tilde{\pi}$  if and only if (12) is satisfied,  $\sigma_V(\tilde{\pi} | \tilde{\pi})^* = 1$ , and  $\sigma_V(\pi_{sq} | \tilde{\pi})^* = 0$ .*
- (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 equilibrium where  $\pi = \tilde{\pi}$  if and only if (13) is satisfied,  $\sigma_V(\tilde{\pi} | \tilde{\pi})^* = 1$ , and  $\sigma_V(\tilde{\pi} | \tilde{\pi})^* \in (0, 1)$ .*
- (c) *If  $-(\hat{x}_C - x_{sq})^2 \geq \underline{y}(q_{sq}, \eta) - (\hat{x}_C - \hat{x})^2$ , there is a unique equilibrium where  $\pi = \tilde{\pi}$  if and only if (11) is satisfied,  $\sigma_V(\tilde{\pi} | \tilde{\pi})^* = 1$ , and  $\sigma_V(\pi_{sq} | \tilde{\pi})^* = 1$ .*

*Proof.* Suppose  $\eta < 0$ . By assumption the incumbent tries to implement her reform for all  $q_I$ . By Lemma C, in any equilibrium, the incumbent is reelected if the challenger agrees to her reform. By Lemma C,  $\underline{y}(q_{sq}, \eta)$  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 the challenger agrees to her reform or not. Then the challenger agrees to her reform if and only

if

$$q_I \geq q_{sq} - (\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2. \quad (11)$$

Sequential rationality requires 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 the challenger agrees to her reform but not if she blocks it. Then, the challenger agrees to the incumbent's reform if and only if

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

Sequential rationality requires  $-(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 + r < \underline{y}(q_{sq}, \eta)$ . This shows (a).

Finally, suppose  $\underline{y}(q_{sq}, \eta) = z^*$ . The voter is indifferent when the challenger blocks the incumbent's reform, and reelects the incumbent with probability  $\sigma_V(\pi_{sq}|\tilde{\pi})^* \in [0, 1]$ . Hence, given  $\sigma_V(\pi_{sq}|\tilde{\pi})^*$ , the challenger agrees to the incumbent's reform if and only if

$$q_I \geq q_{sq} - (\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 + (1 - \sigma_V(\pi_{sq}|\tilde{\pi})^*)r. \quad (13)$$

For the voter to be indifferent, it must be that  $\sigma_V(\pi_{sq}|\tilde{\pi})^* = \frac{-(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 + r - \underline{y}(q_{sq}, \eta)}{r}$ . To ensure that  $\sigma_V(\pi_{sq}|\tilde{\pi})^* \in [0, 1]$ , 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 an equilibrium where  $\pi = \tilde{\pi}$  if and only if (11) is satisfied,  $\sigma_V(\tilde{\pi}|\tilde{\pi})^* = 0$ , and  $\sigma_V(\pi_{sq}|\tilde{\pi})^* = 0$ .*
- (b) *If  $-(\hat{x}_C - x_{sq})^2 \in [\bar{y}(q_{sq}, \eta) - (\hat{x}_C - \hat{x})^2 - r, \bar{y}(q_{sq}, \eta) - (\hat{x}_C - \hat{x})^2]$ , there is an equilibrium where  $\pi = \tilde{\pi}$  if and only if (14) is satisfied,  $\sigma_V(\tilde{\pi}|\tilde{\pi})^* \in [0, 1]$ , and  $\sigma_V(\pi_{sq}|\tilde{\pi})^* = 0$ .*



(c) If  $-(\hat{x}_C - x_{sq})^2 > \bar{y}(q_{sq}, \eta) - (\hat{x}_C - \hat{x})^2 - r$ , there is an equilibrium where  $\pi = \tilde{\pi}$  if and only if (12) is satisfied,  $\sigma_V(\tilde{\pi}|\tilde{\pi})^* = 1$ , and  $\sigma_V(\pi_{sq}|\tilde{\pi})^* = 0$ .

*Proof.* Suppose  $\eta > 0$ . By Lemma C, in any equilibrium, the incumbent is replaced if the challenger blocks the incumbent's reform. By Lemma C,  $\bar{y}(q_{sq}, \eta)$  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  $z^* > \bar{y}(q_{sq}, \eta)$ , in which case the incumbent is reelected if the challenger agree to her reform but not otherwise. Then, the challenger agrees to the reform if (12) is satisfied. Sequential rationality requires that  $-(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 + r > \underline{y}(q_{sq}, \eta)$ . This shows (c).

Next, suppose  $z^* < \bar{y}(q_{sq}, \eta)$ , in which case the challenger is reelected whether or not he agrees to the incumbent's reform. Then, the challenger agrees to her reform if and only if (11) is satisfied. Sequential rationality requires 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 agrees to the incumbent's reform. Hence, he reelects the incumbent with probability  $\sigma_V(\tilde{\pi}|\tilde{\pi})^*$ . Given  $\sigma_V(\tilde{\pi}|\tilde{\pi})^*$ , the challenger agrees to the incumbent's reform if

$$q_I \geq q_{sq} - (\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2 + \sigma_V(\tilde{\pi}|\tilde{\pi})^* r. \quad (14)$$

For the voter to be indifferent, it must be that  $\sigma_V(\tilde{\pi}|\tilde{\pi})^* = \frac{\bar{y}(q_{sq}, \eta) - [-(\hat{x}_C - x_{sq})^2 + (\hat{x}_C - \hat{x})^2]}{r}$ . To ensure that  $\sigma_V(\tilde{\pi}|\tilde{\pi})^* \in [0, 1]$ , 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 equilibrium where  $\pi = \tilde{\pi}$  if and only if (12) is satisfied,  $\sigma_V(\tilde{\pi}|\tilde{\pi})^* = 1$ , and  $\sigma_V(\pi_{sq}|\tilde{\pi})^* = 0$ .

*Proof.* Suppose  $\eta = 0$ . The incumbent is reelected when the challenger agrees to her reform but not otherwise. Thus, the challenger will agree to the incumbent's reform if and only if

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

**Lemma E.** *D1 requires that in any equilibrium, if the incumbent deviates to not trying to implement her 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 an equilibrium surviving D1 in which on the path the incumbent tries to implement her reform for all  $q_I$ . Let  $\chi \in \mathbb{R}$  be this arbitrary incumbent's type. Define  $R(\chi)$  as the set of reelection probabilities for which type  $\chi$  strictly prefers retaining the status quo over receiving her payoff under  $\sigma$ , and define  $R_0(\chi)$  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  $R(\chi) \cup R_0(\chi) \subseteq R(\chi')$  (Cho and Kreps 1987). Additionally, let  $\omega \in [0, 1]$  be the probability the voter elects the incumbent when she deviates off the equilibrium path.

Suppose  $\chi < q_{sq} + z^*$ , in which case on the path the challenger will block the incumbent's reform. The incumbent weakly prefers to deviate if  $\omega \geq \sigma_V(\pi_{sq} | \tilde{\pi})^*$ .

And suppose  $\chi > q_{sq} + z^*$ , in which case on the path the challenger agrees to the incumbent's reform. The incumbent weakly prefers to deviate if  $\omega \geq \sigma_V(\tilde{\pi} | \tilde{\pi})^* + \frac{\chi - q_{sq} + (x_I - x_{sq})^2}{r}$ . Since  $\sigma_V(\tilde{\pi} | \tilde{\pi})^* \geq \sigma_V(\pi_{sq} | \tilde{\pi})^*$  and  $\chi > q_{sq} + z^* \geq q_{sq} - (\hat{x} - x_{sq})^2$  (which is implied by Assumption 2),

$$\sigma_V(\tilde{\pi} | \tilde{\pi})^* + \frac{q_I - q_{sq} + (x_I - x_{sq})^2}{r} > \sigma_V(\pi_{sq} | \tilde{\pi})^*.$$

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 retains the status quo on the equilibrium path, and is not reelected when she does.

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

$$-(\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2 < \underline{y}(q_{sq}, \eta). \quad (15)$$

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

$$\begin{aligned} \int_{-\infty}^{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2 - r} (q_{sq} - (\hat{x} - x_{sq})^2) h(q_I) dq_I \\ + \int_{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2 - r}^{\infty} (q_I - (\hat{x} - \underline{x}^*)^2 + r) h(q_I) dq_I. \end{aligned} \quad (16)$$

Differentiating,

$$\frac{\partial(16)}{\partial \underline{x}^*} = \int_{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2}^{\infty} 2(\hat{x} - \underline{x}^*) h(q_I) dq_I.$$

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 (15).

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

$$-(\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2 > \underline{y}(q_{sq}, \eta). \quad (17)$$

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

$$\begin{aligned} \int_{-\infty}^{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2} (q_{sq} - (\hat{x} - x_{sq})^2 + r) h(q_I) dq_I \\ + \int_{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2}^{\infty} (q_I - (\hat{x} - \underline{x}^*)^2 + r) h(q_I) dq_I. \end{aligned} \quad (18)$$

Differentiating,

$$\frac{\partial(18)}{\partial \underline{x}^*} = \int_{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x}^*)^2}^{\infty} 2(\hat{x} - \underline{x}^*)h(q_I)dq_I.$$

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  $\underline{x}^*$  satisfying (17).

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

$$\int_{-\infty}^{q_{sq} + \underline{y}(q_{sq}, \eta)} (q_{sq} - (\hat{x} - x_{sq})^2 + \rho^*r)h(q_I)dq_I + \int_{q_{sq} + \underline{y}(q_{sq}, \eta)}^{\infty} (q_I - (\hat{x} - \underline{x}^*)^2 + r)h(q_I)dq_I. \quad (19)$$

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

$$\begin{aligned} & \int_{-\infty}^{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x})^2} (q_{sq} - (\hat{x} - x_{sq})^2 + r)h(q_I)dq_I \\ & + \int_{q_{sq} - (\hat{x} - x_{sq})^2 + (\hat{x} - \underline{x})^2}^{\infty} (q_I - (\hat{x} - \underline{x})^2 + r)h(q_I)dq_I. \end{aligned} \quad (20)$$

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

$$\int_{-\infty}^{q_{sq} + \underline{y}(q_{sq}, \eta)} (q_{sq} - (\hat{x} - x_{sq})^2 + r)h(q_I)dq_I + \int_{q_{sq} + \underline{y}(q_{sq}, \eta)}^{\infty} (q_I - (\hat{x} - \underline{x}^*)^2 + r)h(q_I)dq_I, \quad (21)$$

which is larger than (19). 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

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

where  $h(q_I) = pf(q_I) + (1 - p)g(q_I)$ . Rearranging, (22) is satisfied if

$$\begin{aligned} & \int_{q_{sq} - (\hat{x} - x_{sq})^2 - r}^{q_{sq} + \underline{y}(q_{sq}, \eta)} (q_{sq} - (\hat{x} - x_{sq})^2 - q_I) h(q_I) dq_I \\ & - \int_{q_{sq} + \underline{y}(q_{sq}, \eta)}^{\infty} ((\hat{x} - \underline{x}^*)^2) h(q_I) dq_I + \int_{-\infty}^{q_{sq} - (\hat{x} - x_{sq})^2 - r} (r) h(q_I) dq_I \geq 0. \quad (23) \end{aligned}$$

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 (23) 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 (23) 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. Then an incumbent of type  $\tau_j$  implements her reform if and only if  $q_I \geq q_{sq} - (\hat{x} - x_{sq})^2 + (\sigma_V(\pi_{sq})^* - \sigma_V(\pi_I)^*)r$ . 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 the quality of her reform 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  $\hat{y} < -(\hat{x} - x_{sq})^2$ .

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  $y^* < \underline{y}(q_{sq}, \eta)$ . 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 3.** *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:  $\sigma_V(\pi_{sq})^* < \sigma_V(\pi_I)^*$ . Then her expected utility is

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

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