# Signaling Ability Through Policy Change

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August 9, 2024

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**Abstract**

How does uncertainty about a policymaker's ability to develop high-quality policies affect their policymaking? I study a model where an incumbent policymaker chooses whether to retain or replace a status quo policy with a new policy. The voter learns about the incumbent's ability to develop high-quality policies from this decision, then reelects the incumbent or replaces them with a challenger. I show that when the incumbent trails the challenger and changing the status quo is a sufficiently strong signal of ability, and when the incumbent leads the challenger and retaining is a sufficiently strong signal of lack of ability, the incumbent engages in "ability signaling," making additional, low-quality policy changes. Moreover, I show that the extent of ability signaling increases in the degree of ex-ante electoral competition. Next, I examine how the observability of policy quality and the ability to choose the ideology of a policy affects the incumbent's behavior in equilibrium. Finally, I explore what happens when the incumbent must secure the support of another policymaker to change the status quo while engaged in zero-sum electoral competition. This reduces the probability of policy change and increases the expected policy quality conditional on policy change. Yet, the need to secure support may be electorally beneficial for the incumbent.

*blshaver@uchicago.edu. I am deeply indebted to my dissertation commiittee, Wiola Dziuda, Zhaotian Luo, Ethan Bueno de Mesquita, and Scott Gehlbach, for their help on this project. This paper also benefited from discussion with Kevin Angell, Scott Ashworth, Peter Bils, Martin Castillo-Quintana, Álvaro Delgado-Vega, Giorgio Farace, Anthony Fowler, Will Howell, Barton Lee, Hongyi Li, Monika Nalepa, Jon Rogowski, Daniel Sonnenstuhl, and Adam Zelizer. Thank you as well to audiences at the University of Chicago, MPSA, and SIOE.

# 1 Introduction

Uncertainty about a policymaker's type may distort policymaking relative to a benchmark with no uncertainty. Uncertainty about what a policymaker knows about the state of the world may lead to pandering, where the policymaker chooses an action consistent with a voter's prior, or anti-pandering, where the policymaker chooses an action inconsistent with a voter's prior, in both cases despite information suggesting another action is optimal (Canes-Wrone et al., 2001; Ashworth and Shotts, 2010; Bils, 2023; Kartik et al., 2015). Uncertainty about a policymaker's ideology may lead to moderation, where a policymaker chooses a policy that makes it seem as though they have the same preferred policy as the voter (Fearon, 1999). Uncertainty about a policymaker's ability to provide constituency service and global public goods may lead to an emphasis on constituency services (Ashworth and Bueno de Mesquita, 2006). But what about uncertainty about a policymaker's ability to develop high-quality policies?

Suppose an incumbent policymaker inherits a status quo and chooses to retain or replace it. Furthermore, suppose the incumbent's ability to develop a high-quality policy today—a policy that achieves things everyone agrees is good, like a low cost-benefit ratio or limited susceptibility to corruption—is positively correlated with their ability to develop a high-quality policy tomorrow. Finally, suppose the pivotal voter observes whether the policymaker changes the status quo today and reelects them if the expected quality of policy tomorrow, given the incumbent's decision, is sufficiently high. If the incumbent cares about policy quality and winning reelection, and if the voter knows the quality of the policy the incumbent can enact tomorrow, the incumbent will change the status quo when the quality of the policy it develops is higher than the quality of the status quo.

Now, suppose the incumbent cares about policy quality and winning reelection, the voter does not know the quality of policy the incumbent will develop tomorrow, and the voter believes the incumbent only changes the status quo if the quality of policy they develop exceeds the quality of the status quo. Then, changing the status quo is electorally beneficial because it signals the ability to develop high-quality policies tomorrow. And because the incumbent cares about reelection, they have an incentive to change the status quo more often than they do when the voter knows the quality of policy the incumbent can develop tomorrow.

In this paper, I build on this simple logic to explore how uncertainty about a policymaker's ability to develop high-quality policies affects their policymaking. To do so, I develop a formal model that puts more structure on the abovementioned example. In the model, an incumbent politician, motivated by policy and reelection, chooses whether to retain the status quo or incur a cost to change it to a policy at their ideal point. Policy is assumed to have ideological dimension, but it also has a quality dimension, and all players know the ideology and quality of the status quo. Before deciding whether to change the status quo, the incumbent privately learns the quality of the policy they can change the status quo to—the incumbent's potential policy. The policy's quality is drawn from a distribution, and the particular distribution corresponds to the incumbent's unknown type. Quality is drawn from one distribution if the incumbent has policymaking ability, and if the incumbent lacks ability, quality is drawn from another. Importantly, these distributions are such that the higher quality a policy is, the more likely a policymaker with ability developed it. After the incumbent chooses whether to change the status quo, but before the quality of the incumbent's policy is revealed, a voter who cares about the ability of the incumbent to develop high-quality policy chooses whether to reelect the incumbent or to replace them with a challenger.

I begin by showing that in any equilibrium, the incumbent uses a threshold strategy and changes the status quo if and only if the potential policy's quality is sufficiently high. Hence, in equilibrium, changing the status quo is a signal of ability, while retaining the status quo is a signal of the lack of ability. Therefore, as previewed by the simple logic described above, when there is uncertainty about the incumbent's ability, the incumbent's desire for reelection incentivizes additional policy change. But when does what I refer to as "ability signaling"—making additional, low-quality changes to the status quo—arise in equilibrium? The answer depends on two things. First, whether policy change is electorally consequential. Second, how strong a signal changing the status quo is of ability and how strong a signal retaining the status quo is of lack of ability.

When the incumbent's decision whether to change the status quo does not affect the voter's election decision, the incumbent has no reason to engage in ability signaling. Hence, ability signaling only arises when the probability the incumbent is reelected depends on whether they change the status quo.

When the incumbent begins the game trailing the challenger, they lose the election if they retain the status quo because retaining conveys a lack of ability. Hence, for ability signaling to arise in equilibrium, it must be that the incumbent is reelected with a positive probability if they change the status quo. For this to be the case, changing the status quo must be a sufficiently strong signal of ability, which requires the cost of policy change to dominate the ideological benefit of policy change.

In contrast, when the incumbent begins the game leading the challenger, they win reelection if they change the status quo because changing the status quo conveys ability. Hence, a necessary condition for ability signaling to arise in equilibrium is that the challenger is elected with a positive probability if the incumbent retains the status quo. For this to be the case, retaining the status quo must be a sufficiently strong signal of lack of ability. The condition for this to be the case is that the ideological benefit of policy change and reelection incentive dominate the cost of policy change. Hence, ability signaling arises in equilibrium for different types of policies depending on whether the incumbent leads or trails.

An insight derived from the analysis of this model is that the extent of ability signaling is related to the degree of ex-ante electoral competition between the incumbent and challenger. Specifically, the extent of ability signaling is increasing in the degree of ex-ante electoral competition. When there is little electoral competition, the incumbent's decision does not affect the voter's decision, so there is no ability signaling in equilibrium. However, as electoral competition increases, the incumbent's decision becomes relevant to the voter's choice. This is where the incumbent engages in ability signaling.

Building upon the baseline model, I proceed to explore the role of the observability of policy quality by assuming there is some probability that the quality of the new policy is revealed after the incumbent changes the status quo. While voters do not immediately observe the quality of a new policy when it is enacted, the longer it is in place, the more they learn. Hence, changing the probability is akin to considering the incumbent's behavior at different points in their term. There are two types of policies: policies that are high enough quality that the voter will reelect the incumbent if they change the status quo and the quality is revealed, and the remaining policies, which are sufficiently low quality that if they are revealed, then the voter will elect the challenger. As the probability that quality is revealed increases, the incumbent has less incentive to change the status quo if their potential policy is in the second type of policy. Hence, as the probability that quality is revealed increases, the extent of ability signaling decreases. However, the incumbent's incentive to change the status quo is not affected by the probability that quality is revealed if the potential policy is in the first type of policy. Therefore, even when the quality of the new policy is sure to be revealed, there are parameters such that the incumbent engages in ability signaling.

I also explore what happens when the incumbent chooses the ideology of their potential policy before learning its quality. I show that by proposing a policy that differs from their ideal point, the incumbent gains an electoral advantage. In particular, by proposing a policy that differs from their ideal point, the incumbent makes policy change less attractive because changing the status quo will offer a smaller ideological benefit. Hence, changing the status quo is a stronger signal of ability, and retaining the status quo is a weaker signal of lack of ability. I then show that for some parameters, the incumbent proposes a policy that differs from their ideal point to improve their electoral fortune. Notably, unlike other papers where policy has an ideological and quality dimension, the incumbent doesn't propose a policy that differs from their ideal point for Downsian reasons but to affect the information conveyed by their decision whether to change the status quo (Hirsch and Shotts, 2012, 2018; Hitt et al., 2017).

In the model described so far, the incumbent can unilaterally change the status quo. But, of course, there are many institutional arrangements where a policymaker must secure agreement from another policymaker to change policy. Moreover, in some cases, the two policymakers are simultaneously engaged in electoral competition, such as when the incumbent is a majority party and the challenger is a minority party. In light of this, I study an extension where the incumbent, or the majority, proposes a potential policy, but the challenger, or the minority blocks policy change if they don't agree to move from the status quo to the new policy. Before making this decision, the minority observes the quality of the majority's proposed potential policy.

I show that in equilibrium, relative to the baseline model, the probability of policy change is weakly lower, and the expected quality of policy conditional on policy change is weakly higher. This is due to two things. First, if the minority and majority disagree about policy, the minority will block policy changes that yield lower quality than the status quo. Perhaps more interestingly, the minority also blocks policy change for electoral reasons. When policy change is electorally relevant—the probability the majority is reelected is strictly higher when they change the status quo than when they do not—the minority blocks policy change to win elections. This means that even if the majority and minority have the same ideal point, the minority will block policy change the incumbent would do in the baseline. This is reminiscent of empirical that documents how Democratic and Republican senators fight on issues that lack a clear ideological dimension (Lee, 2009).

I also show that in equilibrium, the need to secure the minority's agreement to change the status quo can sometimes be electorally beneficial for the majority in that they can win reelection in cases where the incumbent was not in the baseline model. Because the minority blocks some policy changes that the incumbent would have enacted in the baseline model, securing the minority's agreement is a stronger signal of ability, and failing to secure the minority's agreement is a weaker signal of lack of ability. Hence, this model provides a theoretical account for why voters desire bipartisan policymaking, a preference that appears in public opinion polls and political pundits' columns (Harbridge et al., 2014;

Friedman, 2012).

## 1.1 Related Literature

This paper considers how uncertainty about a policymaker's ability to develop high-quality policies affects their policymaking decisions. To do this, I study a game-theoretic model where policy has two dimensions: ideology and quality. In this modeling choice, I build upon a small but growing literature of formal models where policy has an ideological component and a valence component, and where the valence component usually represents the policy's quality (Hirsch and Shotts, 2012, 2015, 2018; Hitt et al., 2017; Londregan, 2000). Many of the papers within this literature build upon the same basic model where a policymaker makes a costly investment in developing the quality of a potential policy. This makes the potential policy more attractive to another player who has ideological preferences different from the policymaker's and who needs to agree to change the status quo to the potential policy. With one exception, Hitt et al. (2017), policymakers in the existing models do not differ in their ability to develop high-quality policies. In contrast, in my model, some policymakers have more ability than others to develop high-quality policies. Moreover, unlike Hitt et al. (2017), I study a setting with imperfect information about policymakers' ability.

This paper is also closely related to the literature on electoral accountability when there is uncertainty about a policymaker's type (Canes-Wrone et al., 2001; Ash et al., 2017). Previous work focuses on uncertainty about what a policymaker knows about the state of the world (Canes-Wrone et al., 2001; Ash et al., 2017; Kartik et al., 2015; Bils, 2023) and uncertainty about a policymaker's ideal point (Fearon, 1999) among other topics. In both cases, uncertainty leads to distorted policymaking relative to when there is complete information: policymakers pander or anti-pander when there is uncertainty about what they know about the state of the world and moderate when there is uncertainty about their ideal point. I examine a distinct source of uncertainty, uncertainty about a policymaker's ability to craft high-quality policies and show that this leads to distortions in the form of additional, low-quality policy change.

Within this literature, my paper is closest to Judd (2017), who studies a model where a policymaker unilaterally chooses whether to change the status quo. If they change the status quo, they directly reveal their skill, which a voter cares about when choosing whether to reelect the policymaker. In my model, the incumbent cannot directly reveal their ability for two reasons. First, when the incumbent changes the status quo, the voter only observes the decision to change; she doesn't observe the incumbent's type. Second, policymakers with ability can sometimes only enact low-quality policies, and policymakers without ability can sometime enact high-quality policies. Hence, even if the incumbent changes the status quo and the voter observes the quality of the new policy, she will still be uncertain whether the incumbent has ability. An additional distinction between Judd (2017) and the model in this paper is that in this model, the incumbent has ideological preferences, which incentivize policy change and pays a cost to change the status quo, which incentivizes retaining the status quo. Since the voter doesn't learn the quality of the new policy if the incumbent changes the status quo, the incentives exerted by ideology and the cost of policy change affect the information the voter learns from the incumbent's choice to retain or change the status quo. This affects the incumbent's incentive to change the status quo.

By incorporating a cost to change the status quo, this paper is also related to the literature on costly policy change Dziuda and Loeper (2022); Gersbach and Tejada (2018); Gersbach et al. (2023). It departs from this literature by incorporating a separate dimension of policy, policy quality, and uncertainty about the ability of a policymaker to enact high-quality policy. This contrast with the existing literature shows how the relationship between the costliness of policy change and the ideological benefit affects when policy change is electorally decisive.

Finally, in an extension of the baseline model, I study a setting where a majority party and minority party must agree to change the status quo while engaged in zero-sum electoral competition. The behavior of the parties in equilibrium is reminiscent of (Lee, 2009, 2016). Moreover, this model provides a micro-foundation for why a minority party would engage in the behavior identified by Lee (2016).

# 2 Model

There are three players: an incumbent policymaker, a challenger policymaker, $j \in \{I, C\}$ ("they"); and a voter ("she"). Each policymaker either has ability ($\tau_j = \overline{\theta}$) or lacks ability ($\tau_j = \underline{\theta}$), and their types are unknown to all players. At the start of the game, the policymakers' types are independently drawn from a prior distribution such that the prior probability that policymaker $j$ has 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, $q_{sq} \geq 0$. The incumbent chooses whether to retain the status quo, $\pi = \pi_{sq}$, or change it by replacing it with policy $\pi_I$, which has ideology $x_I \geq 0$ and quality

$q_I \geq 0$.[1] Prior to deciding whether to change the status quo, the incumbent privately observes the quality of $\pi_I$, $q_I$. The voter knows $x_I$ and observes whether the incumbent changes the status quo, but does not observe $q_I$ whether the incumbent changes the status quo or not. Then the voter chooses whether to reelect the incumbent or replace them with the challenger, $e \in \{I, C\}$.

The quality of the incumbent's potential policy, $\pi_I$, is drawn from one of two distributions depending on their type. If the incumbent has ability, $q_I \sim f(q_I)$, and if the incumbent lacks ability, $q_I \sim g(q_I)$, where $f(q_I) > 0$ and $g(q_I) > 0$ for $q_I \in [0, \infty)$ and $f(q_I)$ and $g(q_I)$ have the strict monotone likelihood ratio property (MLRP) such that

$$\frac{f(q_I)}{g(q_I)}$$

is strictly increasing in $q_I$ (Milgrom, 1981).[2]

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

**Payoffs** The incumbent cares about policy, winning reelection, and the cost of revision:

$$u_I(x, q) = -(x - x_I)^2 + q - \mathbb{1}_{\pi \neq \pi_{sq}} \kappa + \mathbb{1}_{e=I} r,$$

where $\kappa > 0$ is the cost of changing the status quo, $x_I$ is the incumbent's ideal point, and $r$ represents office rents.[3]

The voter cares about policy and the ability of the policymaker:

$$u_V(x, q) = \mathbb{1}_{e=I} \mathbb{1}_{\tau_I = \overline{\theta}} + \mathbb{1}_{e=C} \mathbb{1}_{\tau_C = \overline{\theta}} + \mathbb{1}_{e=C} \eta - x^2 + q + \mathbb{1}_{\pi \neq \pi_{sq}} \zeta,$$

[1] In Section 6, I analyze an extension where the incumbent endogenously chooses the ideology of $\pi_I$.

[2] That $f(q_I)$ and $g(q_I)$ have the strict MLRP rather than the weak MLRP is unimportant aside from ensuring uniqueness at some points.

[3] Hence, when the incumbent changes the status quo, they change it to a policy with ideology that matches their ideal point. In Section 6, I allow the incumbent to choose a policy with an ideology that differs from their ideal point

where the voter's ideal point is zero, $\eta \in \mathbb{R}$ represents the voter's preference for one of the policymakers for reasons other than ability and captures a notion of ex-ante electoral competition, and $\zeta \in \mathbb{R}$ are the adaptation costs the voter pays if the status quo changes.[4] If $\eta > 0$, the incumbent ex-ante **trails** the challenger, and if $\eta < 0$, the incumbent ex-ante **leads** the challenger.

The voter's utility function means her voting decision does not affect her utility from policy.[5] Hence, in equilibrium, the voter reelects the incumbent with the following probability:

$$\Pr(e = C) = \begin{cases} 1 \text{ if} & \Pr(\tau_I = \overline{\theta}) > p + \eta \\ \rho \in [0,1] \text{ if} & \Pr(\tau_I = \overline{\theta}) = p + \eta \\ 0 \text{ if} & \Pr(\tau_I = \overline{\theta}) < p + \eta. \end{cases}$$

**Equilibrium** Slightly abusing notation,

1. a strategy for the incumbent, $\sigma_I$, maps $\mathbb{R} \times \mathbb{R}_{\geq 0} \times \mathbb{R}_{\geq 0} \times \mathbb{R}_{\geq 0}$ into a distribution over $\{\pi, \pi_I\}$;

2. and a strategy for the voter, $e$, maps $\mathbb{R} \times \mathbb{R}_{\geq 0} \times \mathbb{R}_{\geq 0} \times \{\pi, \pi_I\}$ into a distribution over $\{I, C\}$.

A perfect Bayesian equilibrium surviving D1 with minimum policy change, referred to in the paper as an "equilibrium," satisfies the following:

1. each player's strategy is sequentially rational given their beliefs and the other players' strategies,

2. the voter's belief about the incumbent's ability satisfies Bayes' rule on the equilibrium path,

3. the voter's belief about the incumbent's ability satisfies the D1-criterion off the equilibrium path.

The first two conditions are the usual conditions for a perfect Bayesian equilibrium and the third condition is the D1-criterion from Cho and Kreps (1987). For many parameters, a unique equilibrium satisfies the first three conditions, but, as I show in the next section, for other parameters, multiple equilibria exist satisfying the first three conditions. When

[4]In Section 8.2, I discuss a micro-foundation for the voter's preference for policymakers with ability.

[5]In Section 8.3, I study a version of the model where the election's outcome affects policy.

that is the case, I sometimes focus on the "equilibrium with minimum policy change," which is the unique equilibrium that also satisfies:

(4.) and if multiple equilibria exist, this is the equilibrium with the lowest probability of policy change.

Below, I show that uncertainty about the policymaker's type distorts policymaking in the form of additional policy change. By focusing on the equilibrium with minimum policy change, I focus on the equilibrium where this distortion is minimized. Despite this, it will be shown to exist. Notably, the results of the model do not change if I focus on the equilibrium with the highest probability of policy change. What is important is that I focus on a pure strategy equilibrium when one exists simultaneously with a mixed strategy exist.

# 3 Discussion of the Model

**Policy Quality** I model policy as having two dimensions. The first dimension, the ideology of the policy, represents where the policy falls along the left-right policy dimension. The second dimension, the quality of the policy, represents aspects of the policy that all players value such as cost effectiveness, lack of susceptibility to corruption and fraud, and the extent to which the policy achieves agreed upon goals like economic growth. In this way, a policy's quality is similar to a party or politician's valence (Stokes, 1963). To illustrate these dimensions, consider the example of the Paycheck Protection Program (PPP), established through the CARES Act during the Covid-19 crisis, which provided low-interest loans to business owners to cover pay roll. The ideology of the PPP can be represented by a point along the left-right policy dimension, and this ideology differs from the ideology of other policies that might have aimed to support businesses during the COVID-19 crisis. Additionally, there are aspects of the PPP that are separate from ideology that contribute to the quality of the policy. For example, the PPP was highly susceptible to fraud—by some estimates, 10 percent of the money dispersed was for fraudulent claims—due in part to the way applications were screened (Griffin et al., 2023; Brooks, 2023).[6] Relative to a version of the PPP that was drafted in a way that was less susceptible for fraud, this policy has lower quality.

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

**Ability to Craft High-Quality Policy** In the model, the policymaker's type is related to their ability to develop high-quality policy. Policymakers differ in this ability because of their personal characteristics—their intelligence, experience, or knowledge of a particular issue—and because of factors like the quality of the policymaker's staff or their ability to utilize lobbyists and interest groups to to help craft the policy.

**Voter's Preference for Ability** The voter's preference for policymakers with ability can be easily micro-founded by assuming a second policymaking period where the then-incumbent policymaker enacts policy on a distinct policy issue. I discuss this more in Section 8 and in the Appendix. This preference can also be motivated by voters' stated preference for competence when choosing who to vote for (Healy et al., 2024).

**Learning about Quality** I assume the incumbent knows the quality of their proposed policy when deciding whether to change the status quo but the voter does not. This asymmetry reflects that the policymaker is a policy expert, but the voter needs time to observe the policy after it is implemented to learn about its quality. The model represents a situation where there is insufficient time for the voter to learn about quality before the election, so even if the incumbent changes the status quo, the voter doesn't observe the quality of the new policy. In Section 5, I relax this assumption by allowing the voter to learn the quality of the new policy with some probability, either through experience or learning from some other policy expert.

# 4 Analysis

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

I begin by considering the benchmark case where there is no uncertainty about the incumbent's type. Denote this game by $\hat{\Gamma}$. Since the voter knows whether the incumbent has ability, her voting decision is unrelated to the incumbent's decision whether to change the status quo. If the incumbent has ability, the voter will reelect them, and if not, she will elect the challenger. Therefore, the incumbent changes the status quo if and only if the change increases their utility, which is when:

$$q_I > \max\{q_{sq} + \kappa - (x_I - x_{sq})^2, 0\}. \tag{1}$$

The incumbent's cutoff depends on the cost of policy change and the ideological benefit of policy change, but does not depend on the office rents obtained from winning the election. Additionally, note that when the ideological benefit of policy change dominates the cost, the incumbent sometimes changes the status quo to policies that are relatively lower quality.

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

I now turn to the full model as described in Section 2. Denote this game by $\Gamma$. When the voter chooses whether to reelect the incumbent, she has observed whether or not the incumbent changed the status quo but has not observed $q_I$. This means her strategy is a mapping from the incumbent's decision to a vote choice. Therefore, there are three potential types of equilibria. In the first, the voter's choice does not depend on the incumbent's decision. In this type of equilibrium, the incumbent changes the status quo if and only if condition (1) is satisfied, which is the same threshold they use in $\hat{\Gamma}$. If $\eta$ is sufficiently large, the voter elects the challenger independent of the incumbent's decision, and if $\eta$ is sufficiently small, the voter reelects the incumbent independent of the incumbent's decision. Hence, this type of equilibrium exists for at least some parameters.

In the second potential type of equilibrium, the incumbent's probability of reelection is strictly greater when they retain the status quo than when they change it. In this type of equilibrium, the incumbent's utility from retaining the status quo is constant in $q_I$, while their utility from changing the status quo is increasing in $q_I$. Hence, they use a threshold strategy and change the status quo when $q_I$ is sufficiently large.

The fact that $f(q_I)$ and $g(q_I)$ satisfy strict MLRP means that if the incumbent uses a threshold strategy, changing the status quo signals ability while retaining the status quo signals the opposite.[7] The implication is that there cannot be an equilibrium where the incumbent's probability of reelection is strictly greater when they retain the status quo than when they change it. Hence, this potential equilibrium does not exist.

In the third potential type of equilibrium, an **equilibrium with consequential policy change**, the incumbent's probability of reelection is strictly greater when they change the status quo than when they retain it. As in the previous potential equilibrium, the incumbent's utility from retaining the status quo is constant in $q_I$ while their utility from changing the status quo is increasing in $q_I$. Hence, they use a threshold strategy and change the status quo when $q_I$ is sufficiently large.

[7]This and additional properties of the voter's posterior belief when the incumbent uses a threshold strategy are derived in the Appendix.

**Lemma 1.** *In any equilibrium, the incumbent uses a threshold strategy and changes the status quo if and only if* $q_I > q_{sq} + y^*$*, where* $y^* \in [-q_{sq}, \infty)$

I refer to the incumbent's threshold as their **quality threshold**. In an equilibrium with consequential policy change, the increased probability of reelection obtained by changing the status quo incentivizes additional policy change. This produces distortions relative to the benchmark without uncertainty about the incumbent's type.

**Proposition 1.** *There are regions of the parameter space where equilibria with consequential policy change exist. Moreover, relative to* $\hat{\Gamma}$*, in an equilibrium with consequential policy change,*

*(a) the probability of policy change is strictly higher,*

*(b) and the expected quality of policy conditional on policy change is strictly lower.*

Consider an incumbent in the benchmark model who, given the quality of their potential policy, is essentially indifferent between changing the status quo and retaining it. Now consider an incumbent with that same potential policy when there is uncertainty about their type. If changing the status quo increases their probability of reelection, the incumbent has an additional incentive to change the status quo. I refer to this additional policy change as **ability signaling**.

**Definition 1.** *Let* $y^*_\Gamma$ *be the incumbent's quality threshold in* $\Gamma$*. If* $q_{sq} + \kappa - (x_I - x_{sq})^2 > 0$ *and*

$$y^*_\Gamma < \kappa - (x_I - x_{sq})^2,$$

*the incumbent engages in **ability signaling**. Moreover,*

$$D(y^*_\Gamma) \equiv \begin{cases} 0 & \text{if } q_{sq} + \kappa - (x_I - x_{sq})^2 \leq 0 \\ \kappa - (x_I - x_{sq})^2 - \max\{y^*_\Gamma, 0\} & \text{if } q_{sq} + \kappa - (x_I - x_{sq})^2 > 0 \end{cases}$$

*is the **extent of ability signaling**.*

When the incumbent engages in ability signaling, they enact additional, low-quality policies that they would be unwilling to enact without uncertainty about their ability. Essentially, the incumbent is substituting office rents tomorrow for policy quality today.

While ability signaling decreases policy quality conditional on policy change, its effect on overall policy quality depends on the relationship between the cost of policy change and ideological benefit. If the ideological benefit of policy change dominates the cost, then in the benchmark model, the incumbent sometimes changes the status quo to a policy that is relatively lower quality. When the incumbent engages in ability signaling, they make additional, low-quality policy changes. Hence, ability signaling decreases overall policy quality.

However, if the cost of policy change dominates the ideological benefit, then in the benchmark the incumbent sometimes does not change the status quo even when they could do so to a policy of relatively higher quality. In this case, ability signaling may improve overall policy quality since the incumbent makes additional policy changes that may be higher quality than the status quo.

Proposition 1 demonstrates that equilibria with consequential policy change exist and that the incumbent engages in ability signaling in these equilibria. But under what conditions do these equilibria exist?[8]

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

*(a)* $\eta < 0$ *and is not too small, the status quo is sufficiently high quality, and the cost of policy change is sufficiently small relative to the ideological benefit of policy change and the office rents;*

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

*(c) or* $\eta > 0$ *and is not too large, the status quo is sufficiently high quality, and the cost of policy change is sufficiently large relative to the ideological benefit of policy change.*

*In any other equilibrium, the incumbent's strategy coincides with their strategy in* $\hat{\Gamma}$*.*

When $\eta > 0$, the incumbent ex-ante trails the challenger and will not win reelection if they retain the status quo. But if the incumbent does not trail by too much and the cost of policy change dominates the ideological benefit, changing the status quo is a sufficiently strong signal of ability that the incumbent wins reelection with positive probability when they change the status quo. As a result, the incumbent engages in ability signaling in equilibrium. Hence, holding the cost of policy change fixed, when trailing the challenger, the incumbent engages in ability signaling on policies that are relatively less ideological.

One might wonder why does the condition for the existence of an equilibrium with consequential policy change not depend on the office rents when the incumbent trails. The

[8] In the Appendix, I provide a full characterization of all equilibria.

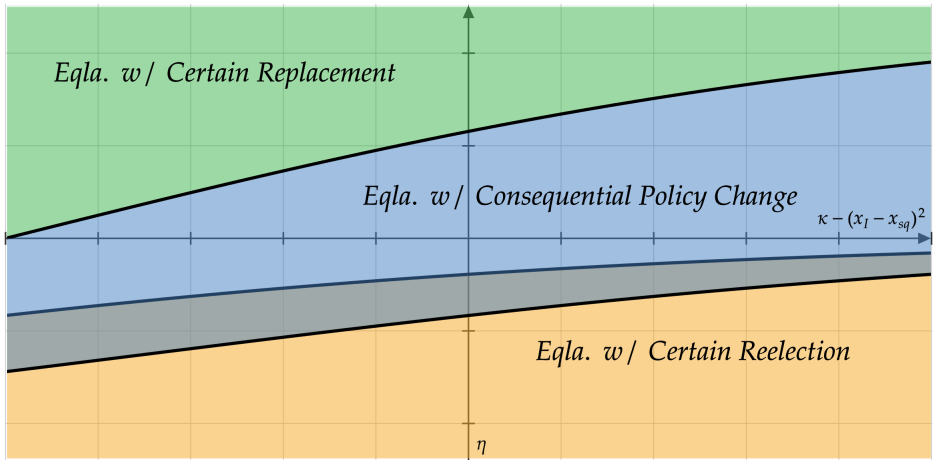


Figure 1: Regions of equilibria when $q_{sq}$ is sufficiently high; $f(q_I) = Exp(1); g(q_I) = Exp(2); q_{sq} = 1; p = \frac{1}{2}; r = 1$

answer is related to the probability the voter reelects the incumbent when they change the status quo. If the incumbent trails, then in an equilibrium with consequential policy change, the probability the incumbent is reelected given they change the status quo is weakly decreasing in the office rents. Moreover, as $r$ goes to infinity, the probability the incumbent is reelected, given they change the status quo, goes to zero. The implication of this is that what matters for the existence of an equilibrium with consequential policy change is whether the incumbent would be reelected if there were no office rents, in which case the relevant considerations determining the strength of signal conveyed by policy change are the cost of policy change and the ideological benefit.

When $\eta < 0$, the incumbent ex-ante leads the challenger and is certain to win reelection if they change the status quo. But if the incumbent does not lead by too much and the ideological benefit of policy change and office rents dominate the cost, retaining the status quo is a sufficiently strong signal of lack of ability, and the incumbent is not reelected when they retain the status quo. In this region of the parameter space, the incumbent engages in ability signaling. In contrast to when the incumbent is trailing, holding the cost of policy change fixed, when leading, the incumbent engages in ability signaling on relatively more ideological policies.

In addition to equilibria with consequential policy change, there are two types of equilibria where the voter's reelection decision does not depend on the incumbent's decision: **equilibria with certain reelection**, where the incumbent is reelected regardless of whether they change the status quo, and **equilibria with certain replacement**, where the incumbent is replaced whether they change the status quo. Figure 1 depicts the regions of each type of equilibrium when $q_{sq}$ is sufficiently high that the incumbent changes and retains on the equilibrium path.[9] When the incumbent leads, equilibria with consequential policy change exist simultaneously with equilibria with certain reelection for some parameters.[10] This is depicted by the overlapping blue and orange regions. For these parameters, if the incumbent believes they will only be reelected if they change the status quo, they have an incentive to engage in ability signaling. This makes retaining the status quo a stronger signal of low ability, which means the voter will not reelect the incumbent if they retain the status quo. Hence, this is an equilibrium. On the other hand, if the incumbent believes they will not be reelected if they change the status quo, they don't have an incentive to engage in ability signaling. This means retaining is a weaker signal of lack of ability. Therefore, the voter is willing to reelect the incumbent when they retain. Hence, this is an equilibrium as well.

**Proposition 3.** *In the equilibrium with minimum policy change, the extent of ability signaling is*

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

*(b) weakly increasing in the office rents.*

There is a connection between the degree of ex-ante electoral competition, which increases as $\eta$ gets closer to zero, and ability signaling in the equilibrium with minimum policy change.[11] When there is little uncertainty because the incumbent is either leading by a lot or trailing by a lot, the outcome of the election does not depend on the incumbent's policy change decision. But, as ex-ante electoral competition increases—as $\eta$ gets closer to zero—policy change becomes electorally relevant because the shift in the voter's posterior induced by policy change or policy retention is enough to decide the election. Because of this, the incumbent has an incentive to engage in ability signaling. Hence, it is when there is a large degree of ex-ante electoral competition that we should see distorted policymaking in the form of additional, low-quality policy change.

[9] When $q_{sq}$ is not sufficiently large, the incumbent always changes the status quo, and there is either an equilibrium with certain replacement or an equilibrium with certain reelection except possibly when $\eta = 0$. For more information, see Section 10.2 of the Appendix.

[10] In this region, a mixed-strategy equilibrium also exists where the voter reelects the incumbent with probability $\rho^* \in (0, 1)$ when the incumbent changes the status quo. See Section 10.2 of the Appendix for more information. When I focus on the equilibrium with minimum policy change, I focus on the equilibrium with certain reelection.

[11] These comparative static results hold if I focus instead on the equilibrium with the highest probability of policy change. What is important is that I focus on a pure strategy equilibrium when one exists simultaneously with a mixed strategy equilibrium.

There is also a connection between ability signaling and office rents. Since the strength of the signal conveyed by the incumbent's decision to change or retain the status quo is related to incumbent's incentive to change the status quo, one might wonder why the effect of increasing office rents is monotonic. When the incumbent leads the challenger, the effect of increasing office rents is monotonic because the incumbent is always reelected when they change the status quo. While increasing office rents means the incumbent will change the status quo for lower quality policies, the voter still reelects the incumbent.

The intuition is different when the incumbent trails the challenger. In the unique equilibrium when $r$ is especially large, the voter randomizes between reelecting the incumbent and the challenger when the incumbent changes the status quo. This has the following implication

**Proposition 4.** *When $\eta > 0$, the probability the incumbent is reelected is non-monotonic in the office rents.*

When the office rents are large, increasing them further leads to a decrease in the probability the incumbent is reelected because in equilibrium, the probability the voter reelects the incumbent conditional on policy change decreases. But when the office rents are small, increasing them leads to an increase in the probability the voter reelects the incumbent. This is because the probability the incumbent is reelected if they change the status quo is constant, but the probability the incumbent changes the status quo increases.

## 4.3 Implications

**Excessive Mutability of Laws** Propositions 1 and 2 demonstrate that for some parameters uncertainty about the incumbent's ability combined with their desire for reelection leads to distorted policymaking relative to the benchmark with no uncertainty. Moreover, this distortion comes in the form of additional, lower-quality policy change. This result resonates with empirical work on state legislators that finds that reelection incentives motivate policymaking effort in the form of additional sponsored bills and attendance at more votes (Fouirnaies and Hall, 2022). In this model, this additional policy change may be bad for the voter. If the incumbent's ideal point is sufficiently far from the voter's ideal point or the voter pays a sufficiently large adaptation cost, then even without uncertainty about the incumbent's ability, there is too much policy change from the voter's perspective. In this case, ability signaling makes the voter worse off.

**Proposition 5.** *If the incumbent's ideal point is sufficiently far from the voter's ideal point or the voter's adaptation costs are sufficiently large, the voter's utility from policy is weakly lower in* $\Gamma$ *than in* $\hat{\Gamma}$.

The concern that elections might lead to too much policy volatility has been voiced since at least the founding of the United States. In Federalist 62, James Madison defended six year Senate terms by arguing

> "The internal effects of a mutable policy are still more calamitous. It poisons the blessing of liberty itself. It will be of little avail to the people, that the laws are made by men of their own choice...if they be repealed or revised before they are promulgated, or undergo such incessant changes that no man, who knows what the law is to-day, can guess what it will be to-morrow" (Madison, 1788)

Alexis de Tocqueville also feared excessive mutability of laws, stating "The mutability of the laws is an evil inherent in democratic government, because it is natural to democracies to raise men to power in vary rapid succession" (Tocqueville, 2003). The crux of Tocqueville and Madison's concern was that variation in the opinions of legislators brought on by frequent elections would result in too much volatility. The benchmark is consistent with this concern since the incumbent's ideological preferences may motivate them to change the status quo more often than the voter if she could choose directly. In particular, in the benchmark where there is no uncertainty about the incumbent's ability, if the incumbent's ideal point is sufficiently far from the voter's ideal point or the voter's adaptation costs are sufficiently large, the incumbent changes the status quo too much from the voter's perspective. But the model with uncertainty about the the incumbent's type illustrates an additional source of potential concern: ability signaling may make the voter even worse off. If the incumbent already changed the status quo too much from the voter's perspective in the benchmark, then uncertainty about the incumbent's type will make the voter even worse off due to ability signaling.

**Ability Signaling without Elections** Although there is a voter and an election in the model, the implications of the model shed light on policymaking by policymakers who are not elected. Suppose the incumbent is the current superintendent in a school district and the voter is either someone who could hire someone else to replace the current superintendent or someone who will potentially hire the current superintendent for a different job in the future. It seems to natural to suppose that in this case, $\eta = 0$. That is, the voter's decision depends entirely on the the incumbent's probability of having ability relative to the challenger's. Then Proposition 1 shows that in equilibrium, the incumbent always engages in ability signaling in equilibrium. This is consistent with qualitative descriptions of policymaking by superintendents. In particular, Hess (1999) argues that the combination of superintendents' desire to improve their reputations—they care about their reputation for career concerns reasons—and their short time horizons—they seek to quickly move to their next job—leads to "policy churn." To bolster their reputations, superintendents are incentivized to "assume the role of the reformer, initiating a great deal of activity" so they are not perceived as ""do nothing" and replaced by a more promising successor" (Hess, 1999, p.43). The desire to signal ability, leads to ineffective education policy reform.

# 5 Quality Observability

As Mayor of New York City, Eric Adams has presided over the development of a plan for a "Trash Revolution," which includes mandated trash bins, stronger enforcement of sanitary laws, and new garbage trucks (Lach, 2024; NYC, 2024). The roll out of this policy began in 2022 and will continue into spring 2025, which is a few months before next mayoral election. Since the policy was implemented well before the next election, voters may learn the quality by the time they decide whether to reelect Adams or replace him.

In the model, the voter observes whether the incumbent changes the status quo but does not observe $q_I$ after policy change. But, as illustrated by the Trash Revolution example, depending on when a policy is enacted, voters may learn the quality of the policy before the election. What effect does the timing of when policy change occurs in relation to the next election have on the policymaker's incentives? To answer this question, I assume that if the incumbent changes the status quo, $q_I$ is revealed before the election with probability $s \in [0, 1]$, where $s$ is exogenous. We should expect $s$ to be higher for policy change that occurs earlier in the incumbent's term.

**Proposition 6.** *The extent of ability signaling is weakly decreasing in $s$. However, the incumbent still engages in ability signaling for some parameters when $s = 1$.*

When the incumbent changes the status quo, they do so to one of two types of policies. The first is a policy that leads to their reelection even if the quality of the policy is revealed. The second is a policy that leads to their reelection only if the quality is not revealed.

When it is unlikely the voter learns the quality of the new policy before the election, the distinction between these two types of policies matters little. But when the probability the quality of the new policy is revealed before the election increases, an incumbent for whom the quality of policy they can enact is too low to win reelection if revealed has less incentive to change the status quo.

However, an incumbent who is able to change the status quo to a policy that will win reelection whether the quality is revealed or not has the same incentive to change the status quo regardless of the probability quality is revealed. This is why there may still ability signaling in equilibrium if $q_I$ is certain to be revealed. This case is very similar to Judd (2017), in which a policymaker chooses whether to reveal their ability by replacing the status quo with a policy that perfectly repeals the policymakers ability. In equilibrium, when the status quo is high quality, high-ability incumbents "show off" by implementing policies that are lower quality than the status quo, but that reveal the policymaker is of high enough skill to warrant reelection.

The primary implication of this result is that ability signaling will be more pervasive later on in a policymaker's term when it is less likely the quality of the new policy will be revealed before the election.[12] Another implication of this result is that the expected quality of policy conditional on policy change decreases over the course of a policymaker's term.

**Corollary 1.** *The expected quality of policy conditional on policy change is weakly decreasing in $s$.*

One might wonder how the incumbent's ex-ante expected utility depends on $s$.

**Proposition 7.** *For some parameters, the incumbent's expected utility is increasing in $s$. For others, the incumbent's expected utility is decreasing in $s$.*

Suppose that in equilibrium, for some realizations of $q_I$, the incumbent changes the status quo and is reelected whether $q_I$ is revealed or not. But for other, lower, realizations of $q_I$, the incumbent changes the status quo and is only reelected if $q_I$ is not revealed. As $s$ increases, the incumbent's probability of winning reelection if they have one of these lower realizations of $q_I$ decreases. Hence, the incumbent's ex-ante expected utility decreases as $s$ increases.

[12] This is similar to results in other models where there is uncertainty about a policymaker such as Canes-Wrone et al. (2001) who find that pandering emerges in equilibrium when the probability of "uncertainty resolution"—essentially the same thing as what $s$ represents—is sufficiently low.

Consider a different equilibrium where for some realizations of $q_I$ the incumbent changes the status quo and is only reelected if $q_I$ is revealed. And for other, lower, realizations of $q_I$, the incumbent changes the status quo and is never reelected. As $s$ increases, the incumbent's probability of winning reelection if they have a sufficiently high realization of $q_I$ increases. Hence, the incumbent's expected utility increases as $s$ increases.

These two examples illustrate different countervailing forces. Increasing $s$ means the voter is more likely to learn the incumbent changed the status quo to a low-quality policy, but it also means the voter is more likely to learn the incumbent changed the status quo to a high-quality policy. Depending on which of these effects dominates, the incumbent's expected utility may be increasing or decreasing in $s$.

The implication of this result is that if the incumbent chooses *when* to develop a policy during their term and then chooses *whether* to change the status quo after learning the quality of their potential policy, in some cases they will want to delay development until later or in their term, in others, they will begin development immediately.[13]

# 6 Endogenous Choice of Ideology

The baseline model assumes the ideology of the incumbent's potential policy is exogenously fixed at their ideal point. In a setting where the incumbent unilaterally changes the status quo, it may be reasonable to assume they will pursue their preferred policy since they don't require the agreement of any other actors. But, as Proposition 2 illustrates, whether policy change is electorally consequential depends on the strength of the signal conveyed by the incumbent's decision. And a key feature determining the strength of the signal is the ideological benefit of policy change. In light of this, does the incumbent have any incentive to propose a policy that differs from their ideal point? To answer this question, suppose the incumbent publicly proposes $\hat{x} \in \mathbb{R}$, then privately learns $q_I$, and then chooses whether to retain the status quo or replace it with $\pi_I = (\hat{x}, q_I)$.

**Proposition 8.** *When $\eta < 0$, there are parameters such that in any equilibrium, the incumbent proposes $\hat{x} \in \{\underline{\hat{x}}^*, \overline{\hat{x}}^*\}$, where $\underline{\hat{x}}^* = x_I - \epsilon$, $\overline{\hat{x}}^* = x_I + \epsilon$, and $\epsilon > 0$.*

Consider an equilibrium of the baseline game where the incumbent leads but only wins

[13]The decision of when to develop policy reveals nothing about the incumbent or the quality of their potential policy because the decision is made before $q_I$ is revealed. In a related but different setting, Gibbs (2024) explores signaling through the timing of policy implementation and finds that policymakers may delay implementation to prevent the voter from learning the quality of a policy before an election.

reelection if they change the status quo. The reason the incumbent is not reelected if they retain is that retaining the status quo is a sufficiently strong signal of lack of ability. By proposing a policy that differs from their ideal point, the incumbent reduces their own incentive to change the status quo because doing so will yield a lower ideological benefit of policy change.[14] That is, by proposing a policy that differs from their ideal point, the incumbent commits to a higher quality threshold. This makes retaining the status quo a relatively weaker signal of lack of ability. Of course, making such a commitment comes at a cost: successful policy change will yield a lower payoff—holding $q_I$ fixed—but in some cases, the electoral benefit outweighs the ideological cost.[15]

Whether the incumbent proposes a policy that differs from their ideal point, the particular policy they propose is chosen to be sufficiently far from their ideal point as to make the voter indifferent between the incumbent and challenger. This means the incumbent is indifferent between two policies, one that is sufficiently to the right of their ideal point and one that is sufficiently to the left. Both choices will affect the voter's inference in the same way. But there are many reasons to think the incumbent will choose to break their indifference between the two policies by choosing the policy that is more moderate than their ideal point. If there is a small amount of uncertainty about the incumbent's ideal point, they have an incentive to choose a policy close to the voter's ideal point as in Fearon (1999). Or if the incumbent cares about the longevity of their policy and the challenger has an ideal point that is less than zero, the incumbent has an incentive to choose a policy that is closer to challenger's ideal point since this will reduce the challenger's incentive to change the incumbent's policy in the future. Using these arguments, Proposition 8 can be interpreted as saying the incumbent has an incentive to moderate.

It is illustrative to juxtapose this result with Hirsch and Shotts (2012, 2018); Hitt et al. (2017), who also study models where policy has quality and ideology. In these models, moderation also emerges in equilibrium because a policymaker needs to secure agreement from another player with a different ideal point to change the status quo. That is, moderation emerges for a Downsian logic—by moving the ideology of a policy closer

[14]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 their ideal point.

[15]When the incumbent trails, there are also parameters such that there are equilibria where the incumbent chooses a policy that differs from their ideal point. However, the parameters such that this type of equilibrium exists are the same parameters such that a mixed strategy equilibrium exists in the baseline. Moreover, the mixed strategy equilibrium continues to exist. Hence, I focus on the case where the ability to commit to $\hat{x}$ destroys some of the baseline equilibria.

to the other player's ideal point, the policymaker makes their policy more attractive. The moderation that emerges in this model emerges for a reason entirely unrelated to Downsian logic. The policymaker moderates because it affects the information conveyed by their decision to retain or change the status quo.

Although the incumbent doesn't moderate because the voter prefers a more moderate policy, moderation often makes the voter better off. Denote the game where the incumbent publicly proposes $\hat{x}$ as $\Gamma^{\hat{x}}$. If the conditions for the voter's policy welfare to be weakly lower in $\Gamma$ relative to $\hat{\Gamma}$ are satisfied, that is the incumbent's ideal point is sufficiently far from the voter's or the voter's adaptation costs are sufficiently large, some moderation improves the voter's policy welfare. But, if the incumbent moderates too much, they may be unwilling to change the status quo when the voter would like them to. When the incumbent trails, they are only reelected if they change the status quo, so the larger the office rents are, the more willing they are to moderate to win. Therefore, a sufficient condition for moderation to make the voter better off when the incumbent trails is for the office rents to be sufficiently small.

# 7 Vetoes

The baseline model assumes the incumbent can unilaterally change the status quo. But there are many institutional arrangements that require the incumbent to secure the agreement of another policymaker to change the status quo. Moreover, in some of these arrangements, the policymakers are under the shadow of electoral competition. For example, the incumbent might be the majority party in congress that needs the support of the minority party, the challenger, to pass legislation. A natural question to ask is how the challenger behaves when they can block the incumbent's proposed policy changes. I answer this question by studying an extended version of the baseline model, denoted $\Gamma^v$, where:

1. Nature draws the policymakers' types and $q_I$.
2. The majority (incumbent) privately learns $q_I$.
3. **The majority chooses whether to retain the status quo, $\pi = \pi_{sq}$, or propose a change, $\tilde{\pi} = (x_I, q_I)$.**
4. **If the majority proposes a policy change, the minority (challenger) observes $q_I$ and chooses whether to block the change, $\pi = \pi_{sq}$, or accept it, $\pi = \tilde{\pi}$.**

5. **The voter observes the majority's decision and the minority's blocking decision but not $q_I$.**

6. **The voter chooses whether to elect the majority or the minority.**

In this extension, the majority's utility function is the same as the incumbent's in the baseline model, and the minority has a similar utility function:

$$u_C(p, q) = -(x_C - x)^2 + q - \mathbb{1}_{\pi \neq \pi_{sq}} \kappa + \mathbb{1}_{e=C} r,$$

where $x_C \leq 0$ is the minority's ideal point.

I also assume

$$(x_C - x_I)^2 - (x_C - x_{sq})^2 \geq -(x_I - x_{sq})^2.$$

This ensures the minority's ideological benefit of policy change is weakly smaller than the majority's.

**Lemma 2.** *In any equilibrium, the minority uses a threshold strategy and changes the status quo if and only if $q_I > q_{sq} + z^*$, where $z^* \in [-q_{sq}, \infty)$.*

In equilibrium, when the majority proposes a policy, the minority's utility from blocking the change is constant for all $q_I$. On the other hand, the minority's utility from changing the status quo is increasing in $q_I$. This implies that in any equilibrium, the minority uses a threshold strategy and accepts proposed policies that are sufficiently high quality. As a result, the voter updates about the majority's ability in a similar way to how she updates in the baseline model: when the minority agrees with a proposed policy, the voter updates positively about the majority's ability, and when the minority blocks a proposed policy, the voter updates negatively about the majority's policy.

**Lemma 3.** *In any equilibrium,*

*(a) the majority proposes a policy for any $q_I$,*

*(b) the majority only proposes policies the minority will accept,*

*(b) or the probability the majority is reelected when they don't propose a policy is the same the probability they are reelected if they propose a policy and the minority blocks it.*

Suppose that in equilibrium, for some $q_I$, the majority doesn't propose a policy, and for other $q_I$, the majority proposes a policy and the minority blocks the proposal. Furthermore, suppose the majority's probability of reelection differs in these two cases. Then the majority's utility differs in these two cases. This means the incumbent has a a profitable deviation.

The implication of Lemma 3 is that there are potentially many equilibria where the majority proposes some policies knowing the minority will block them and doesn't propose others knowing they would be blocked if they were proposed. But, across these equilibria, the voter responds the same when the majority does not propose a policy and when they do and the minority blocks the policy. In light of this, and to simplify exposition, I focus on equilibria where the majority proposes a policy for any $q_I$.

**Proposition 9.** *Fix an equilibrium of* $\Gamma$*. In any corresponding equilibrium in* $\Gamma^v$*,*

*(a) the probability of policy change is weakly lower,*

*(b) and the expected quality of policy conditional on policy change is weakly higher.*

Two forces explain why, when the majority needs to secure the minority's agreement, there is less policy change and the expected quality of policy change conditional on policy change is higher. The first is ideological disagreement between the majority and minority. Because the minority receives a weakly smaller ideological benefit from policy change, they are more discerning about the quality of policy that needs to be developed to make policy change worth it. As a result, their presence prevents the majority from making some lower quality policy change that the majority would make in the absence of the minority's veto power. In this way, the minority acts a salutary filter, blocking low-quality policy changes.

While ideological disagreement between the minority and majority is sufficient to explain why there is less policy change and why the expected quality of policy conditional on policy change is higher in $\Gamma^v$, it is not necessary. Even if the minority and majority are completely ideologically aligned, the minority blocks policy change because it electorally beneficial.

**Remark 1.** *Fix an equilibrium of* $\Gamma$*, and suppose* $x_I = x_C$*. In any corresponding equilibrium in* $\Gamma^v$*,*

*(a) the probability of policy change is weakly lower,*

*(b) and the expected quality of policy conditional on policy change is weakly higher.*

Suppose there is no uncertainty about the majority's type and the minority is essentially indifferent between accepting and blocking a proposed policy change. Now suppose there is uncertainty about the majority's type. If the minority blocks a proposed change, the voter updates negatively about the majority's ability. Hence, in some cases, the minority has an additional incentive to block proposed policy change.

That the majority and minority will disagree on policy despite the absence of ideological disagreement is consistent with empirical and theoretical accounts of the behavior of parties in Congress. Lee (2009) uses roll-call votes to show how an enormous amount of disagreement between the democrats and republicans in the Senate arises on issues that lack a clear ideology. Lee (2009) then argues this disagreement can be explained by four factors: presidential leadership, "good government causes," conflict over control of the legislative agenda, and manipulation of the agenda toward issues the cleave the other party. This model offers a fifth factor explaining why the minority might vote against the majority's proposal even if there is no ideological disagreement, to prevent the voter from updating positively about the majority's ability to develop high-quality policy. More generally, the minority's incentive to block policy change is consistent with Lee (2016), who argues that when there is uncertainty about which party will be in the majority tomorrow, congressional parties have an incentive to take actions that promote their own image and damage the other party's image. This argument is supported by evidence from staffers and legislators in the minority who are clear that they perceive blocking the majority as advantageous. For example, she quotes a Senate leadership staffer:

> "In the minority, you don't want to fuel the success of the majority... Too much deal making can perpetuate them in the majority" - Senate Leadership Staffer, quoted in Lee (2016).

There is a large literature that examines the effect of bipartisanship on voters' perceptions of Congress as an institution and of individual legislators (Harbridge and Malhotra, 2011; Harbridge et al., 2014; Paris, 2017). This model suggests that another fruitful endeavour would be to examine the effect of bipartisanship on voters' perceptions of the quality of policy. An empirical implication of this model is that voters should perceive policies that are passed with bipartisan support as higher quality than those passed on partisan lines.

A key piece of the theory offered in Lee (2016) is that parties worry about their reputation relative to the other party's when there there is ex-ante uncertainty about which party will hold the majority tomorrow. This emerges in the model.

**Proposition 10.** *The probability of policy change is decreasing in ex-ante electoral competition (as $\eta$ approaches zero).*

The minority's aversion to policy change for ideological reasons is constant, while their aversion to change for electoral reasons depends on whether or not policy change is electorally relevant. When there a large degree of ex-ante electoral uncertainty, policy change is relevant to the election outcome. Hence, the minority has the greatest incentive to block policy change. On the other hand, when there is no uncertainty about the election outcome, the minority has no additional incentive to block the majority beyond their ideological incentive.

A final insight from this extension of the baseline model is that the need to secure the minority's agreement to change the status quo may be electorally beneficial for the majority.

**Proposition 11.** *For some parameters, there exists an equilibrium of $\Gamma^v$ where the the probability the majority is reelected is higher than the probability the incumbent is reelected in $\Gamma$.*

The minority's higher quality threshold means successful policy change is a relatively stronger signal of ability. The implication of this is that when the majority is behind in $\Gamma^v$, they sometimes win reelection when they successfully change the status quo in cases where they wouldn't in $\Gamma$. This is depicted in Figure 2, where the region of equilibria with consequential policy change is larger relative to the baseline model. [16]

The story is similar when the majority is ahead. The minority's higher quality threshold means unsuccessful policy change is a weaker signal of lack of ability. The voter recognizes that sometimes policy change does not occur not because the majority could not develop a high-quality policy, but because the minority wanted to block the majority's proposal. This implies that the region of equilibria with consequential policy change shrinks, which is depicted in Figure 2.

# 8 Robustness

In the Appendix, I explore whether the model is robust to alternative assumptions.

[16] The baseline regions are outlined by the solid line. When the green and blue regions overlap, both types of equilibria exist.

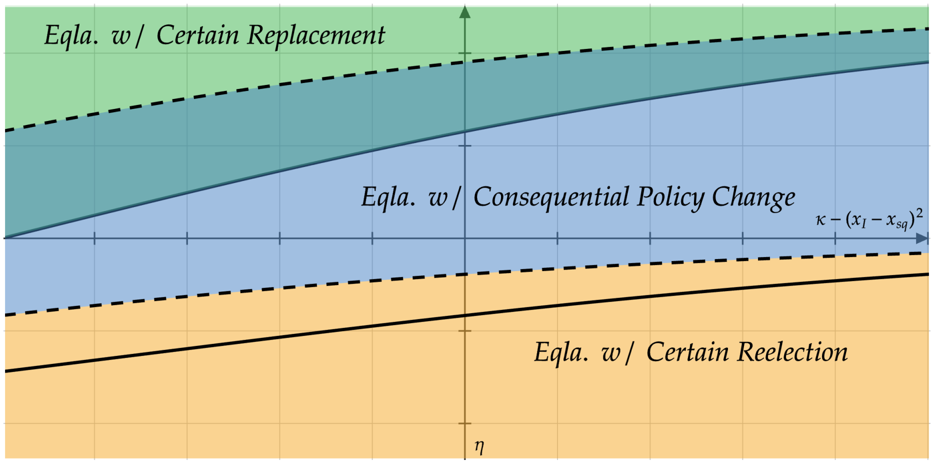


Figure 2: Regions of equilibria when $q_{sq}$ is sufficiently high; $f(q_I) = Exp(1); g(q_I) = Exp(2); q_{sq} = 1; p = \frac{1}{2}; r = 1$

## 8.1 Incumbent knows their Type

If the incumbent knows their type, then conditional on observing $q_I$, their utility from retaining the status quo is constant in $q_I$ and does not depend on their type. Moreover, conditional on observing $q_I$, the incumbent's utility from changing the status quo is increasing in $q_I$, and also does not depend on their type. This means that in equilibrium, both types of incumbent use threshold strategy. Furthermore, they use the same threshold.

## 8.2 Second Policymaking Period

Suppose that after the election, the winner learns the quality of a new policy they can enact in a separate policy area and chooses whether to enact that policy or retain the status quo $\pi_{sq} = (0, 0)$. This represents policymaking when there isn't a status quo in place. In this situation, the winner of the election changes the status quo for any $q_I$. As a result, the voter elects one policymaker over the other when that policymaker is sufficiently likely to be high ability, taking into account the distance between the parties' ideal points and the voter's ideal point.

## 8.3 Election Outcome Affects Policy

Suppose the election outcome affects policy: if the incumbent is reelected, the policy they chose is implemented, and if the challenger is elected, the status quo is retained regardless of the incumbent's choice. Then, in addition to serving as a way of selecting the policymaker who is more likely to be competent, the election is a referendum on the incumbent's chosen policy.

If the incumbent retains the status quo, the election does not affect policy. This means, everything is as in the baseline. If the incumbent changes the status quo, the voter's expected utility from reelecting the incumbent is increasing in the incumbent's quality threshold because a higher threshold means higher expected quality of policy conditional on policy change and a higher probability the incumbent has ability. This is the same as in the baseline, where the voter's expected utility of reelecting the incumbent is increasing in the incumbent's threshold. Hence, there are equilibria with consequential policy change, certain reelection, and certain replacement.

# 9 Conclusion

I studied a model of policymaking when there is uncertainty about the policymaker's ability to develop high-quality policy. This uncertainty and the policymaker's desire for reelection leads to ability signaling.

Two natural extensions of this model come to mind. First, one could endogenize the status quo by studying a model with two periods of potential policy change. In the first period, the incumbent chooses whether to implement a policy or retain the status quo, and then the voter chooses whether to retain the incumbent or replace them with a challenger without observing the quality of the incumbent's policy. In the second, the winner of the election chooses whether to retain the status quo inherited from the previous period or to change it after learning the quality of their potential policy. This is similar to the extension described in Section 8.3, but there are important differences. For one, the voter's decision is more complicated since what the elected politician will do tomorrow depends on the quality of the status quo, and she doesn't observe the quality of the status quo when she votes.

Second, one could allow the incumbent to choose $s$ after they learn $q_I$. This would capture the idea that the incumbent can choose *whether* to change the status quo and *when* to change the status quo. In Section 5, I showed that if the incumbent chooses $s$ before learning $q_I$, they are either indifferent over all $s$ or will delay until later in their term–choose a small $s$. When $s$ is chosen before $q_I$ is revealed, there are no signaling considerations. But if $s$ is chosen after $q_I$ is revealed, things are more complicated. One might think that if the incumbent can only enact a low-quality policy, they wait until the end of their term to change the status quo to minimize the probability the quality is revealed. But then waiting to change the status quo will convey that the quality of policy is low. Hence, things may be more complicated.

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# 10 Appendix: Main Results

## 10.1 Proof of Lemma 1

*Proof.* Suppose in equilibrium the incumbent is reelected with probability $\gamma^* \in [0,1]$ if they retain the status quo and with probability $\lambda^* \in [0,1]$ if they change it. Note that $\lambda$ and $\gamma$ do not depend on $q_I$ since the voter does not observe $q_I$ before the election in either case. In this equilibrium, the incumbent changes the status quo if and only if

$$q_I - \kappa + \lambda r > q_{sq} + \underbrace{\kappa - (x_I - x_{sq})^2 + (\gamma^* - \lambda^*) r}_{y^*}. \tag{2}$$

Hence, the incumbent uses a threshold strategy and changes the status quo if and only if $q_I > q_{sq} + y^*$. ■

## 10.2 Proof of Propositions 1 and 2

I begin by proving Lemmas 4 and 5, which I use to fully characterize the equilibria of the model in Propositions 12, 13, and 14 under the assumption that off the equilibrium path,

$$\Pr(\tau_I = \overline{\theta} | \text{deviation off path}) = \frac{pf(0)}{pf(0) + (1-p)g(0)} \equiv \mu.$$

Then, I show the assumed off the path belief survives D1 in Proposition 15. Propositions 1 and 2 follow immediately.

**Lemma 4.** *If the incumbent uses a threshold such that they change the status quo if and only if $q_I > q_{sq} + y$, for $y \in (-q_{sq}, \infty)$*

*(a)* $\Pr(\tau_I = \overline{\theta} | \pi = \pi_I) > p$ *and* $\Pr(\tau_I = \overline{\theta} | \pi = \pi_I, y)$ *is increasing in $y$.*

*(b)* $\Pr(\tau_I = \overline{\theta} | \pi = \pi_{sq}) < p$ *and* $\Pr(\tau_I = \overline{\theta} | \pi = \pi_{sq}, y)$ *is increasing in $y$.*

*Proof.* $\Pr(\tau_I = \overline{\theta} | \pi = \pi_{sq}) = \frac{1}{1 + \frac{1-p}{p} \frac{G(q_{sq}+y^*)}{F(q_{sq}+y^*)}}$. Differentiating:

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

This is negative since

$$\begin{aligned} F(q_{sq}+y^*)g(q_{sq}+y^*) &< G(q_{sq}+y^*)f(q_{sq}+y^*) \\ \Leftrightarrow \frac{f(q_{sq}+y^*)}{g(q_{sq}+y^*)} &> \frac{F(q_{sq}+y^*)}{G(q_{sq}+y^*)}. \end{aligned}$$

where the last line is due to a well-known property of strict MLRP that $\frac{f(x)}{g(x)} > \frac{F(x)}{G(x)}$. Hence, $\Pr(\tau_I = \overline{\theta}|\pi = \pi_{sq})$ is increasing in $y^*$.

Rearranging, $\Pr(\tau_I = C|\pi_1 = \pi_{sq}) = \frac{F(q_{sq}+y^*)p}{F(q_{sq}+y^*)p+G(q_{sq}+y^*)(1-p)}$, which is less than $p$ if

$$F(q_{sq}+y^*) < F(q_{sq}+y^*)p + G(q_{sq}+y^*)(1-p),$$

which is immediate due to MLRP implying first order stochastic dominance (FOSD). This proves the first result in the proposition.

$\Pr(\tau_I = \overline{\theta}|\pi = \pi_I) = \frac{1}{1+\frac{1-p}{p}\frac{(1-G(q_{sq}+y^*))}{(1-F(q_{sq}+y^*))}}$. Differentiating with respect to $y^*$,

$$\begin{aligned} &\frac{\partial}{\partial y^*}\frac{G(q_{sq}+y^*)}{F(q_{sq}+y^*)} \\ &\quad = \frac{-(1-F(q_{sq}+y^*))g(q_{sq}+y^*) - (-(1-G(q_{sq}+y^*)f(q_{sq}+y^*)))}{(1-F(q_{sq}+y^*))^2}. \end{aligned}$$

This is negative since

$$\begin{aligned} (1-G(q_{sq}+y^*)f(q_{sq}+y^*)) &< (1-F(q_{sq}+y^*))g(q_{sq}+y^*) \\ \Leftrightarrow \frac{f(x)}{1-F(x)} &< \frac{g(x)}{1-G(x)}, \end{aligned}$$

and the second line is the monotone hazard rate property which is implied by MLRP. Hence, $\Pr(\tau_I = \overline{\theta}|\pi = \pi_I)$ is increasing in $y^*$.

Rearranging, $\Pr(\tau_I = C|\pi_1 = \pi_{sq}) = \frac{(1-F(q_{sq}+y^*))p}{(1-F(q_{sq}+y^*))p+(1-G(q_{sq}+y^*))(1-p)}$. This is less than $p$ if

$$(1-F(q_{sq}+y^*)) > p(1-F(q_{sq}+y^*)) + (1-p)(1-G(q_{sq}+y^*)).$$

This is immediate due to MLRP implying FOSD. This proves the second result in the proposition. ■

**Lemma 5.** *(a) If $\eta < 0$ and $p+\eta \leq \underline{L}$,* $\Pr(\tau_I = \overline{\theta}|\pi = \pi_{sq}, y^*) > p+\eta$ *for all*

*$y$, otherwise, there exists $\underline{y} \in (-q_{sq}, \infty)$ such that for all $y \geq \underline{y}$,* $\Pr(\tau_I = \overline{\theta}|\pi = \pi_{sq}, y) \geq p + \eta$.

(b) *If $\eta > 0$ and $p + \eta \geq \overline{L}$,* $\Pr(\tau_I = \overline{\theta}|\pi = \pi_I, y^*) < p + \eta$ *for all $y$, otherwise, there exists $\overline{y} \in (-q_{sq}, \infty)$ such that for all $y \geq \overline{y}$,* $\Pr(\tau_I = \overline{\theta}|\pi = \pi_I) \geq p + \eta$.

*Proof.* Suppose $\eta < 0$. Then

$$\lim_{y \to -q_{sq}} \frac{1}{1 + \frac{1-p}{p}\frac{g(q_{sq}+y)}{g(q_{sq}+y)}} = \frac{1}{1 + \frac{1-p}{p}\frac{g(0)}{f(0)}} \equiv \underline{L}$$

By Lemma 4, $\Pr(\tau_I = C|\pi = \pi_{sq}, y)$ is strictly increasing in $y$. Hence, if $p + \eta > \underline{L}$, there exists a unique $\underline{y} \in (-q_{sq}, \infty)$ such that $\Pr(\tau_I = \overline{\theta}|\pi = \pi_{sq}, y) = p + \eta$, and for all $y \geq \underline{y}$, $\Pr(\tau_I = \overline{\theta}|\pi = \pi_{sq}, y) \geq p + \eta$. Otherwise, if $p + \eta \leq \underline{L}$, $\Pr(\tau_I = C|\pi = \pi_{sq}, y) > p + \eta$ for all $y \in (-q_{sq}, \infty)$.

Now suppose $\eta > 0$. By Lemma 4, $\Pr(\tau_I = \overline{\theta}|\pi = \pi_I)$ is strictly increasing in $y$. Moreover, $\Pr(\tau_I = C|\pi = \pi_I, y)$ is a probability so it is bounded above by one. Hence, there is a least upper bound of $\Pr(\tau_I = C|\pi = \pi_I, y)$, and that is the limit as $y \to \infty$. Call this least upper bound $\overline{L}$. Hence, if $p+\eta < \overline{L}$ there exists $\overline{y}$ such that $\Pr(\tau_I = C|\pi = \pi_I, y) \geq p + \eta$ for all $y \geq \overline{y}$. Otherwise, if $p + \eta \geq \overline{L}$, $\Pr(\tau_I = C|\pi = \pi_I, y^*) < p + \eta$ for all $y$. ■

From Lemma 5, there are two distinct cases. If

$$\eta \in (-\infty, \underline{L} - p] \cup [\overline{L} - p, \infty). \tag{3}$$

$\eta \neq 0$ and $\underline{y}$ and $\overline{y}$ do not exist. In this case, the incumbent's choice does not affect the election outcome. If (3) is not satisfied, the incumbent's choice may affect the election.

**Proposition 12.** *If $\eta < 0$,*

(a) *and (3) is satisfied, there is a unique equilibrium where the incumbent changes the status quo if and only if (6) is satisfied, and is always reelected.*

*Otherwise, if $\eta < 0$ and (3) is not satisfied:*

(b) *and $\underline{y} \geq \kappa - (x_I - x_{sq})^2 - r$, there is an equilibrium where the incumbent changes the status quo if and only if (8) is satisfied, and is reelected if and only if they change the status quo.*

(c) *and $\underline{y} \leq \kappa - (x_I - x_{sq})^2$, there is an equilibrium where the incumbent changes the status quo if and only if (4) is satisfied and is always reelected.*

*(d) and $\underline{y} \in (\kappa - (x_I - x_{sq})^2 - r, \kappa - (x_I - x_{sq})^2)$, there is an equilibrium where the incumbent changes the status quo if and only if (9) is satisfied, and is reelected with probability one if they change the status quo and with probability $\rho^* \in (0,1)$ if they retain the status quo.*

*Proof.* Suppose $\eta < 0$ and (3) is satisfied. In any equilibrium the incumbent wins reelection whether they retain the status quo or change it. Hence, the incumbent changes the status quo if and only if

$$q_I > q_{sq} + \kappa - (x_I - x_{sq})^2. \tag{4}$$

If

$$0 > q_{sq} + \kappa - (x_I - x_{sq})^2, \tag{5}$$

retaining the status quo is off the equilibrium path. By assumption, the voter believes the incumbent has ability with probability $\mu$ if the incumbent deviates. Because (3) is satisfied, the incumbent will still win reelection if they deviate off the equilibrium path. Hence, the incumbent does not deviate if (4) is satisfied, which holds for $q_I = 0$, and hence for all $q_I$. This shows (a) in the proposition, in which the incumbent changes the status quo if and only if

$$q_I > \max\{q_{sq} + \kappa - (x_I - x_{sq})^2, 0\}. \tag{6}$$

For the remainder of the proof, Suppose $\eta < 0$ and (3) is not satisfied which implies $\underline{y}$ exists. If $y^* < \underline{y}$, the incumbent is reelected if and only if they change the status quo. Therefore, the incumbent changes the status quo if and only if

$$q_I > q_{sq} + \kappa - (x_I - x_{sq})^2 - r. \tag{7}$$

For this equilibrium to exist, it must be that $\kappa - (x_I - x_{sq})^2 - r < \underline{y}$. If $0 > q_{sq} + \kappa - (x_I - x_{sq})^2 - r$, retaining is off the equilibrium path. Given the voter's assumed off the path belief, if the incumbent deviates, they will not be reelected. Hence, the incumbent will not deviate as long as (7) is satisfied, which holds for $q_I = 0$, and hence for all $q_I$. This shows (b) in the proposition, in which the incumbent changes the status quo if and only if

$$q_I > \max\{q_{sq} + \kappa - (x_I - x_{sq})^2 - r, 0\} \tag{8}$$

If $y^* > \underline{y}$, the incumbent is reelected whether they retain or change the status quo. Therefore, they change the status quo if and only if (4) is satisfied. For this equilibrium to exist, it must be that $\kappa - (x_I - x_{sq})^2 > \underline{y}$. By definition, $\underline{y} > -q_{sq}$. This, and the fact that $\kappa - (x_I - x_{sq})^2 - r > \underline{y}$ implies the incumbent retains and changes the status quo on the equilibrium path in this equilibrium. This (c) in the proposition

Finally, suppose $y^* = \underline{y}$. Then, the voter reelects the incumbent if they change the status quo and is indifferent between the incumbent and challenger when the incumbent retains the status quo. Given this indifference, suppose the voter reelects the incumbent with probability $\rho$ when they retain. Then the incumbent changes the status quo if

$$q_I > q_{sq} + \kappa - (x_I - x_{sq})^2 + (\rho^* - 1)r. \tag{9}$$

For the voter to be indifferent, it must be that

$$\kappa - (x_I - x_{sq})^2 + (\rho^* - 1)r = \underline{y},$$

which implies $\rho^* \equiv \frac{\underline{y} - \kappa + (x_I - x_{sq}^2)}{r} + 1$. Hence, there is a mixed strategy equilibrium. For such an equilibrium to exist, it must be that $\frac{\underline{y} - \kappa + (x_I - x_{sq}^2)}{r} + 1 \in [0, 1]$. That is,

$$\underline{y} \in [\kappa - (x_I - x_{sq})^2 - r, \kappa - (x_I - x_{sq})^2]$$

This shows (d) in the proposition. Moreover, since $\underline{y} > -q_{sq}$ and $y^* = \underline{y}$, the incumbent changes and retains on the equilibrium path.

Note, when $\underline{y} \in [\kappa - (x_I - x_{sq})^2 - r, \kappa - (x_I - x_{sq})^2]$, multiple equilibria exist. Otherwise, there is a unique equilibrium. ■

**Proposition 13.** *If $\eta > 0$,*

*(a) and (3) is satisfied, there is a unique equilibrium where the incumbent changes the status quo if and only if (6) is satisfied, and is never reelected.*

*Otherwise, if $\eta > 0$ and (3) is not satisfied,*

*(b) and $\overline{y} \geq \kappa - (x_I - x_{sq})^2$, there is a unique equilibrium where the incumbent changes the status quo if and only if (6) is satisfied, and is never reelected.*

(c) *and* $\overline{y} < \kappa - (x_I - x_{sq})^2$*, there is a unique equilibrium where the incumbent changes the status quo if and only if (10) is satisfied, and is reelected with probability* $\rho^* \in (0, 1]$ *if they change the status quo.*

*Proof.* Suppose $\eta > 0$ and (3) is satisfied. Hence, $\overline{y}$ does not exist. In any equilibrium the incumbent will not be reelected whether they change or retain the status quo. Hence, they change the status quo if and only if (4) is satisfied. If (5) is satisfied, retaining is off the equilibrium path. By assumption, if the incumbent deviates off the equilibrium path, the voter believes the incumbent has ability with probability $\mu$. Because the incumbent trails, they will not win reelection if the deviate. Hence, the incumbent will not deviate as long as (4) is satisfied, which holds for all $q_I$. This shows (a) in the proposition.

For the remainder of the proof suppose $\eta > 0$ and (3) is not satisfied. If $y^* < \overline{y}$, the incumbent is never reelected. Then the incumbent changes the status quo if (4) is satisfied. For this equilibrium to exist, it must be that $\kappa - (x_I - x_{sq})^2 < \overline{y}$. If (5) is satisfied, retaining is off the equilibrium path. Given the assumed off the path beliefs and the assumption that the incumbent trails, the incumbent will not be reelected if they deviate. Hence, the incumbent will not deviate as long as (4) is satisfied, which holds for all $q_I$. This shows (b) in the proposition.

If $y^* > \overline{y}$, the incumbent is reelected with probability one when they change the status quo but not if they retain it. Then the incumbent changes the status quo if and only if (7) is satisfied. For this equilibrium to exist, it must be that $\kappa - (x_I - x_{sq})^2 - r > \overline{y}$. Since $\overline{y} > -q_{sq}$, in this equilibrium, the incumbent changes and retains on the equilibrium path.

Finally, suppose $y^* = \overline{y}$. In this case, the voter is indifferent between electing the challenger and the incumbent when the incumbent changes the status quo and, hence, reelects the incumbent with probability $\rho^*$. Given $\rho^*$, the incumbent changes the status quo if and only if

$$q_I > q_{sq} + \kappa - (x_I - x_{sq})^2 - \rho^* r. \tag{10}$$

For the voter to be indifferent, it must be that

$$\kappa - (x_I - x_{sq})^2 - \rho r = \overline{y}.$$

which implies $\rho^* \equiv \frac{\kappa - (x_I - x_{sq})^2 - \overline{y}}{r}$. $\rho^* \in [0, 1]$ for

$$\overline{y} \in [\kappa - (x_I - x_{sq})^2 - r, \kappa - (x_I - x_{sq})^2]$$

Hence, a mixed strategy equilibrium exists for $\overline{y} \in [\kappa - (x_I - x_{sq})^2 - r, \kappa - (x_I - x_{sq})^2]$. This shows (c) in the proposition.

■

**Proposition 14.** *If $\eta = 0$.*

*(a) and if $q_{sq} + \kappa - (x_I - x_{sq})^2 - r \geq 0$, there is a unique equilibrium where the incumbent changes the status quo if and only if (7) is satisfied, and is reelected if and only if they change the status quo;*

*(b) otherwise, a continuum of equilibria exist where the incumbent changes the status quo for all $q_I$ and is reelected with probability $\rho^* \in [0, 1]$.*

*Proof.* Suppose $\eta = 0$. And suppose the incumbent changes and retains the status quo on the equilibrium path. Hence, for any $y^* \in (q_{sq}, \infty)$, the incumbent is reelected when they change the status quo and is not reelected when they retain the status quo. Hence, the incumbent changes the status quo if and only if (7) is satisfied. This is an equilibrium as long as $q_{sq} + \kappa - (x_I - x_{sq})^2 - r \geq 0$.

Now suppose the incumbent changes the status quo for any $q_I$. Then, in equilibrium, the posterior probability the incumbent has ability equals the prior and the voter reelects the incumbent with probability $\rho^*$. Therefore, the incumbent lacks a profitable deviation if $0 > q_{sq} + \kappa - (x_I - x_{sq})^2 - r\rho^*$. That is, if there is a $\rho^*$ such that the condition is satisfied, there is an equilibrium where the incumbent changes the status quo for any $q_I$.

■

**Proposition 15.** *In any equilibrium surviving D1,*

$$\Pr(\tau_I = \overline{\theta} | \textit{deviation off path}) = \frac{pf(0)}{pf(0) + (1-p)g(0)}.$$

*Proof.* By Lemma 1, in any equilibrium the incumbent uses a threshold rule and changes the status quo when $q_I$ is sufficiently large. Hence, the only action that is potentially off the path is retaining the status quo.

Suppose there is an equilibrium where the incumbent changes the status quo for all $q_I$. Let $\xi \in \mathbb{R}_{\geq 0}$ be this arbitrary incumbent's type. Note that the type does not include whether the incumbent has ability because the incumbent does not observe this. Define $D(\xi)$ as the set of reelection probabilities for which type $\xi$ strictly prefers deviating to retaining the status quo over receiving their equilibrium payoff on the path, and define $D_0(\xi)$ as the set of reelection probabilities for which type $\xi$ is indifferent between retaining the status quo and receiving their equilibrium payoff. D1 requires the voter putting probability zero on a type $\xi$ deviating if there exists another type $\xi'$ such that $D(\xi) \cup D_0(\xi) \subseteq D(\xi')$ (Cho and Kreps, 1987).

Let $\lambda \in [0,1]$ be the probability the voter elects the incumbent on the path and let $\omega \in [0,1]$ be the probability the voter elects the incumbent when they deviate off the path. Then, an incumbent of type $\xi$ will deviate off the path if

$$\frac{\xi - q_{sq} + \lambda r - \kappa + (x_I - x_{sq})^2}{r} < \omega.$$

It that the set of $\omega$ such that the incumbent deviates is weakly decreasing in $\xi$.

There are three cases to consider. First, suppose $0 > q_{sq} + \kappa - (x_I - x_{sq})^2 + (1-\lambda)r$. Then for any $\omega \in [0,1]$, an incumbent with type $\xi = 0$ will not deviate. The incumbent's utility on the path is increasing in $q_I$, hence no types deviate.

Next, suppose $0 \in (q_{sq} + \kappa - (x_I - x_{sq})^2 + \lambda r, q_{sq} + \kappa - (x_I - x_{sq})^2 + (1-\lambda)r)$. Therefore,

$$\frac{-q_{sq} + \lambda r - \kappa + (x_I - x_{sq})^2}{r} > 0.$$

Thus, an incumbent of type $\xi = 0$ deviates for some realizations of $q_I$. Since the incumbent's utility on the path is increasing in $q_I$, an incumbent of type $\xi = 0$ deviates for the largest interval of $\omega$. By D1, the voter is required to put probability one on the deviation coming from an incumbent with type $\xi = 0$. This induces the following posterior

$$\Pr(\tau_I = \overline{\theta} | \text{deviation off path}) = \frac{pf(0)}{pf(0) + (1-p)g(0)}.$$

Finally, suppose $q_{sq} + \kappa - (x_I - x_{sq})^2 + \lambda r > 0$. Then there exist $q_I$ such that

$$0 > \frac{q_I - q_{sq} + \lambda r + (x_I - x_{sq})^2}{r}.$$

That is, there are types of incumbent that deviate for any $\omega$. But this cannot be an equilibrium. ■

## 10.3 Proof of Proposition 3

*Proof.* **First Result:** $\eta$

I first prove a preliminary lemma.

**Lemma 6.** *$\underline{y}$ and $\overline{y}$ are increasing in $\eta$.*

*Proof.* $y = \overline{y}$ solves

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

By Lemma 4, the LHS is increasing in $y$. Hence, if $\eta$ increases, $\overline{y}$ increases to maintain equality. By an identical argument to above, the same can be shown for $\underline{y}$. ■

If (5) is satisfied or if (5) is not satisfied but (3) is either $\underline{y}$ and $\overline{y}$ do not exist or the incumbent change the status quo for all $q_I$ even absent ability signaling. Hence, $D(y^*_\gamma) = 0$ for all $\eta$.

For the remainder of the proof for this result, suppose neither (5) nor (3) are satisfied. Then $\underline{y}$ and $\overline{y}$ exist and the incumbent retains on the equilibrium path. Suppose $\eta < 0$, and fix an equilibrium with minimum policy change. In particular, this means that if $\underline{y} \in [\kappa-(x_I-x_{sq})^2-r, \kappa-(x_I-x_{sq})^2]$, the incumbent changes the status quo if and only if (4) is satisfied and is reelected whether they change the status quo or not. Suppose $\underline{y} \leq \kappa-(x_I-xsq)^2-r$. Then, $D(y^*_\gamma) = 0$. If $\eta$ increases to a sufficient degree that $\underline{y} > \kappa-(x_I-x_{sq})^2$, then in equilibrium, the incumbent changes the status quo if and only if (8) is satisfied and $D(y^*_\gamma) = \min\{r, q_{sq}+\kappa-(x_I-x_{sq}^2)\}$. Otherwise, $D(y^*_\gamma)$ is constant in $\eta$. Hence, when $\eta < 0$, $D(y^*_\gamma)$ is weakly increasing in $\eta$ and is always weakly smaller than $\min\{r, q_{sq}+\kappa-(x_I-x_{sq}^2)\}$.

Now suppose $\eta = 0$. Then $D(y^*_\gamma) = \min\{r, q_{sq}+\kappa-(x_I-x_{sq}^2)\}$.

Suppose $\eta > 0$. Then $\overline{y}$ exists. When $\eta > 0$, there is always a unique equilibrium. Hence, the set of equilibria and the equilibrium with minimum policy change are identical. When $\overline{y} \leq \kappa-(x_I-x_{sq})^2-r$, $D(y^*_\gamma) = r$. Note that since $-q_{sq} < \overline{y}$, for $\overline{y} \leq \kappa-(x_I-x_{sq})^2-r$ it must be that $\min\{r, q_{sq}+\kappa-(x_I-x_{sq}^2)\} = r$. When $\overline{y} \in (\kappa-(x_I-x_{sq})^2-r, \kappa-(x_I-x_{sq})^2)$, $D(y^*_\gamma) = \kappa-(x_I-x_{sq})^2-\overline{y} < r$, which is decreasing in $\eta$. Finally, when $\overline{y} \geq \kappa-(x_I-x_{sq})^2)$, $D(y^*_\gamma) = 0$.

**Second Result**: $r$

If (5) is satisfied or if (5) is not satisfied but (3) is satisfied, $D(y^*_\gamma) = 0$ for all $r$. For the remainder of the proof, suppose (5) is not satisfied. For the remainder of the proof suppose neither (5) nor (5) are satisfied.

Suppose $\eta > 0$. Then $\overline{y}$ exists. Suppose first that $\overline{y} \geq \kappa-(x_I-x_{sq})^2$. Then, the incumbent changes the status quo if and only if (6) is satisfied. Hence, $D(y^*_\Gamma) = 0$ for all $r$.

Now suppose $\overline{y} < \kappa-(x_I-x_{sq})^2$. Consider $r$ small enough that $\overline{y} \leq \kappa-(x_I-x_{sq})^2-r$. Then the incumbent changes the status quo if and only if (7) is satisfied, and hence

$D(y_\gamma^*) = r$. Thus, the extent of ability signaling is weakly increasing in $r$ for $r \leq \kappa - (x_I - x_{sq})^2 - \underline{y}$.

Now consider $r > \kappa - (x_I - x_{sq})^2 - \underline{y} \Leftrightarrow \overline{y} > \kappa - (x_I - x_{sq})^2 - r$. Then the incumbent changes the status quo if and only if (10) is satisfied, which can be rewritten at $q_I > q_{sq} + \overline{y}$. This threshold is constant in $r$. Then,

$$D(\kappa - (x_I - x_{sq})^2, \kappa - (x_I - x_{sq})^2 - r) < D(\kappa - (x_I - x_{sq})^2, \overline{y})$$
$$\Leftrightarrow \overline{y} > \kappa - (x_I - x_{sq})^2 - r,$$

which holds by assumption. Hence, the extent of ability signaling is lower than when $\overline{y} \leq \kappa - (x_I - x_{sq})^2 - r$.

Next, consider $\eta = 0$. Then the incumbent changes the status quo if and only if (7) is satisfied. Therefore, $D(y_\gamma^*) = r$. Thus, the extent of ability signaling is increasing in $r$ for $r$ such that $q_{sq} + \kappa - (x_I - x_{sq})^2 - r \geq 0$. For $r$ sufficiently larger that $q_{sq} + \kappa - (x_I - x_{sq})^2 - r < 0$, the incumbent changes the status quo for any $q_I$. Hence, $D(y_\gamma^*) = q_{sq} + \kappa - (x_I - x_{sq})^2$ is constant in $r$.

Suppose $\eta < 0$. Then $\underline{y}$ exists. If $\underline{y} \leq \kappa - (x_I - x - sq)^2$, then in the equilibrium with minimum policy change, the incumbent changes the status quo if and only if (4) is satisfied. Then $D(y_\gamma^*) = 0$, and this is constant in $r$.

Finally, suppose $\underline{y} > \kappa - (x_I - x - sq)^2$. Then, in the equilibrium with minimum policy change, the incumbent changes the status quo if and only if (8) is satisfied. Hence, $D(y_\gamma^*) = \min\{r, \kappa - (x_I - x_{sq})^2\}$ and this is weakly increasing in $r$.

■

## 10.4 Proof of Proposition 4

*Proof.* Suppose $\eta > 0$. If $\kappa - (x_I - x_{sq})^2 - r > \overline{y}$, the probability the incumbent is reelected is $p(1 - F(q_{sq} + \kappa - (x_I - x_{sq})^2) - r) + (1 - p)(1 - G(q_{sq} + \kappa - (x_I - x_{sq})^2) - r)$. This is clearly increasing in $r$.

Now consider $r$ sufficiently large that $\overline{y} \in (\kappa - (x_I - x_{sq})^2 - r, \kappa - (x_I - x_{sq})^2)$. Then the probability that the incumbent is reelected is $p(1 - F(\overline{y}) + (1 - p)(1 - G(\overline{y})\rho^*$, where $\rho^* = \frac{\overline{y} - \kappa + (x_I - x_{sq})^2}{r}$. Since $\rho^*$ is decreasing in $r$, the probability the incumbent is reelected is decreasing in $r$. ■

## 10.5 Proof of Proposition 5

*Proof.* The voter's utility from policy is maximized when the incumbent changes the status quo if and only if $q_I > \max\{q_{sq} - x_{sq}^2 + x_I^2 + \xi, 0\}$. In $\hat{\Gamma}$, the incumbent changes the status quo if and only if $q_I > \max\{q_{sq} + (x_I - x_{sq})^2 - \kappa, 0\}$. Therefore, the incumbent changes the status quo too much from the voter's perspective if

$$\kappa - (x_I - x_{sq})^2 < \xi - x_{sq}^2 + x_I^2. \tag{11}$$

(11) is satisfied if $\xi$ is sufficiently large or if $x_I$ is sufficiently large.

Suppose (11) is satisfied. By Proposition 1, in any equilibrium of $\Gamma$, the incumbent probability of policy change is weakly higher. Hence, the voter's utility from policy is weakly lower. ■

## 10.6 Proof of Proposition 6

I begin by proving Lemma 7, which I use to provide a full characterization of the equilibria when $q_I$ is revealed with probability $s \in [0, 1]$ if the incumbent changes the status quo in Propositions 16, 17, and 18. Then I prove Proposition 6.

If the incumbent changes the status quo and the voter observes $q_I$,

$$\Pr(\tau_I = \overline{\theta}|q_I) = \frac{1}{1 + \frac{1-p}{p}\frac{g(q_I)}{f(q_I)}}.$$

This is increasing in $q_I$ by the definition of strict MLRP. Therefore, if

$$p + \eta \in \left(\frac{1}{1 + \frac{1-p}{p}\frac{g(0)}{f(0)}}, \lim_{q_I \to \infty} \frac{1}{1 + \frac{1-p}{p}\frac{g(q_I)}{f(q_I)}}\right),$$

$\hat{q}_I$ exists. Note this condition can be rearranged to obtain (3). Define $\hat{y} \equiv \hat{q}_I - q_{sq}$.

**Lemma 7.** *$\overline{y} < \hat{y}$ and $\underline{y} > \hat{y}$*

*Proof.* Suppose not for the first part of the lemma, then $\overline{y} \geq \hat{y}$. By the definitions of $\overline{y}$ and $\hat{y}$,

$$\frac{p(1 - F(q_{sq} + \overline{y}))}{p(1 - F(q_{sq} + \overline{y})) + (1 - p)(1 - G(q_{sq} + \overline{y}))} = \frac{pf(q_{sq} + \hat{y})}{pf(q_{sq} + \hat{y}) + (1 - p)g(q_{sq} + \hat{y})}.$$

Hence,

$$\frac{f(q_{sq}+\hat{y})}{g(q_{sq}+\hat{y})}=\frac{1-F(q_{sq}+\overline{y})}{1-G(q_{sq}+\overline{y})}$$

By strict MLRP and since $q_{sq}+\hat{y}\leq q_{sq}+\overline{y}$

$$\begin{aligned}
\frac{f(q_{sq}+\hat{y})}{g(q_{sq}+\hat{y})} &\leq \frac{f(q_{sq}+\overline{y})}{g(q_{sq}+\overline{y})}\\
\Longrightarrow \frac{f(q_{sq}+\overline{y})}{g(q_{sq}+\overline{y})} &\geq \frac{1-F(q_{sq}+\overline{y})}{1-G(q_{sq}+\overline{y})}\\
\Leftrightarrow \frac{f(q_{sq}+\overline{y})}{1-F(q_{sq}+\overline{y})} &\geq \frac{g(q_{sq}+\overline{y})}{1-G(q_{sq}+\overline{y})},
\end{aligned}$$

where the last line is a contradiction due to the monotone hazard rate property of MLRP.

Suppose not for the second part of the lemma, then $\underline{y}\leq\hat{y}$. Using the definitions of $\underline{y}$ and $\hat{y}$, it must be that

$$\frac{F(q_{sq}+\underline{y})}{G(q_{sq}+\underline{y})}=\frac{f(q_{sq}+\hat{y})}{g(q_{sq}+\hat{y})}$$

By strict MLRP and since $q_{sq}+\hat{y}\geq q_{sq}+\underline{y}$

$$\begin{aligned}
\frac{f(q_{sq}+\hat{y})}{g(q_{sq}+\hat{y})} &\geq \frac{f(q_{sq}+\underline{y})}{g(q_{sq}+\underline{y})}\\
\Longrightarrow \frac{F(q_{sq}+\underline{y})}{G(q_{sq}+\underline{y})} &\geq \frac{f(q_{sq}+\underline{y})}{g(q_{sq}+\overline{y})}
\end{aligned}$$

where the last line is a contradiction due to the well known property of strict MLRP that

$$\frac{f(x)}{g(x)}>\frac{F(x)}{G(x)}.$$

■

**Proposition 16.** *If* $\eta>0$

*(a) and (3) is satisfied, there is an equilibrium where the incumbent changes the status quo if and only if (6) is satisfied, and is never reelected.*

*Otherwise, if* $\eta>0$ *and (3) is not satisfied:*

*(b) and if* $\hat{y}\leq\kappa-(x_I-x_{sq})^2-(1-s)r$*, the incumbent changes the status quo if and only if (12) is satisfied, and is reelected if they change the status quo.*

(c) *and if* $\overline{y} \leq \kappa - (x_I - x_{sq})^2 - (1-s)r < \hat{y}$*, the incumbent changes the status quo if and only if (13) is satisfied, and the incumbent is reelected if they change the status quo and* $q_I$ *is not revealed or if* $q_I$ *is revealed and* $q_I > \hat{q}_I$*.*

(d) *and if* $\overline{y} \in (\kappa - (x_I - x_{sq})^2 - (1-s)r, \kappa - (x_I - x_{sq})^2)$*, the incumbent changes the status quo if and only if (14) is satisfied, and is reelected with probability* $\rho^* < 1$ *if they change the status quo and* $q_I$ *is not revealed or if* $q_I$ *is revealed and* $q_I > \hat{q}_I$*.*

(e) *and if* $\overline{y} \geq \kappa - (x_I - x_{sq})^2$ *the incumbent changes the status quo if and only if (6) is satisfied, and is reelected with probability one if they change the status quo,* $q_I$ *is revealed, and* $q_I > \hat{q}_I$*.*

*Proof.* Fix $\eta > 0$. Furthermore, suppose that (3) is satisfied, in which case $\overline{y}$ and $\hat{y}$ do not exist. Then the incumbent is never reelected if they change the status quo. Hence, they change the status quo if and only if (4) is satisfied. When $q_{sq} + \kappa - (x_I - x_{sq})^2 < 0$, retaining is off the equilibrium path. By assumption, if the incumbent deviates to an action off the equilibrium path, the probability they has ability is $\mu < p$. Therefore, the incumbent will not deviate as long as (4) is satisfied, which holds for all $q_I$. This proves the first result of the proposition.

Now suppose $\eta > 0$ and (3) is not satisfied. In equilibrium, the incumbent's expected utility from changing the status quo is

$$q_I - \kappa + (1-s)\lambda r + s\gamma(q_I)r$$

where $\lambda$ is the probability the incumbent is reelected if $q_I$ is not revealed and $\gamma(q_I)$ is the probability the incumbent is reelected if $q_I$ is revealed. This expected utility is increasing in $q_I$ since $\gamma(q_I)$ is weakly increasing in $q_I$. Hence, it is sufficient to solve for $q_I$ such that the incumbent is indifferent between retaining and changing since they will strictly prefer changing for any larger $q_I$.

Focus on equilibria where the incumbent is reelected with positive probability when they change the status quo and $q_I$ is not revealed. That is, equilibria where $\overline{y} \leq y^*$. First suppose the incumbent is reelected with probability one when they change the status quo and $q_I$ is not revealed. Then, in equilibrium, the incumbent changes the status if and only if (7) is satisfied. For this to be an equilibrium, it must be that $\hat{y} < \kappa - (x_I - x_{sq})^2 - r$ and $\underline{y} < \kappa - (x_I - x_{sq})^2 - r$, where the first implies the second.

Next, suppose there is an equilibrium where the incumbent changes the status quo if and only if $q_I > \hat{q}_I$. This implies that the incumbent is reelected if they change the status quo. In addition to the restrictions on the voter's beliefs that are satisfied by the definition of $\hat{y}$, two other conditions must be satisfied for this to be an equilibrium. First, if the incumbent wins reelection if $q_I$ is revealed, they must prefer to change the status quo. That is,

$$\hat{q}_I \geq q_{sq} + \kappa - (x_I - x_{sq})^2 - r.$$

Second, an incumbent for whom $q_I < \hat{q}_I$ cannot want to deviate to changing the status quo and getting reelected with probability $1 - s$. That is,

$$\hat{q}_I \leq q_{sq} + \kappa - (x_I - x_{sq})^2 - (1 - s)r.$$

These conditions are satisfied if $\hat{y} \in [\kappa - (x_I - x_{sq})^2 - r, \kappa - (x_I - x_{sq})^2 - (1 - s)r]$

Summarizing, if $\hat{y} \leq \kappa - (x_I - x_{sq})^2 - (1 - s)r$, in equilibrium, the incumbent changes the status quo if and only if

$$q_I > \max\{q_{sq} + \kappa - (x_I - x_{sq})^2 - r, \hat{q}_I\}. \tag{12}$$

This proves the second result in the proposition.

Continue to suppose that in equilibrium the incumbent is reelected with probability one if they change the status quo. But suppose there are realizations of $q_I$ such that they change the status quo but are not reelected if $q_I$ is revealed. This means that an indifferent incumbent will not be reelected if $q_I$ is revealed. The incumbent is indifferent if $q_I = q_{sq} + \kappa - (x_I - x_{sq})^2 - (1 - s)r$, and hence changes the status quo if and only if

$$q_I > q_{sq} + \kappa - (x_I - x_{sq})^2 - (1 - s)r. \tag{13}$$

For this to be an equilibrium, it must be that

$$\overline{y} < \kappa - (x_I - x_{sq})^2 - (1 - s)r < \hat{y}$$

Finally, suppose there is an equilibrium where the incumbent is reelected with probability $\rho^* \in [0, 1]$ if they change the status quo and $q_I$ is not revealed. Since the voter mixes, it must be that $y^* = \overline{y}$, which implies $y^* < \hat{y}$ and hence the incumbent is sometimes not reelected if they change the status quo and $q_I$ is revealed. In particular, the incumbent who is indifferent will not be reelected if $q_I$ is revealed. In this potential mixed strategy equilibrium, the incumbent is indifferent between retaining and changing when

$q_I = q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)\rho^* r$, and hence changes the status quo if and only if

$$q_I > q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)\rho^* r. \tag{14}$$

The voter is willing to mix if

$$\Leftrightarrow \rho^* = \frac{\kappa - (x_I - x_{sq})^2 - \overline{y}}{(1-s)r}.$$

$\rho^* \in (0,1)$ if

$$\overline{y} \in (\kappa - (x_I - x_{sq})^2 - (1-s)r, \kappa - (x_I - x_{sq})^2).$$

Additionally, note that when when $\overline{y} = \kappa - (x_I - x_{sq})^2 - (1-s)r$, $\rho^* = 1$, and when $\overline{y} = \kappa - (x_I - x_{sq})^2$, $\rho^* = 0$.

It remains to consider equilibria where the incumbent is not reelected when $q_I$ is not revealed. In such an equilibrium, there must be realizations of $q_I$ such that the incumbent changes the status quo and is not reelected if $q_I$ is revealed. As a result, the incumbent is indifferent when $q_I = q_{sq} + \kappa - (x_I - x_{sq})^2$, and hence changes the status quo if and only if (4) is satisfied. This requires $\overline{y} > \kappa - (x_I - x_{sq})^2$. Which means this equilibrium exists when $\kappa - (x_I - x_{sq})^2 < 0$. ■

**Proposition 17.** *If $\eta = 0$:*

*(a) and if $0 > q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)r$, there is an equilibrium where the incumbent changes the status quo for any $q_I$, and is reelected with probability $\rho^* \in [0,1]$ if they change the status quo and $q_I$ is not revealed and with probability one if $q_I$ is revealed and $q_I > \hat{q}_I$.*

*Otherwise, if $\eta = 0$, $0 \leq q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)r$:*

*(b) and if $\hat{y} \leq \kappa - (x_I - x_{sq})^2 - (1-s)r$, there is a unique equilibrium where the incumbent changes the status quo if and only if (12) is satisfied, and is reelected if they change the status quo.*

*(c) and if $\hat{y} > \kappa - (x_I - x_{sq})^2 - (1-s)r$, there is a unique equilibrium where the incumbent changes the status quo if and only if (13) is satisfied, and is reelected if they change the status quo and $q_I$ is not revealed or if $q_I$ is revealed and $q_I > \hat{q}_I$.*

*Proof.* Fix $\eta = 0$. Moreover, suppose there is an equilibrium where the incumbent changes the status quo for any $q_I$. Further, consider an incumbent for whom $q_I = 0$. Since $\eta = 0$,

$\hat{q}_I$ exists and $\hat{q}_I > 0$. Thus, changing the status quo is a best response for this incumbent if and only if

$$0 > q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)\rho r. \tag{15}$$

By a similar argument to the one used in Proposition 16, in equilibrium, the incumbent's expected utility from changing the status quo is increasing in $q_I$. Hence, if 15, the incumbent changes the status quo for all $q_I$. Hence, if $0 > q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)r$, a continuum of equilibria exist where the incumbent changes the status quo with probability one and is reelected with probability with probability $\rho^*$ where $0 > q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)\rho^*$.

For the remainder of the proof suppose the incumbent retains the status quo on the equilibrium path. Hence, the incumbent is reelected when they change the status quo and $q_I$ is not revealed.

Consider first an equilibrium where the incumbent is reelected with probability one when they change the status quo. In such an equilibrium, the incumbent will change the status quo if and only if (7) is satisfied. This equilibrium exists if $\hat{y} < \kappa - (x_I - x_{sq})^2 - r$.

Next, consider a strategy profile where the incumbent changes the status quo if and only if $q_I > \hat{q}_I$ and is reelected with probability one when they change the status quo. By a similar argument to the one used in Proposition 16, for this to be an equilibrium, it must be that

$$\hat{y} \in (\kappa - (x_I - x_{sq})^2 - r, \kappa - (x_I - x_{sq})^2 - (1-s)r)$$

which is true by assumption.

Finally, consider an equilibrium where the incumbent is only reelected if they change the status quo and $q_I$ is not revealed or if $q_I$ is revealed and $q_I > \hat{q}_I$. Hence, the incumbent changes the status quo if and only if (13) is satisfied. For this to be an equilibrium it must be that $\hat{y} > \kappa - (x_I - x_{sq})^2 - (1-s)r$.

It remains to check two knife edge cases. Suppose $\hat{y} = \kappa - (x_I - x_{sq})^2 - (1-s)r$, which is the same as saying $\hat{q}_I = q_{sq} + \kappa - (x_I) - x_{sq}^2 - (1-s)r$. In the previously proposed equilibrium the incumbent changes the status quo, $q_I > \hat{q}_I$, and is reelected with probability one when they change the status quo. Hence, this is an equilibrium.

Finally, suppose $\hat{y} = \kappa - (x_I - x_{sq})^2 - r$. This is the same as saying $\hat{q}_I = q_{sq} + \kappa - (x_I) - x_{sq}^2 - (1-s)r$. In the previously proposed equilibrium the incumbent changes the status quo, $q_I > \hat{q}_I$, and is reelected with probability one when they change the status quo. Hence, this is an equilibrium. ■

**Proposition 18.** *If $\eta < 0$,*

*(a) and (3) is satisfied, there is a unique equilibrium where the incumbent changes the status quo if and only if (6) is satisfied, and is always reelected.*

*Otherwise, if $\eta < 0$ and (3) is not satisfied,*

*(b) if $\underline{y} \leq \kappa - (x_I - x_{sq})^2$, there is an equilibrium where the incumbent changes the status quo if and only if (9) is satisfied, and is reelected with probability one if they change the status quo and with $\rho^* \in (0, 1]$ if they retain the status quo.*

*(c) if $\overline{y} \geq \kappa - (x_I - x_{sq})^2 - r$ and $\kappa - (x_I - x_{sq})^2 - (1 - s)r \geq \hat{y}$, there is an equilibrium where the incumbent changes the status quo if and only if (12) is satisfied, and is reelected if they change the status quo.*

*(d) if $\hat{y} > \kappa - (x_I - x_{sq})^2 - (1 - s)r$, there is an equilibrium where the incumbent changes the status quo if and only if (13) is satisfied, and is reelected if they change the status quo if $q_I$ is not revealed or if $\hat{q}_I$ is revealed and $q_I > \hat{q}_I$.*

*Proof.* Fix $\eta < 0$. Furthermore, suppose (3) is satisfied, and hence $\underline{y}$ and $\hat{y}$ do not exist. Then the incumbent is reelected whether they change or retain the status quo. Hence, the incumbent changes the status quo if and only if (4) is satisfied. If $q_{sq} + \kappa - (x_I - x_{sq})^2 < 0$, retaining is off the equilibrium path. Given the assumption about the off the path beliefs, the incumbent will be reelected if they deviate. Hence, they will not deviate if (4) is satisfied which holds for all $q_I$. This shows existence of the first equilibrium in the proposition.

For the remainder of the proof suppose (3) is not satisfied. Since $\eta < 0$, the incumbent is always reelected if they change the status quo and $q_I$ is not revealed. Moreover, by a similar argument to the one used in the proof of Proposition 16, the incumbent's expected utility in equilibrium from changing the status quo is increasing in $q_I$. Hence, it is sufficient to find the realization of $q_I$ such that the incumbent is indifferent as they will change the status quo for any higher realizations of $q_I$.

Additionally, note that if the incumbent is reelected when they retain the status quo, they are also reelected when they change the status quo and $q_I$ is revealed. To see this, suppose not. Then there exist $q_I < q_I'$ such that

$$\frac{1}{1 + \frac{1-p}{p}\frac{G(q_I)}{F(q_I)}} > p + \eta > \frac{1}{1 + \frac{1-p}{p}\frac{g(q_I)}{f(q_I)}}.$$

Hence,

$$\begin{aligned}
&\frac{g(q_I')}{f(q_I')} > \frac{G(q_I)}{F(q_I)} \\
\implies &\frac{1-G(q_I')}{1-F(q_I')} > \frac{G(q_I')}{F(q_I')},
\end{aligned}$$

where the second line is a contradiction due to the FOSD property of MLRP.

Now, suppose there is an equilibrium where the incumbent is reelected with probability one whether they change the status quo or not. In that case, the incumbent changes the status quo if and only if (4) is satisfied. This equilibrium exists if $\underline{y} < \kappa - (x_I - x_s)^2$ and $\hat{y} < \kappa, -(x_I - x_s)^2$, where the first implies the second.

Next, suppose there is an equilibrium where the incumbent is reelected with some probability less than one when they retain the status quo. In equilibrium, the incumbent changes the status quo if and only if (9) is satisfied. For the voter to be willing to randomize, it must be that

$$\rho^* = \frac{\overline{y} - \kappa + (x_I - x_{sq})^2 + r}{r}.$$

For $\rho^* \in [0, 1]$, it must be that

$$\underline{y} \in [\kappa - (x_I - x_{sq})^2 - r, \kappa - (x_I - x_{sq})^2].$$

Summarizing, if $\underline{y} \leq \kappa - (x_I - x_{sq})^2$, there is an equilibrium where the incumbent changes the status quo if and only if (9) is satisfied.

In the remaining equilibria, the incumbent is certain to be reelected when they retain the status quo and $q_I$ is not revealed and is not reelected when the retain. That is, $\underline{y} > y^*$. What happens when $q_I$ is revealed depends on the equilibrium.

First, suppose there is an equilibrium where the incumbent is reelected with probability one if they change the status quo but is not reelected if they retain. That is, $\overline{y} > y^* \geq \hat{y}$. In equilibrium, the incumbent will change the status quo if (7) is satisfied. Hence, this equilibrium exists if

$$\overline{y} > \kappa - (x_I - x_{sq})^2 - r > \hat{y}$$

Now consider a strategy for the incumbent where the change the status quo if and only if $q_I > \hat{q}_I$. For this to be an equilibrium, it must be that

$$\hat{y} < (\kappa - (x_I - x_{sq})^2 - r, \kappa - (x_I - x_{sq})^2 - (1-s)r).$$

Summarizing, if $\overline{y} \geq \kappa - (x_I - x_{sq})^2 - r$, and $\kappa - (x_I - x_{sq})^2 - (1-s)r \leq \hat{y}$, there is an equilibrium where the incumbent changes the status quo if and only if (12) is satisfied.

Finally, suppose there is an equilibrium where the incumbent is reelected with probability one if they change the status and $q_I$ is not revealed, but there are values of $q_I$ such that if $q_I$ is revealed the incumbent is not reelected. Then the incumbent who is indifferent between retaining and changing observes $q_I$ such that $q_I = q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)r$. Hence, the incumbent changes the status quo if and only (13) is satisfied. This equilibrium exists if $\hat{y} > q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)r$. Note, this allows for the possibility that $0 > \kappa - (x_I - x_{sq})^2 - (1-s)r$ ■

I now prove Proposition 6.

*Proof.* If (3) is satisfied, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = 0$ and is constant in $s$.

For the remainder of the proof, suppose (3) is not satisfied.

**Case One:** $\eta > 0$

Fix $\hat{y}$ and $\overline{y}$, this means $\hat{q}_I$ is fixed as well. If $\hat{y} \leq \kappa - (x_I - x_{sq})^2 - (1-s)r$, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = \min\{r, \kappa - (x_I - x_{sq})^2 - \hat{q}_I\}$. Since $\kappa - (x_I - x_{sq})^2 - (1-s)r$ is increasing in $s$, the extent of ability signaling is constant in $s$.

If $\hat{y} > \kappa - (x_I - x_{sq})^2 - (1-s)r \geq \overline{y}$, the incumbent changes the status quo if and only if (13) is satisfied. Note, this condition is the same as $\hat{q}_I > q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)r$, which implies $\hat{q}_I > q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)r$. Then, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = (1-s)r$, which is decreasing in $s$ for $s$ such that $\hat{y} > \kappa - (x_I - x_{sq})^2 - (1-s)r$. Suppose $s$ increases sufficiently large that $\hat{y} \leq \kappa - (x_I - x_{sq})^2 - (1-s)r$, which is equivalent to $\hat{q}_I \leq q_{sq}\kappa - (x_I - x_{sq})^2 - (1-s)r$. Note, the limit $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma})$ as $s$ approaches this point is $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = \kappa - (x_I - x_{sq})^2 - \hat{q}_I$. Then the incumbent changes the status quo if and only if (12) is satisfied. In particular, because $\hat{q}_I > q_{sq} + \kappa - (x_I - x_{sq})^2 - r$, the incumbent changes the status quo if and only if $q_I > \hat{q}_I$. Hence, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = \kappa - (x_I - x_{sq})^2 - \hat{q}_I$ and is constant in $s$.

If $\overline{y} \in (\kappa - (x_I - x_{sq})^2 - (1-s)r)r, \kappa - (x_I - x_{sq})^2)$, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = (1-s)\rho^* r$ where $\rho^* = \frac{\kappa - (x_I - x_{sq})^2 - \overline{y}}{(1-s)r}$. Hence, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma})$ is constant for $s$ such that $\overline{y} > \kappa - (x_I - x_{sq})^2 - (1-s)r$. When $s$ increases to a sufficient degree that $\overline{y} \leq \kappa - (x_I - x_{sq})^2 - (1-s)r < \hat{y}$, the incumbent changes the status quo if and only if (13) is satisfied. Hence, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = (1-s)r$. By the argument in the previous two paragraphs, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma})$ is then increasing in $s$.

Finally, if If $\overline{y} \geq \kappa - (x_I - x_{sq})^2$, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = 0$ and is constant in $s$.

**Case Two:** $\eta = 0$.

Fix $\hat{y}$. First, suppose $\hat{y} \leq \kappa - (x_I - x_{sq})^2 - r$. Then $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = r$ and is constant in $s$.

For the remainder of the proof of this case, suppose $\hat{y} > \kappa - (x_I - x_{sq})^2 - r$. This is equivalent to $\hat{q}_I > q_{sq} + \kappa - (x_I - x_{sq})^2 - r$. Furthermore, suppose $0 > q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)r$. Fix $\rho^*$ such that an equilibrium exists. If $0 > q_{sq} + \kappa - (x_I - x_{sq})^2$, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = 0$ for any $s$.

Now suppose $0 < q_{sq} + \kappa - (x_I - x_{sq})^2$. Then $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = q_{sq} + \kappa - (x_I - x_{sq})^2$ for all $s$ such that $0 > q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)r$. If $s$ increases to a sufficient degree that $0 < q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)r < \hat{w}_I$, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = (1-s)r$. And if $s$ increases to a sufficient degree that $q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)r \geq \underline{y}$, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = \kappa - (x_I - x_{sq})^2 - \hat{q}_I$, which is constant in $s$.

The cases where $\hat{y} > \kappa - (x_I - x_{sq})^2 - (1-s)r$ and where $\hat{y} \leq \kappa - (x_I - x_{sq})^2 - (1-s)r$ follow the came arguments.

**Case Three:** $\eta < 0$. Fix $\hat{y}$ and $\underline{y}$. Suppose $\underline{y} \leq \kappa - (x_I - x_{sq})^2$, and suppose in equilibrium the incumbent changes the status quo if and only if (9) is satisfied. Then $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = (1-\rho^*)r$, where $\rho^* = 1$ if $\underline{y} \leq \kappa - (x_I - x_{sq})^2 - r$ and $\rho^* = \frac{\overline{y} - \kappa + (x_I - x_{sq})^2 + r}{r}$ otherwise. In both cases, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma})$ is constant in $s$.

If $\overline{y} \geq \kappa - (x_I - x_{sq})^2 - r > \underline{y}$, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = r$ and is constant in $s$. If however, $\underline{y} \in (\kappa - (x_I - x_{sq})^2 - r, \kappa - (x_I - x_{sq})^2 - (1-s)r)$, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = \kappa - (x_I - x_{sq})^2 - \hat{q}_I$, which is constant in $s$.

Finally, suppose $\hat{y} > \kappa - (x_I - x_{sq})^2 - (1-s)r$, in which case $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = (1-s)r$. This is decreasing in $s$ as long as $s$ is sufficiently small that $\hat{y} > \kappa - (x_I - x_{sq})^2 - (1-s)r$. Moreover, as $s$ increases $\kappa - (x_I - x_{sq})^2 - (1-s)r \to \hat{y}$ which implies $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) \to \kappa - (x_I - x_{sq})^2 - \hat{q}_I$. Additionally, when $s$ increases to a sufficient degree that $\hat{y} < \kappa - (x_I - x_{sq})^2 - (1-s)r$, $D(y_{\hat{\Gamma}^*}, y^*_{\Gamma}) = \kappa - (x_I - x_{sq})^2 - \hat{q}_I$. Hence, the extent of ability signaling is decreasing in $s$.

■

## 10.7 Proof of Proposition 7

Suppose (3) is satisfied and $\eta > 0$. Fix $\hat{y}$ and $\overline{y}$ such that $\hat{y} > \kappa - (x_I - x_{sq})^2 - (1-s)r \geq \overline{y}$. Hence, the incumbent changes the status quo if and only if (13) is satisfied. Note, the preliminary assumption implies $\hat{q}_I > q_{sq} + \kappa - (x_I - x_{sq})^2 - (1-s)r$. Hence, their ex ante expected utility is

$$\int_0^{q_{sq}+\kappa-(x_I-x_{sq})^2-(1-s)r} (q_{sq}-(x_I-x_{sq})^2)h(q_I)dq_I + \int_{q_{sq}+\kappa-(x_I-x_{sq})^2-(1-s)r}^{\hat{q}_I} (q_I-\kappa+(1-s)r)h(q_I)dq_I + \int_{\hat{q}_I}^{\infty} (q_I-\kappa+r)h(q_I)dq_I, \quad (16)$$

where $h(q_I) = pf(q_I) + (1-p)g(q_I)$. Differentiating,

$$\frac{\partial(16)}{\partial s} = -\int_{q_{sq}+\kappa-(x_I-x_{sq})^2-(1-s)r}^{\hat{q}_I} rh(q_I)dq_I < 0.$$

Hence, for small increases in $s$, the incumbent's expected utility is decreasing.

Now, suppose $\overline{y} \geq \kappa-(x_I-x_{sq})^2$. Then, the incumbent changes the status quo if and only if (6). In particular, $q_{sq}+\kappa-(x_I-x_{sq})^2 \geq 0$. Then the incumbent's expected utility is

$$\int_0^{q_{sq}+\kappa-(x_I-x_{sq})^2} (q_{sq}-(x_I-x_{sq})^2)h(q_I)dq_I + \int_{q_{sq}+\kappa-(x_I-x_{sq})^2}^{\hat{q}_I} (q_I-\kappa)h(q_I)dq_I + \int_{\hat{q}_I}^{\infty} (q_I+sr)h(q_I)dq_I, \quad (17)$$

Differentiating,

$$\frac{\partial(17)}{\partial s} = \int_{\hat{q}_I}^{\infty} rh(q_I)dq_I > 0.$$

Hence, the incumbent's expected utility is increasing $s$.

## 10.8 Proof of Proposition 8

I analyze this model for $\eta < 0$ and $\eta > 0$.

*Proof.* Suppose $\eta < 0$. By identical arguments to those used in Proposition 12, the following equilibria exist in the subgame induced by $\hat{x}$:

(a) if $\kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2 \geq \underline{y}$, the incumbent changes the status quo if and only if $q_I > q_{sq} + \kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2$, and is reelected regardless of their decision

(b) if $\underline{y} \geq \kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2 - r$, the incumbent changes the status quo if and only if $q_I > q_{sq} + \kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2 - r$, and the voter reelects the incumbent with probability one if they change the status quo

(c) if $\underline{y} \in (\kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2 - r, \kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2 - r)$, the incumbent changes the status quo if and only if $q_I > q_{sq} + \kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2 - (1 - \rho^*)r$, and the voter reelects the incumbent if they change the status quo with probability one and if it retains with probability $\rho^* \in (0, 1)$.

Consider the incumbent's initial proposal decision, focusing on the case where $\underline{y} < \kappa - (x_I - x_{sq})^2$, and hence the incumbent is not reelected if they propose $\hat{x} = x_I$ and retain the status quo. If the incumbent chooses $\hat{x} \neq x_I$, their optimal choice is $\hat{x}$ such that the voter is indifferent between the incumbent and the challenger when the incumbent retains the status quo. Hence, $\hat{x}^*$ solves

$$q_{sq} + \underline{y} = q_{sq} + \kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2,$$
$$\Leftrightarrow \hat{x}^* = x_I \pm \sqrt{\underline{y} - \kappa + (x_I - x_{sq})^2}.$$

To show existence of an equilibrium where $\hat{x} \neq x_I$, consider the following example: $f(q_I)$ and $g(q_I)$ are exponential distributions with rate parameters 1 and 2, respectively; $p = 0.5$; and $\eta = p - \frac{1}{1 + \frac{1 - e^{-2}}{1 - e^{-1}}} \approx 0.078$. If the incumbent changes the status quo if and only if $q_I > 1$,

$$\Pr(\tau_I = \overline{\theta} | \pi_1 = \pi_{sq}) = p + \eta.$$

Therefore, if $q_{sq} = 1$, $\underline{y} = 0$. Finally, suppose that, $\kappa = 0.16$, and $r = 0.5$. Hence, as $x_I \to 0.6$,

$$(x_I - x_{sq})^2 - \kappa + r \to 0.5 > \underline{y}$$
$$(x_I - x_{sq})^2 - \kappa = 0 \to \underline{y},$$

and the incumbent's expected utility from choosing $\hat{x} = \hat{x}^*$ is

$$\left(\frac{1}{2}\left(1 - e^{-1}\right) + \frac{1}{2}\left(1 - e^{-2}\right)(1 - 0.16 + 0.5)\right.$$
$$\left. + \int_1^{\infty} (q_I - 0.16 + 0.5)\left(\frac{1}{2}e^{-q_I} + \frac{1}{2}2e^{-2q_I}\right) dq_I \approx 1.5577,\right.$$

and their expected utility from proposing $\hat{x} = x_I$ is

$$\left(\frac{1}{2}\left(1 - e^{-1}\right) + \frac{1}{2}\left(1 - e^{-2}\right)(1 - 0.16)\right.$$
$$\left. + \int_1^{\infty} (q_I - 0.16 + 0.5)\left(\frac{1}{2}e^{-q_I} + \frac{1}{2}2e^{-2q_I}\right) dq_I \approx 1.1835.\right.$$

For $x_I$ sufficiently close to 0.6, $\kappa - (x_I - x_{sq})^2 > \underline{y}$. Moreover, because the incumbent's expected utility is continuous in $x_I$, for $x_I$ sufficiently close to 0.6, the incumbent's expected utility from choosing $\hat{x} = \hat{x}^*$ is greater than their expected utility from choosing $\hat{x} = x_I$. This demonstrates the existence of equilibria where $\hat{x} = \hat{x}^*$ when $\eta < 0$.

Now consider the case where $\eta > 0$. By the same arguments used in Proposition 13, the following equilibria exist in the subgame induced by $\hat{x}$:

(a) if $\overline{y} \leq \kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2$, the incumbent changes the status quo if and only if $q_I > q_{sq} + \kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2 - r$, and is reelected with probability one if they change the status quo

(b) if $\overline{y} \geq \kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2$, the incumbent changes the status quo if and only if $q_I > q_{sq} + \kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2$, and the voter reelects the incumbent with probability one if they changes the status quo

(c) if $\overline{y} \in (\kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2 - r, \kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2 - r)$, the incumbent changes the status quo if and only if $q_I > q_{sq} + \kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2 - (1 - \rho^*)r$, and the voter reelects the incumbent with probability $\rho^* \in (0, 1)$ if they change the status quo.

Now consider the incumbent's proposal decision. In particular, focus on the case where $\kappa - (x_I - x_{sq})^2 - r < \overline{y}$, as this is the case where the incumbent is not reelected with probability one if they propose $\hat{x} = x_I$ and change the status quo.

If the incumbent proposes a policy that differs from their ideal point, they will choose the policy such that when the voter observes revision, she is at indifferent between the policymakers. That is, they will choose $\hat{x}$ such that

$$q_{sq} + \overline{y} = q_{sq} + \kappa - (x_I - x_{sq})^2 + (x_I - \hat{x})^2 - r$$
$$\hat{x} = x_I \pm \sqrt{r + (x_I - x_{sq})^2 + \overline{y} - \kappa}.$$

Suppose $\overline{y} \in (\kappa - (x_I - x_{sq})^2 - r, \kappa - (x_I - x_{sq})^2)$. The incumbent's expected utility from proposing $\hat{x} = \hat{x}^*$ is

$$(q_{sq} - (x_I - x_{sq})^2)(pF(q_{sq} + \overline{y}) + (1-p)G(q_{sq} + \overline{y})) \\ + \int_{q_{sq}+\overline{y}}^{\infty} (q_I - (x_I - x_{sq})^2 - \overline{y})h(q_I)dq_I$$

and their expected utility from proposing $\hat{x} = x_I$, in which case there is a mixed strategy equilibrium, is

$$(q_{sq} - (x_I - x_{sq})^2)(pF(q_{sq} + \overline{y}) + (1-p)G(q_{sq} + \overline{y})) \\ + \int_{q_{sq}+\overline{y}}^{\infty} (q_I - (x_I - x_{sq})^2 - \overline{y}h(q_I)dq_I$$

Hence, an equilibrium exists where the incumbent proposes $\hat{x} = \hat{x}^*$. ■

## 10.9 Proof of Lemma 2

*Proof.* Suppose that in equilibrium, the probability that the minority wins reelection when they block the proposed change is $\omega$ and the probability they win reelection if they accept the proposal is $\lambda$. Then, the minority accepts the change if and only if

$$q_I > q_{sq} + \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + (\omega - \lambda)r.$$

Therefore, the minority agrees to a change if and only if $q_I$ is sufficiently large. ■

## 10.10 Proof of Lemma 3

*Proof.* Suppose not and that $q_{sq} + z^* > 0$. Then, because the proposition is not true, there are intervals $Q \subset [0, q_{sq})$ and $Q' \subset [0, q_{sq})$ with $Q \cup Q' = [0, q_{sq})$ and $Q \cap Q' =$ such that if $q_I \in Q$ the incumbent retains the status quo and if $q_I \in Q'$ the incumbent proposes a policy change. Moreover, the probability the incumbent is reelected if $q_I \in Q'$ is different from the probability they are reelected if $q_I \in Q'$. Denote these probability $\upsilon_Q$ and $\upsilon_{Q'}$. Since $q_I$ is not revealed to the voter in either cases, neither $\upsilon_Q$ nor $\upsilon_{Q'}$ depend on $q_I$.

When $q_I \in Q$, the incumbent's expected utility is

$$q_{sq} - (x_I - x_{sq})^2 + \upsilon_Q r,$$

and when $q_I \in Q'$, the incumbent's expected utility is

$$q_{sq} - (x_I - x_{sq})^2 + \upsilon_{Q'} r.$$

Hence, the incumbent has a profitable deviation from action with the lower probability of reelection to the action with the higher probability.

Suppose that $q_{sq} + z^* \leq 0$. Then the incumbent will accept any proposal by the incumbent. ■

## 10.11 Proofs of Proposition 9

I provide a full characterization of equilibrium behavior in Propositions 19, 20, and 21. Proposition 9 follows immediately.

**Proposition 19.** *If $\eta > 0$,*

*(a) and (3) is satisfied, there is a unique equilibrium where the majority proposes a policy for any $q_I$, the minority accepts the proposal if and only if (18) is satisfied, and the majority is never reelected.*

*Otherwise, if $\eta > 0$ and (3) is not satisfied:*

*(b) if $\kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + r \geq \underline{y}$, there is an equilibrium where the majority proposes a policy for any $q_I$, the minority accepts the proposal if and only if (19) is satisfied, and the majority is reelected if the proposal is accepted.*

*(c) if $\kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 \leq \underline{y}$, there is an equilibrium where the majority proposes a policy for any $q_I$, the minority accepts the proposal if and only if (18) is satisfied, and the majority is never reelected.*

*(d) if $\overline{y} \in (\kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2, \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + r)$, there is an equilibrium where the majority proposes a policy for any $q_I$, the minority accepts the proposal if and only if (21) is satisfied, and the majority is with probability $\rho^* \in (0, 1)$ if the proposal is accepted.*

*Proof.* Fix $\eta > 0$. Since the minority uses a threshold, the majority is never reelected if the minority blocks a proposed policy. Additionally, fix a strategy for the majority of proposing a policy for any $q_I$. Any equilibrium with this strategy will satisfy the equilibrium selection criterion of focus on equilibria where the majority proposes the largest interval of policies as this is the largest possible interval.

Then suppose (3) is satisfied. Then the majority cannot win reelection and will accept a proposed change if

$$q_I > \max\{q_{sq} + \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2, 0\} \tag{18}$$

For the remainder of the proof suppose (3) is not satisfied. Hence, $\overline{y}$ exists. Furthermore, suppose $z^* > \underline{y}$, in which case the majority is reelected if the minority accepts the proposed policy but not otherwise. Then, the minority accepts a proposed policy if

$$q_I > q_{sq} + \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + r. \tag{19}$$

For this to be an equilibrium, it must be that $\kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + r > \underline{y}$.

Next, suppose $z^* < \underline{y}$, in which case the minority is reelected whether or not they accept the proposed policy. Then, the minority accepts a proposed policy if and only if

$$q_I > q_{sq} + \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2. \tag{20}$$

For this to be an equilibrium, it must be that $\kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 < \underline{y}$. Note, this allows for the possibility that $q_{sq} + \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 < 0$, in which case the minority accepts any proposed policy. Hence, the minority's threshold is to accept a proposal if and only if (18) is satisfied.

Finally, suppose $z^* = \overline{y}$, in which case the voter is indifferent between the majority and minority when the minority accepts a proposed policy. Hence, she reelects the majority with probability $\rho$. Given $\rho$, the minority accepts a proposed policy if

$$q_I > q_{sq} + \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + \rho^* r. \tag{21}$$

Then, such an equilibrium exists if

$$\frac{\overline{y} - \kappa + (x_C - x_{sq})^2 - (x_C - x_I)^2}{r} = \rho^*,$$

and if $\overline{y} \in [\kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2, \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + r]$.

Note, when $\overline{y} \in (\kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2, \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + r])$, multiple equilibria exist. ■

**Proposition 20.** *If $\eta < 0$,*

*(a) and (3) is satisfied, there is an equilibrium where the majority proposes a policy for any $q_I$, the minority accepts the proposal if and only if 18 is satisfied, and the majority is always reelected.*

*Otherwise, if $\eta < 0$ and (3) is not satisfied,*

*(b) if $\kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 \geq \underline{y}$, there is an equilibrium where the majority proposes a policy for any $q_I$, the minority accepts the proposal if and only if (21) is satisfied, and the majority is always reelected.*

*(c) if $\kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 < \underline{y}$, there is an equilibrium where the majority proposes a policy for any $q_I$, the minority accepts the proposal if and only if (22) is satisfied, and the majority is reelected with probability one if the minority accepts the policy and with probability $\rho^* \in [0, 1)$ if the minority blocks the policy.*

*Proof.* Fix $\eta < 0$. Since the minority uses a threshold, the majority is always reelected if the minority accepts the proposed policy. Additionally, fix a strategy for the majority of proposing a policy for any $q_I$. Any equilibrium with this strategy will satisfy the equilibrium selection criterion of focusing on equilibria where the majority proposes the largest interval of policies as this is the largest possible interval.

Then suppose (3) is satisfied. Then the majority always wins reelection and will accept a proposed change if and only if (18) is satisfied.

For the remainder of the proof suppose (3) is not satisfied, and hence, $\underline{y}$ exists.

First, suppose $\underline{y} < z^*$, in which case the majority is reelected whether they retain or change the status quo. Then the minority accepts a proposed policy if and only if (18) is satisfied. For this equilibrium to exist, it must be that $\kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 > \underline{y}$.

Now, suppose $\underline{y} > z^*$, in which case the majority is reelected if they change but not if they retain. Then the minority accepts a proposed policy if and only if

$$q_I > q_{sq} + \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + r.$$

For this equilibrium to exist, it must be that $\kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + r < \underline{y}$.

Finally, suppose $\underline{y} = z^*$. Then the voter is indifferent when the minority blocks a proposed change, and reelects the majority with probability $\rho$. Hence, the minority accepts a proposed policy if and only if

$$q_I > q_{sq} + \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + (1 - \rho^*)r.$$

For this to exist, it must be that

$$\rho^* = \frac{\kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + r - \underline{y}}{r}$$

and if $\overline{y} \in [\kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2, \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + r]$.

Summarizing, if $\underline{y} \geq \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2$, the minority accepts the proposed policy if and only if

$$q_I > q_{sq} + \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + (1 - \rho^*)r, \tag{22}$$

for $\rho \in [0, 1)$. ■

**Proposition 21.** *If $\eta = 0$*

*Proof.* Fix $\eta = 0$. Fix a strategy for the majority of proposing a policy for any $q_I$.

Additionally, suppose there is an equilibrium where the minority accepts any proposal. Then on the path the voter is indifferent between the minority and majority and reelects the majority with probability $\rho^*$. For such an equilibrium to exist, it must be that

$$0 > q_{sq} + \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + (1 - \rho^*)r.$$

Since $\rho^* \in [0, 1]$, if $0 > q_{sq} + \kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2$, a continuum of equilibria exist.

For the remainder of the proof, suppose the minority blocks some proposed policies on the equilibrium path. Hence, the majority is reelected when the minority accepts a proposal and is not reelected when the minority blocks a proposal. Hence, the minority will accept a proposal if and only if

$$q_I > q_{sq}\kappa - (x_C - x_{sq})^2 + (x_C - x_I)^2 + r$$

■

## 10.12 Proof of Proposition 11

Needs to be added

# 11 Appendix: Robustness

Needs to be added.