Signaling Ability Through Policy Change

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August 31, 2024

Abstract

I consider a model in which a voter is uncertain about an incumbent's ability to develop high-quality policies. The incumbent develops a reform of an inherited status quo, observes the reform's quality, and decides whether to implement it. The voter observes this decision but not the quality of the reform and decides whether to reelect the incumbent. I show that the incumbent engages in ability signaling: she implements the reform even if its quality is lower than what she would implement under complete information about her ability. I then show that requiring the incumbent to secure the agreement of a second policymaker with whom she is electorally competing creates the opposite distortion, ability blocking: the second policymaker blocks reforms that he would allow under complete information. Hence, ability signaling produces policy churn under unitary policymaking but leads to excessive gridlock under a super-majoritarian institution. I extend the model to study the timing of reform and show that, in some cases, the incumbent prefers to develop reforms later in her term to minimize the information that voters receive about the reform's quality before the election. Finally, I allow the incumbent to choose the ideological bent of the reform. In that case, the incumbent sometimes moderates. This moderation, however, arises not for a Downsian logic but because the incumbent can improve voters' inference about the reform's quality by choosing a reform further away from his own ideal point.

1   Introduction

Voters want to choose policymakers who share their policy goals, work hard, understand which policies should be chosen from a menu of options, and can develop high-quality policies. However, these traits are difficult for voters to observe. Policymakers recognize this and often take action to demonstrate their type. This phenomenon has been discussed with respect to politicians' ideology (Fearon, 1999), effort (Austen-Smith and Banks, 1989; Banks and Sundaram, 1993), and understanding of which policies should be chosen (Canes-Wrone et al., 2001; Ashworth and Shotts, 2010; Bils, 2023; Kartik et al., 2015); I study how a policymaker's desire to signal her ability to develop high-quality policies affects policymaking.

Suppose an incumbent inherits a status quo policy and decides whether to retain or replace it after developing her highest-quality alternative policy. Assume the incumbent's ability to develop a high-quality policy today—characterized by attributes such as a low cost-benefit ratio or the policy's ability to achieve goals valued by everyone like increasing GDP—is positively correlated with her ability to develop a high-quality policy tomorrow. The voter observes whether the policymaker changes the status quo and reelects her if the expected quality of the policy the incumbent will develop tomorrow is sufficiently high. If the incumbent cares about policy quality and reelection, and if the voter knows the quality of the policy the incumbent will develop tomorrow, the incumbent replaces the status quo when the alternative policy's quality exceeds the quality of the status quo. However, if the voter does not know the quality of the policy the incumbent will develop tomorrow, and the voter believes the incumbent changes the status quo if and only if the alternative policy's quality exceeds the quality of the status quo, changing the status quo may be electorally advantageous for the incumbent as it signals the ability to develop high-quality policies in the future.

In this paper, I explore this simple logic using a formal model. In the model, policies have ideology and quality. An incumbent policymaker, driven by policy goals and the prospect of reelection, decides whether to maintain an inherited policy of publicly known ideology and quality or to change it to a policy with her preferred ideology. Before deciding whether to change the policy, the incumbent privately learns the quality of her alternative policy, which is drawn from a distribution that depends on her ability. Notably, a higher-quality policy is more likely to be developed by a high-ability policymaker. A voter observes the incumbent's decision but not the quality of the alternative policy, and reelects the incumbent if the probability the incumbent has high ability is sufficiently high. Otherwise, he elects the challenger.

I begin by analyzing the benchmark case where the voter knows the incumbent's abil-

ity. Consequently, the incumbent's decision whether or not to change the status quo does not affect the election's outcome. Hence, the incumbent changes the status quo when her ideological benefit is larger than the net change in quality.

I then solve the model where the incumbent's type is unknown. Sometimes, the incumbent's equilibrium strategy coincides with her strategy in the benchmark. In the remaining cases, the incumbent changes the status quo for lower realizations of quality than she does in the benchmark. I refer to this additional policy change relative to the benchmark as *ability signaling* and show that it leads to decreased expected policy quality relative to the benchmark. Whether ability signaling arises in equilibrium is determined by polarization, which affects how discerning the incumbent is about the quality of the alternative policy required for her to change the status quo and which affects what the voter learns from the incumbent's decision. In particular, ability signaling arises when the voter has an ex-ante preference for the incumbent and there is low polarization or if the voter has an ex-ante preference for the challenger and there is moderately high polarization.

The extent of ability signaling is also related to the degree of ex-ante political competition between the incumbent and challenger. When the incumbent either leads the challenger or trails the challenger by a significant degree, she has no incentive to engage in ability signaling because it will not affect the election's outcome. But, as political competition increases, the incumbent's decision becomes electorally relevant. This is when the incumbent engages in ability signaling. Hence, it is when political competition is strongest that we see the most distorted policymaking.

In the baseline model, I assume the voter does not learn the alternative policy's quality before the election. In reality, whether he does may depend on when the change occurs relative to the election. To account for this, I extend the model to assume there is an exogenous probability that the alternative policy's quality is revealed if the incumbent changes the status quo. As this probability increases, the incumbent has less incentive to change the status quo if she knows she will not be reelected if the quality of her alternative policy is revealed. Hence, as the probability of quality revelation increases, the extent of ability signaling decreases. Yet, even if the quality of her alternative policy is certain to be revealed, the incumbent still engages in ability signaling for some parameters.

In light of this, one might conjecture that if given the choice of when to develop an alternative to the status quo, the incumbent will wait until the end of her term in case her alternative turns out to be low quality. I show that sometimes, the revelation of information about the quality of her alternative policy only hurts the incumbent. In this case, if given the choice of when to develop her alternative policy, the incumbent waits until the end of her term. But, in other cases, quality revelation helps the incumbent, such as when

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policy change without quality revelation does not lead to her reelection. In these cases, the incumbent develops her alternative immediately to maximize the probability the voter learns her alternative is high-quality. Hence, in some situations, the incumbent's behavior is observationally similar to the behavior predicted by the political business cycles literature: an incumbent pursuing policies with short-term benefits at the end of her term to boost electoral prospects (Nordhaus, 1975; Drazen, 2000). In other cases, her behavior appears more like the "honeymoon hypothesis," where politicians use their early-term political capital to enact new policies (McCarty, 1997; Beckmann and Godfrey, 2007).

Policymakers are not required to develop policies that match their ideal point; they may choose more moderate or extreme policies. I study the model under the assumption that the incumbent publicly chooses the ideology of her alternative policy before learning its quality and is not required to choose her ideal point. I then show that for some parameters, the incumbent develops a policy that differs from her ideal point. In doing so, the incumbent makes policy change less attractive as the ideological benefit is smaller. This means the incumbent must have a higher-quality alternative to warrant changing the status quo. As a result, in equilibrium, changing the status quo is a stronger signal of high ability, and retaining the status quo is a weaker signal of low ability. Due to this, the incumbent can sometimes win reelection with a higher probability than if she proposed a policy with her ideal ideology. Notably, unlike other papers where policy has ideological and quality dimensions, the incumbent does not propose a policy that differs from her ideal point for Downsian reasons but to affect the information conveyed by her decision whether to change the status quo (Hirsch and Shotts, 2012, 2018; Hitt et al., 2017).

Since at least the early days of the United States, some have worried that elections produce policy churn (Madison, 1788a; de Tocqueville, 2003). One argument for this depends on policymakers' ideology. Since elections alter who serves as a policymaker, and since different policymakers have different opinions about good policy, variation in who serves leads to variation in policy.[1] Analysis of the baseline model shows this fear is warranted. Even in the absence of uncertainty about the incumbent's ability, the incumbent's ideological opposition to the status quo incentivizes additional policy change beyond what would be done just to improve policy quality. A key insight from the model is that there is an additional reason to fear elections might lead to policy churn: the desire of a policymaker to signal her ability to develop high-quality policies.

One solution to policy churn is to require multiple actors to agree to change the status

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[1]In Federalist 62, James Madison writes, "Every new election in the states, is found to change one half of the representatives. From this change of men must proceed a change of opinions; and from a change of opinions, a change of measures." (Madison, 1788a)

quo, and many policymaking institutions have this requirement. I study an extension of the baseline model where the incumbent, or the majority, chooses whether to propose an alternative policy, which is implemented if and only if the challenger, or the minority, agrees to the proposal. Before deciding, the minority observes the quality of the majority's proposed alternative.

Relative to the baseline, when the minority must agree to change the status quo, the probability of policy change is weakly lower, and the expected quality of policy conditional on policy change is weakly higher. This difference arises for two reasons. The first is ideological. The minority may be more amenable to the status quo than the majority, in which case the minority's presence prevents the majority from making some policy changes that the majority would pursue if she could change the status quo unilaterally. Perhaps more interestingly, the second reason is that sometimes the minority blocks proposed changes because doing so is electorally advantageous. In equilibrium, successful policy change weakly increases the probability the majority wins reelection relative to the case where the status quo is maintained. In these cases, the minority blocks proposed changes to improve his probability of winning reelection. In fact, even if the majority and minority have the same ideal point, the minority blocks policy changes he would allow if there was complete information about the majority's ability. This result captures the strategic, electorally motivated opposition we see in roll-call voting in Congress, even on non-ideological issues (Lee, 2009).

Analysis of this extension also reveals that the need to secure the minority's agreement to change the status quo is sometimes electorally beneficial for the majority in that she can win reelection in cases where she would not be able to if she could unilaterally change the status quo. Because the minority blocks some policy changes that the majority would make if she could act unilaterally, securing the minority's agreement is a stronger signal of high ability, and failing to secure the minority's agreement is a weaker signal of low ability.

Summarizing, my model shows that when there is uncertainty about a policymaker's ability to develop high-quality policies, and she can change the status quo unilaterally, she engages in ability signaling. This distortion results in policy churn as the incumbent changes the status quo more than she would without uncertainty about her type. Moreover, this distortion leads to lower expected policy quality. Under an institution that requires agreement between two policymakers to change the status quo, the distortion of ability signaling is ameliorated. However, it is replaced by a different distortion: the second policymaker blocks policy change that would be allowed under complete information. Hence, when designing policymaking institutions in a world where there is uncertainty about a policymaker's ability to develop high-quality policies, there is a choice between policy churn and policy stagnation.

1.1 Related Literature

This paper considers how uncertainty about a policymaker's ability to develop high-quality policies affects her 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 an alternative to the status quo. By doing this, the policymaker makes her alternative policy more attractive to a different player with ideological preferences different from the policymaker's and who must agree to change the status quo to the alternative policy. With one exception, Hitt et al. (2017), policymakers in the existing models have the same ability to develop high-quality policies. In contrast, in my model, some policymakers have more ability than others. Moreover, unlike Hitt et al. (2017), I study a setting with incomplete information about the policymaker's ability.

This paper is also closely related to the literature on electoral accountability when there is uncertainty about a policymaker's type. Previous work focuses on uncertainty about what a policymaker knows about the state of the world (Canes-Wrone et al., 2001; Ashworth and Shotts, 2010; Kartik et al., 2015; Bils, 2023) and about a policymaker's ideal point (Fearon, 1999) among other topics. In all 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 points. 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 policy change that decreases expected policy quality.

Within this literature, my paper is closest to Judd (2017), who studies a model where a policymaker unilaterally chooses whether or not to change the status quo. If the policymaker changes the status quo, she directly reveals her skill, which a voter cares about when choosing whether or not to reelect the policymaker. In my model, the incumbent cannot perfectly reveal her ability for two reasons. First, when the incumbent changes the status quo, the voter only observes the decision to change; he doesn't observe the incumbent's type. Second, policymakers with high ability can sometimes only develop low-quality policies, and policymakers without ability can sometimes develop high-quality policies. Hence, even if the voter observes the quality of the alternative policy, he will still be uncertain whether the incumbent has high 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. Since the voter does not learn the quality of the alternative policy before the election, ideology affects the information he learns from the incumbent's choice to retain or change the status quo. This alters the incumbent's incentive to change the status quo.

This paper is also related to the literature on when politicians act. Some studies focus on how policy considerations affect when politicians act (Ostrander, 2016; Binder and Maltzman, 2002; Thrower, 2018).[2] Others focus on the effect of position-taking considerations on when politicians act (Huang and Theriault, 2012). I study a distinct consideration: how uncertainty about a policymaker's ability affects when she acts. Gibbs (2024) studies a similar question, although using a model where the policymaker's ability is related to the quality of her information about the right policy rather than her ability to develop high-quality policies.

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 the strategic, electorally motivated opposition we see in roll-call voting documented by Lee (2009, 2016).

2 Model

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

There is a publicly observed status quo, $\pi_{sq} = (x_{sq}, q_{sq})$, which consists of ideology, $x_{sq} \in \mathbb{R}$, and quality, $q_{sq} \geq 0$. The incumbent has the option to maintain this status quo, $\pi = \pi_{sq}$, or replace it with an alternative policy, π_I, which has an exogenously determined ideology, $\hat{x} \geq 0$, and quality, $q_I \geq 0$. [3] While the incumbent and the voter know $\hat{x}$, only the incumbent knows q_I, which she privately learns before publicly deciding whether to change the status quo. Observing this decision, but without observing q_I, the voter chooses between reelecting the incumbent and replacing her with the challenger, $e \in \{I, C\}$.

The quality of the incumbent's alternative policy, q_I, is drawn from one of two distributions depending on her type. Let $f(q_I)$ be the prior distribution of q_I if the incumbent has high ability, and let $g(q_I)$ be the prior distribution of q_I if the incumbent has low ability. I assume $f(q_I) > 0$ and $g(q_I) > 0$ for $q_I \in [0, \infty)$ and $f(q_I)$ and $g(q_I)$ have the strict monotone

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[2]Also see the literature on political business cycles (Nordhaus, 1975; Drazen, 2000).

[3]In Section 6, I explore an extension where the incumbent chooses $\hat{x}$.

likelihood ratio property (MLRP) such that $\frac{f(q_I)}{g(q_I)}$ is strictly increasing in q_I (Milgrom, 1981).[4]

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 the quality and ideology of policy and winning reelection. Her utility from a policy with ideology x and quality q is

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

where x_I is the incumbent's ideal point and r represents office rents. I begin by assuming $\hat{x} = x_I$, that is, the ideology of the incumbent's alternative policy matches her ideal point. But, in Section 6, I allow the incumbent to choose a policy with an ideology that differs from her ideal point.

The voter cares about the quality and ideology of policy and the policymakers' ability. His utility from a policy with ideology x and quality q is

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

where the voter's ideal point is zero, $\zeta \in \mathbb{R}_+$ are the adaptation costs the voter pays if the status quo is changed, and $\eta \in \mathbb{R}$ represents the voter's preference for or against the challenger for reasons other than ability and captures a notion of ex-ante electoral competition. 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 his voting decision does not affect his utility from policy.[5] Hence, the voter prefers the incumbent if his posterior belief about the incumbent's ability is higher than $p + \eta$, prefers the challenger if his posterior belief is lower than $p + \eta$, and is indifferent otherwise.

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[4]Assuming $f(q_I)$ and $g(q_I)$ have the strict MLRP ensures there is a unique threshold in the incumbent's strategy such that the voter is indifferent between the incumbent and challenger. Without this assumption, the substantive results would be the same but there might be more equilibria. See Section A.2 of the Appendix for more information.

[5]In Section 8.2, I study a version of the model where the election's outcome affects policy.

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I make two assumptions about the parameters of the model. The first is about the location of the ideology of the status quo relative to the incumbent and voter's ideal points.

Assumption 1. $|x_{sq}| \leq x_I$.

This assumption implies that the incumbent's ideological benefit from policy change is weakly larger than the voter's ideological benefit from policy change.

The second assumption is about the voter's preference for or against the challenger for reasons other than ability.

Assumption 2. $\eta \in (\underline{\eta}, \overline{\eta})$, *where* $\underline{\eta} < 0 < \overline{\eta}$.

This assumption means that the incumbent does not ex-ante lead or trail by a sufficient margin that the election's outcome is predetermined. $\underline{\eta}$ and $\overline{\eta}$ depend on p, $f(q_I)$, and $g(q_I)$ and are defined in the Section A.2 of the Appendix.

Equilibrium

1. The incumbent's strategy is a function $\sigma_I(\cdot) : \mathbb{R}_+ \to \Delta\{\pi, \pi_I\}$;

2. The voter's strategy is a function $\sigma_V(\cdot) : \{\pi, \pi_I\} \to \Delta\{I, C\}$.

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 her or his 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.

4. There is no other equilibrium with lower probability of policy change.

The first two conditions are the conditions for a perfect Bayesian equilibrium, and the third is the D1-criterion from Cho and Kreps (1987), which restricts the belief the voter holds when the incumbent chooses an action that is off the equilibrium path. The fourth condition is an equilibrium selection criterion I adopt in light of the existence of multiple equilibria. For much of the parameter space, a unique perfect Bayesian equilibrium satisfies the first three conditions, but elsewhere, multiple perfect Bayesian equilibria surviving D1

exist. Adopting the fourth condition ensures uniqueness, except for in some knife-edge cases. 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. Notably, the comparative statics results derived when I focus on the equilibrium with minimum policy change are the same those if I focus on the equilibrium with maximum policy change.

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 ideological 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, policy quality is similar to a party or a politician's valence (Stokes, 1963). To illustrate these dimensions, consider the example of the Paycheck Protection Program (PPP), establi he d through the CARES Act during the COVID-19 crisis, which provided low-interest loans to business owners to cover payroll. 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 partly 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 to fraud, this policy has lower quality.

Learning about Quality I assume the incumbent knows the quality of her alternative 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 its implementation 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 if the incumbent changes the status quo, the voter does not observe the quality of the

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[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, they had little incentive to scrutinize applications closely. See Brooks (2023) for more information.

alternative policy before he votes. In Section 5, I relax this assumption by allowing the voter to learn the quality of the alternative policy with some probability if the incumbent changes the status quo, either through experience or learning from some other policy expert.

Ability to Craft High-Quality Policy In the model, the policymakers differ in their ability to develop high-quality policies. Policymakers differ in this regard 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 her ability to utilize lobbyists and interest groups to help craft the policy.

This ability is related to issue ownership, where particular policymakers or parties are associated with greater competence in an issue area (Petrocik, 1996). One reason a policymaker might own an issue is that she is perceived as able to develop high-quality policies in that area. Existing work typically begins with the assumption that voters know which policymakers own which issues (Krasa and Polborn, 2010; Ascencio and Gibilisco, 2015; Hummel, 2013). In contrast, in this model, the policymaker can influence the voter's perception of whether she has high ability. In the model, the incumbent and the challenger both have the same prior probability of having high ability. Importantly, by varying η, the incumbent may begin the game leading or trailing the follower. Hence, one could allow the voter to have asymmetric priors about the incumbent and challenger, and nothing would change. That is, the voter could believe the incumbent or challenger has some degree of issue ownership over the policy area in question.

Timing In the model, the policymaker learns the quality of her alternative policy and then decides whether to change or retain the status quo. This feature of the model represents how, after drafting a piece of legislation, a policymaker has the choice of whether to proceed with implementing it. For example, after designing an executive order with her staff, a mayor might choose not to issue it. Or, after some of their members draft a piece of legislation, a party's leadership might decide not to schedule a vote. This is what happened to the Graham-Cassidy amendment in 2017. Republican Senators Lindsey Graham and Bill Cassidy developed and introduced an amendment that would overhaul or repeal significant pieces of the Affordable Care Act, replacing them with block grants to states (Frostenson, 2017). Although the amendment had support among most Senate Republicans, key votes like Susan Collins and John McCain stated they opposed the bill. In a statement explaining her opposition, Collins wrote:

> "Sweeping reforms to our health care system and to Medicaid can't be done well
> in a compressed time frame, especially when the actual bill is a moving target...

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The CBO's analysis on the earlier version of the bill, incomplete though it is due to time constraints, confirms that this bill will have a substantially negative impact on the number of people covered by insurance." (Collins, 2017)

In light of this opposition, Republican leadership in the Senate decided not to put the legislation up for a vote.[7]

Adaptation Costs The cost the voter pays if the status quo is changed represents the cost of adapting to or complying with a new policy. For example, after the passage of the Affordable Care Act, voters incurred a cost to learn about the policy (Am I eligible? What are the benefits of enrollment?) and a cost to comply with the policy (time spent navigating the marketplace and submitting an application). Businesses also faced costs to comply with the ACA as many no longer had the choice of whether to offer group health plan coverage to their employees. Even those businesses that are not required still need to follow the rules dictating which businesses must provide insurance to their employees. Ultimately, however, the voter's adaptation cost is not necessary for any results. Its addition is simply helpful for exploring the effects of uncertainty on the incumbent's ability.

4 Analysis

4.1 Benchmark: No Uncertainty about the Incumbent's Type

I begin by considering the benchmark case where there is complete information about the incumbent's type. Denote this game by $\hat{\Gamma}$. When the voter knows whether the incumbent has high ability, his voting decision is unrelated to the incumbent's decision whether to change the status quo. Therefore, the incumbent changes the status quo if and only if the change increases her utility from policy, which is when:

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

As long as the incumbent has some degree of ideological opposition to the status quo, she sometimes changes it to a relatively lower-quality policy. Moreover, as the incumbent's ideological opposition to the status quo increases, so does the probability she changes the status quo. Since a likely source of the status quo is the incumbent's predecessor, I refer to $(x_I - x_{sq})^2$ as *polarization*. However, my results can also be interpreted with $(x_I - x_{sq})^2$ simply representing the incumbent's ideological opposition to the status quo.

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[7]At the time, Republicans controlled the House, Senate, and presidency, and hence, if the party had been unified, would have been able to unilaterally change the status quo.

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4.2 Full Model: Uncertainty about the Incumbent's Type

I now turn to the full model described in Section 2, denoted by Γ. When the voter chooses whether to reelect the incumbent, his 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 which case the incumbent changes the status quo if and only if condition (1) is satisfied, which is the same threshold she uses in $\hat{\Gamma}$.[8]

In the remaining potential equilibria, the incumbent's probability of reelection depends on whether she changes the status quo. One possibility is that in equilibrium, the incumbent's probability of reelection is strictly greater when she retains the status quo than when she changes it. Suppose such an equilibrium exists. In this equilibrium, the incumbent's utility from retaining the status quo does not depend on q_I. However, her utility from changing the status quo is increasing in q_I. Hence, she must use a threshold strategy where she changes 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 high ability while retaining the status quo signals the opposite.[9] As a result, there cannot be an equilibrium where the incumbent's probability of reelection is higher when she retains the status quo than when she changes it. This rules out the possibility that this potential equilibrium exists.

In the final potential equilibrium, the incumbent's probability of reelection is strictly greater when she changes the status quo than when she retains it. I refer to this as an *equilibrium with consequential policy change*. The same argument about the incumbent's threshold strategy applies hise. Hence, she uses a threshold strategy and changes the status quo when q_I is sufficiently large.

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 y^* as the incumbent's *quality threshold*. The higher the incumbent's quality threshold, the more discerning she is about how high quality her alternative policy needs to be to warrant policy change.

In an equilibrium with consequential policy change, the incumbent's desire for reelection is an additional incentive for policy change. This produces distortions relative to the benchmark without uncertainty about the incumbent's type.

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[8]This includes equilibria where the incumbent chooses one action on the equilibrium path, but the voter's action would be the same if the incumbent chose her action off the equilibrium path.

[9]This and additional properties of the voter's posterior belief when the incumbent uses a threshold strategy are derived in Section A.2 of the Appendix.

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

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

    (b) and the expected quality of policy is strictly lower.

Consider an incumbent in the benchmark model who is indifferent between changing the status quo and retaining it, given the quality of her alternative policy. If there is uncertainty about the incumbent's type and changing the status quo increases her probability of reelection, she has an extra incentive to change the status quo relative to the benchmark. This extra incentive leads to additional policy changes. I refer to this additional policy change as *ability signaling*.

Definition 1. *Let y_Γ^* be the incumbent's quality threshold in an equilibrium of Γ. If $q_{sq} - (x_I - x_{sq})^2 > 0$ and*

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

the incumbent engages in ability signaling. Moreover,

$$D(y_\Gamma^*) = \begin{cases} 0 & \text{if } q_{sq} - (x_I - x_{sq})^2 \leq 0 \\ -(x_I - x_{sq})^2 - \max\{y_\Gamma^*, 0\} & \text{if } q_{sq} - (x_I - x_{sq})^2 > 0 \end{cases}$$

is the extent of ability signaling.

When the incumbent engages in ability signaling, she sometimes changes the status quo to a lower quality policy than she would be willing to change to without uncertainty about her ability. Essentially, the incumbent trades office rents tomorrow for policy quality today, decreasing the overall expected policy quality.

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 does ability signaling arise?[10] In the following proposition, I provide precise conditions for the existence of an equilibrium with consequential policy change.

Proposition 2. *Fix π_{sq}. An equilibrium with consequential policy change exists if and only if*

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[10]In the Section A.2 of the Appendix, I provide a full characterization of all equilibria.
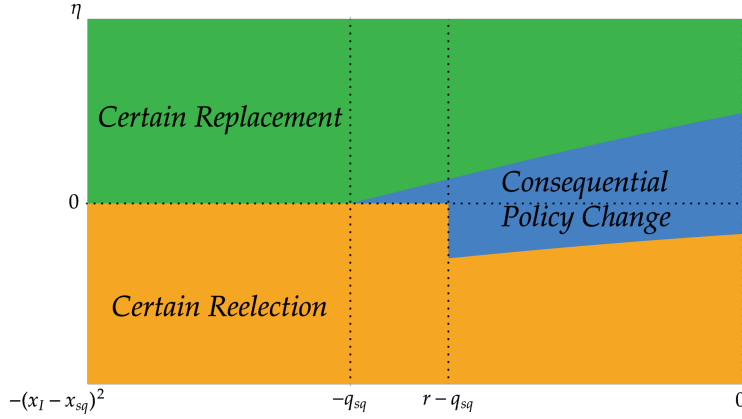
Figure 1: Regions of equilibria with minimum policy change. $q_{sq} = 1$, $r = \frac{1}{4}$, $f(q_I) = e^{-q_I}$, $g(q_I) = 2e^{-2q_I}$, and $p = \frac{1}{2}$.

(a) $\eta > 0$ and $-(x_I - x_{sq})^2 > \overline{y}(q_{sq}, \eta)$;

(b) $\eta = 0$ and $-(x_I - x_{sq})^2 > r - q_{sq}$;

(c) or $\eta < 0$ and $-(x_I - x_{sq})^2 \in (r - q_{sq}, \underline{y}(q_{sq}, \eta))$,

where $\overline{y}(q_{sq}, \eta)$ and $\underline{y}(q_{sq}, \eta)$ solve

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

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

Otherwise, the incumbent's strategy coincides with her strategy in $\hat{\Gamma}$.

As depicted in Figure 1 where the blue region is the region of the parameter space where equilibria with consequential policy change exist, whether an equilibrium with consequential policy change exists depends on three things: the degree of ex-ante electoral competition (y-axis), polarization (x-axis), and office rents (on the x-axis). When the incumbent trails, she is never reelected if she retains the status quo, but she may be reelected if she changes it. In this case, ability signaling arises in equilibrium when there is little polarization. Otherwise, the incumbent's strong ideological preference for policy change means changing the status quo is a weak signal of high ability.[11]

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[11]In an equilibrium with consequential policy change when the incumbent trails, the voter reelects the
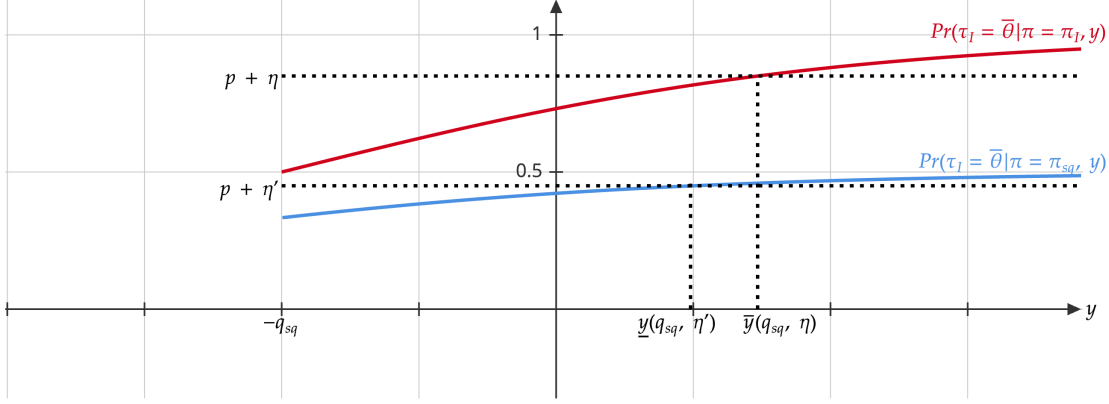
Figure 2: Voter's posterior, $\underline{y}(q_{sq}, \eta)$, and $\overline{y}(q_{sq}, \eta)$. $q_{sq} = 1$, $f(q_I) = e^{-q_I}$, $g(q_I) = 2e^{-2q_I}$, $p = \frac{1}{2}$, $\eta = \frac{7}{20}$, and $\eta' = -\frac{1}{20}$.

When the incumbent leads, she is always reelected if she changes the status quo but may not be reelected when she retains it. In particular, the existence of an equilibrium with consequential policy change requires there to a sufficiently high degree of polarization that when the incumbent retains the status quo she is not reelected. However, existence of an equilibrium with consequential policy also requires that there not be too much polarization as when there the incumbent always changes the status quo and is always reelected on the equilibrium path.

In the remaining regions of the parameter space, there are two other types of equilibria: *equilibria with certain reelection*, where the incumbent is reelected regardless of whether she changes the status quo, and *equilibria with certain replacement*, where the incumbent is replaced whether she changes the status quo.[12]

Proposition 3. *In any equilibrium, the extent of ability signaling is*

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

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

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incumbent with probability $\rho^* \in (0, 1]$ if she changes the status quo and elects the challenger otherwise. As long as $\overline{y}(q_{sq}, \eta) < -(x_I - x_{sq})^2$, there exists a $\rho^* \in (0, 1]$ such that $\overline{y}(q_{sq}, \eta) < -(x_I - x_{sq})^2 - \rho^* r$, which is the condition for existence of an equilibrium with consequential policy change. See Section A.2 of the Appendix for more information.

[12]If I do not restrict attention to the set of equilibria with minimum policy change, there is a band below the region with consequential policy change when the incumbent trails where two other types of equilibria exist. One is an equilibrium with consequential policy change where the incumbent is only reelected if she changes the status quo. The other is an equilibrium with consequential policy change where the incumbent is reelected if she changes the status quo and with probability $\rho^* \in [0, 1]$ if she retains the status quo. See Section A.2 of the Appendix for more information.

There is a connection between the degree of ex-ante electoral competition, which increases as η gets closer to zero, and the extent of ability signaling.[13] Fix a status quo and the incumbent's ideal point, and suppose the incumbent leads. Proposition 2 introduces $\underline{y}(q_{sq}, \eta)$, which is the cutoff such that if the incumbent uses this cutoff, the voter is indifferent between reelecting the incumbent and the challenger when the incumbent retains the status quo. This is depicted in 2. When η is very negative, the voter has a strong ex-ante preference for the incumbent, which means that even if there is moderate polarization, he will reelect the incumbent when she retains the status quo. In this case, there is no ability signaling. As the degree of ex-ante political competition increases—as η approaches zero—$\underline{y}(q_{sq}, \eta)$ also increases. Eventually, $\underline{y}(q_{sq}, \eta) > -(x_I - x_{sq})^2$, and the incumbent is no longer reelected when she retains the status quo. As a result, ability signaling arises, and the extent of ability signaling increases. Things are similar when $\eta = 0$. The incumbent either changes the status quo for all q_I or engages in ability signaling.

The logic is flipped when $\eta > 0$. When η is close to zero, the incumbent engages in ability signaling. But as η increases away from zero, so does $\underline{y}(q_{sq}, \eta)$. Eventually, $-(x_I - x_{sq})^2 \leq \overline{y}(q_{sq}, \eta)$, and the incumbent is never reelected. Hence, there is no ability signaling.

Additionally, there is a connection between the extent of ability signaling and office rents. When the incumbent trails and is never reelected, increasing the office rents does not affect the incumbent's incentive to change the status quo. But, if the incumbent is reelected when she changes the status quo, increasing office rents makes changing the status quo more attractive, and hence the extent of ability signaling increases. Eventually, the office rents increase to the point that changing the status quo no longer conveys a sufficiently strong signal of high ability for the incumbent to be reelected. To maintain equilibrium, the voter must reelect the incumbent with a lower probability when she changes the status quo. As r goes to infinity, this probability goes to zero. This decrease in the probability of reelection conditional on policy change as the office rents increase maintains the same probability of policy change in equilibrium, and hence, increasing office rents further has no effect on the extent of ability signaling.

When the incumbent leads, increasing the office rents does not affect the probability of policy change when the incumbent is always reelected. However, if she is only reelected when she changes the status quo, increasing the office rents makes policy change more attractive, leading to an increase in the extent of ability signaling.

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[13]I specify that this result holds for any equilibrium as a continuum of equilibria potentially exists when $\eta = 0$. In all these equilibria, the incumbent changes the status quo for all q_I.

4.3 Implications

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 natural to suppose that, in this case, $\eta = 0$. That is, the voter's decision depends entirely on the incumbent's probability of having high ability relative to the challenger's. Then Proposition 1 shows that in equilibrium, the incumbent always engages in ability signaling in equilibrium if polarization is not too extreme, which also may be reasonable to assume in this context. Ability signaling 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 move to their next job quickly —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 education policy churn.

Desire for Reelection Motivates Policymaking Propositions 1 and 2 show that in some regions of the parameter space, uncertainty about the incumbent's ability combined with her desire for reelection leads her to change policy more than she would without uncertainty. This result resonates with empirical work on state legislators that finds that reelection incentives motivate legislators to sponsor more bills, be more productive on committees, and attend more floor votes (Fouirnaies and Hall, 2022). Such effort benefits voters; productive committee work allows a policymaker to mark up legislation with her constituents' interests in mind, and attending roll call votes makes it easier for voters to infer their legislators' positions (Fouirnaies and Hall, 2022, p. 666). In contrast, this model demonstrates how additional policymaking efforts, motivated by reelection concerns, may harm voters.[14][15]

Proposition 4. *In any equilibrium of Γ, the voter's welfare is weakly lower in than in $\hat{\Gamma}$.*

In $\hat{\Gamma}$, the incumbent changes the status quo too much from the voter's perspective because

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[14]Following others in the literature, I define the voter's welfare only in terms of his utility from policy (Canes-Wrone et al., 2001; Fox and Van Weelden, 2012).

[15]This result holds even if the voter does not have adaptation cost if the incumbent changes the status quo. It is sufficient that the incumbent's ideal point is further from the ideology of the status than the voter's ideal point.

she has a larger ideological benefit of policy change. Ability signaling exacerbates this. Moreover, increasing the voter's adaptation cost weakly increases the difference between the voter's welfare in the two games.

Excessive Mutability of Laws Since the founding of the United States, some have feared that there's a connection between elections and policy churn. 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, 1788a)

Madison's concern was that political turnover would lead to excessive policy churn because different policymakers had different preferences.[16] There is a sense in which this concern is captured by my model.

Proposition 5. *Fix π_{sq}. In any equilibrium, the probability of policy change is weakly increasing in x_I.*

That said, my model identifies an additional reason why elections and policy churn might be connected: the desire of a policymaker to signal the ability to develop high-quality policies.

5 Quality Observability

As Mayor of New York City, Eric Adams has presided over developing a plan for a "Trash Revolution," which includes mandated trash bins, more vigorous enforcement of sanitary laws, and new garbage trucks (Lach, 2024; NYC, 2024). The rollout of this policy began in 2022 and will continue into spring 2025, which is a few months before the 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 the status quo is changed. However, as illustrated by the example of the Trash Revolution, depending on when a policy is enacted, voters may learn the quality of

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[16]Alexis de Tocqueville shared the same concern, writing, "The mutability of the laws is an evil inherent in democratic government, because it is natural to democracies to raise men to power in very rapid succession." (de Tocqueville, 2003)

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. *In any equilibrium, 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, she does to one of two types of policies. The first is a policy that leads to her reelection even if the quality of the policy is revealed. The second is a policy that leads to her reelection only if the quality is not revealed. When it is unlikely the voter learns the quality of the alternative policy before the election, the distinction between these two types of policies matters little. But when the probability the quality of the alternative policy is revealed before the election increases, an incumbent for whom the quality of policy she can enact is too low to win reelection if revealed has less incentive to change the status quo.

However, an incumbent who can 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 that quality is revealed. This is why the incumbent may still engage in 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 her ability by replacing the status quo with a policy that perfectly reveals the policymaker's ability. In equilibrium, when the status quo has 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 alternative policy will be revealed before the election.[17] 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. *In any equilibrium, the expected quality of policy is weakly increasing in s.*

One might wonder how the incumbent's ex-ante expected utility depends on the probability the voter learns the quality of her alternative if she changes the status quo.

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[17]This is similar to results in other models where there is uncertainty about a policymaker such as Canes-Wrone et al. (2001) and Gratton et al. (2015) who find that policymaking distortions are related to the "political horizon."

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

In some cases, information revelation only hurts the incumbent. For example, suppose that in equilibrium, the incumbent is reelected if she changes the status quo and the quality of the alternative policy is not revealed, but sometimes she is not reelected if the quality of her alternative is revealed. In this case, information revelation hurts the incumbent and her ex-ante expected utility is decreasing in s.

Yet, in other cases, information revelation helps the incumbent. Suppose that in equilibrium, the incumbent is not reelected if she changes the status quo and the alternative's quality is not revealed. In this case, the only way the incumbent is reelected is if she develops an especially high-quality alternative, changes the status quo, and the quality of the alternative is revealed. In this case, information revelation helps the incumbent, and her ex-ante expected utility is increasing in s.

Consider a game where the incumbent chooses when to develop her alternative policy during her term and, after learning the quality, immediately chooses whether to change the status quo. The longer she waits in her term, the lower s is. The implication of Proposition 7 is that in some cases, the incumbent will delay development until the end of her term to minimize the probability the voter learns her alternative's quality. But, in other cases, the incumbent will begin development immediately to maximize the probability the voter learns the alternative policy's quality.

In this sketch of a game, the incumbent does not have the ability to delay policy change after learning the quality. As a result, the incumbent cannot signal information about the quality of her alternative through her choice of when to act. Analysis of the game where the incumbent chooses when to develop policy and then when to change the status quo is beyond the scope of this paper, but the preliminary insight offered by Proposition 7 suggests interesting trade-offs.[18] An incumbent who learns the quality of her alternative is low will want to delay policy change until the end of her term, and an incumbent who learns the quality of her alternative is high will want to do the opposite. But, of course, the voter will recognize this, and this incentive to separate will affect the voter's posterior when the quality of the alternative is not revealed.

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[18]In a distinct game, 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.

6 Endogenous Choice of Ideology

The baseline model assumes the ideology of the incumbent's alternative policy is exogenously fixed at her ideal point. In a setting where the incumbent unilaterally changes the status quo, it may be reasonable to assume she will pursue her preferred policy since she does not require the agreement of any other actors. But, as Proposition 2 illustrates, whether policy change is electorally consequential depends on the degree of polarization. In light of this, does the incumbent have any incentive to propose a policy that differs from her ideal point? To answer this question, suppose the incumbent publicly chooses $\hat{x} \in \mathbb{R}$, 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 reelection if she changes the status quo. The reason the incumbent is not reelected if she retains is that retaining the status quo is a sufficiently strong signal of low ability. By proposing a policy that differs from her ideal point, the incumbent reduces her incentive to change the status quo because doing so will yield a lower ideological benefit from policy change.[19] That is, by proposing a policy that differs from her ideal point, the incumbent commits to a higher quality threshold. This makes retaining the status quo a relatively weaker signal of low 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.[20]

When the incumbent proposes a policy that differs from her ideal point, the particular policy she proposes is chosen to be sufficiently far from her ideal point as to make the voter indifferent between the incumbent and challenger. This means the incumbent is indifferent between two policies, one to the right of her ideal point and one to the left. Both choices will affect the voter's inference in the same way. However, there are many reasons why we might expect the incumbent to break her indifference between the two policies by choosing the policy that is more moderate than her ideal point. If there is a small amount of uncertainty about the incumbent's ideal point, she is incentivized to choose a policy close to the voter's

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[19]The model assumes the incumbent's utility from quality does not depend on the ideology of the policy. That is not necessary for this result. It is sufficient that fixing quality, the incumbent's utility from a policy is lower the farther the ideology of the policy is from her ideal point.

[20]When the incumbent trails, there are also parameters such that there are equilibria where the incumbent chooses a policy that differs from her 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.

ideal point as in Fearon (1999). Or if the incumbent cares about the longevity of her 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 the 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 from a Downsian logic—by moving the ideology of a policy closer to the other player's ideal point, the policymaker makes her 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 her decision to retain or change the status quo.

7 Super-Majoritarian Policymaking

The baseline model assumes the incumbent can unilaterally change the status quo, and I show that in such a setting, uncertainty about the incumbent's ability and her desire for reelection leads to distorted policymaking in the form of ability signaling, which leads to policy churn. As shown in Proposition 4, under reasonable assumptions, this policy churn decreases the voter's welfare relative to a setting where there is no uncertainty about the incumbent's ability.

One might conjecture that a way to alleviate this policy churn is to change institutional rules within which the incumbent is making policy. One possible rule change would be to require the incumbent to secure the agreement of another policymaker to change the status quo. This type of arrangement is a feature of many policymaking institutions. Moreover, it is common for policymakers to interact under the shadow of future 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. To study the effects of introducing a super majoritarian requirement on policymaking, I study an extended version of the baseline model, denoted Γ^{sm}, 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. The minority also cares about the quality and ideology of policy and winning reelection. Given a policy with ideology x and quality q, the minority's utility function is

$$u_C(x, q) = -(x_C - x)^2 + q + \mathbb{1}_{e=C} r,$$

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

I make an assumption about the location of the minority and majority's ideal points relative to the status quo.

Assumption 3. $(x_C - x_I)^2 - (x_C - x_{sq})^2 \geq -(x_I - x_{sq})^2.$

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

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

Suppose an equilibrium exists. In such an equilibrium, and for any proposed change, the minority's utility from blocking the proposed change is constant for all q_I. On the other hand, the minority's utility from agreeing to a proposed change is increasing in q_I. This implies that in any equilibrium, the minority uses a threshold strategy and accepts proposed changes that are sufficiently high quality. As a result, the voter updates about the majority's ability similarly to how he updates in the baseline model. When the minority agrees to the proposed change, the voter updates positively about the majority's ability, and when the minority blocks a proposed change, the voter updates negatively about the majority's ability.

Lemma 3. *In all equilibria,*

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

(b) the minority accepts all policies proposed by the majority,

(b) or the probability the majority is reelected when she does not propose a policy is the same the probability she is reelected if she proposes a policy and the minority blocks it.

Suppose that in equilibrium, for some q_I, the majority does not 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. But this means the majority has 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 does not propose others knowing they would be blocked if they were proposed. However, across these equilibria, the voter responds the same when the majority does not propose a policy and when she does 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.

One question to ask is how policymaking under a super-majoritarian institution compares to unilateral policymaking.

Proposition 9. *Fix an equilibrium of Γ. In any equilibrium in Γ^{sm},*

(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. The first is the ideological disagreement between the majority and the minority. Because the minority receives a weakly smaller ideological benefit from policy change, he is more discerning about the quality of alternative policy that must be developed to warrant changing the status quo. As a result, his presence prevents the majority from making some lower-quality policy changes that the majority would make without the minority's ability to block policy change. In this way, the minority acts as a salutary filter by blocking some low-quality policy changes.

While ideological disagreement between the minority and majority is sufficient to explain why there is less policy change, it is not necessary. To illustrate why this is the case, compare this Γ^{sm} to the game where the minority must agree to change the status quo and the majority's ability is known, denoted $\hat{\Gamma}^{sm}$.

Proposition 10. *In any equilibrium of Γ^{sm}, the probability of policy change is weakly lower than in $\hat{\Gamma}^{sm}$.*

Suppose there is no uncertainty about the majority's type, and the minority is essentially indifferent between accepting and blocking a proposed 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 a policy change proposed by the majority.

The key implication of Propositions 9 and 10 is that requiring the majority to gain the minority's support to change the status quo reduces policy churn because the majority is not able to engage in ability signaling. However, because the majority and minority are engaged in electoral competition, requiring the minority's agreement introduces an additional and distinct distortion: the minority blocks policy changes he would allow absent uncertainty about the majority's ability. I refer to this as "ability blocking."

This implication highlights a fundamental trade-off between making it easier and harder to make policy. In the words of James Madison writing in Federalist 73,

> "It may perhaps be said that the power of preventing bad laws includes that of preventing good ones; and may be used to the one purpose as well as to the other." (Madison, 1788b)

However this model offers, to my knowledge, a novel explanation for why a policymaker would block another policymaker's proposed change: to prevent the voter from updating about the proposer's ability to develop high-quality policy.

Another implication of Propositions 9 and 10 is that the minority's behavior is consistent with the strategic, electorally motivated opposition we observe in roll-call voting in Congress. Notably, even if the minority and majority have the same ideological preferences, the minority will sometimes block policies she would allow if there was no uncertainty about the majority's type. This is reminiscent of 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.

Additionally, the extent of ability blocking is connected to ex-ante electoral competition.

Definition 2. *Let $y^*_{\Gamma^{sm}}$ be the minority's quality threshold in an equilibrium of Γ^{sm}. If $y^*_{\Gamma^{sm}} > 0$ and*

$$y^*_{\Gamma^{sm}} > -(x_C - x_{sq})^2 + (x_C - x_I)^2,$$

the minority engages in ability blocking. Moreover,

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

is the extent of ability blocking.

Proposition 11. *In any equilibrium, the extent of ability blocking is increasing in ex-ante electoral competition (as η approaches zero).*

The intuition for this proposition parallels the intuition for (a) in Proposition 3. The minority's aversion to policy change for ideological reasons is constant, while his aversion to policy change for electoral reasons depends on whether or not policy change is electorally relevant.[21]

This result is consistent with theorizing about the connection between electoral competition and partisan conflict in Congress (Lee, 2016). 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 clearly 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," quoted in Lee (2016).

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 12. *For some parameters, in a unique equilibrium of Γ^{sm}, the probability the majority is reelected is higher than the probability the incumbent is reelected in the corresponding unique equilibrium of Γ.*

The minority's ideological disagreement with the incumbent, as well as his electoral considerations, means he blocks some policy changes the incumbent would enact in Γ. When this is the case, successful policy change is a relatively stronger signal of ability because the voter knows the quality of the alternative must be higher than if the policy was enacted unilaterally. The implication of this is that when the majority is behind in Γ^v, she sometimes wins reelection when she successfully changes the status quo in cases where she wouldn't in Γ. This is depicted in Figure 3, where the region of equilibria with consequential policy change includes new parameters relative to the baseline model.

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[21]This comparative static is the same if I focus on the equilibrium with maximum policy change.
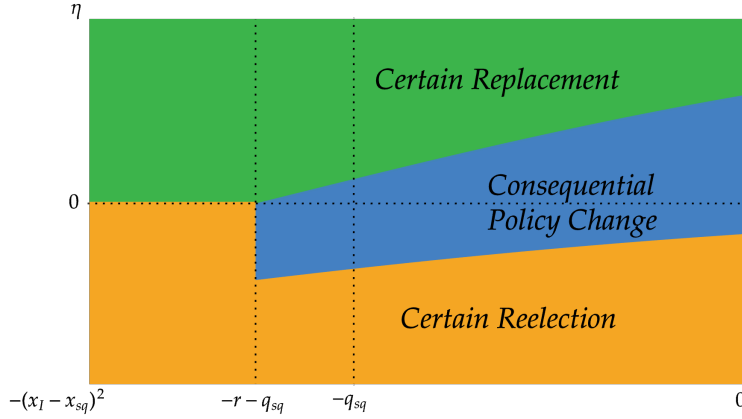
Figure 3: Regions of equilibria for $q_{sq} = 1$, $r = \frac{1}{4}$, $f(q_I) = e^{-q_I}, g(q_I) = 2e^{-2q_I}, p = \frac{1}{2}$, and $x_I = x_C$.

The story is similar when the majority is ahead. The minority's higher quality threshold means unsuccessful policy change is a weaker signal of low 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 blocked the majority's proposal.

8 Robustness

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

8.1 Incumbent Knows Her Type

If the incumbent knows her type, then conditional on observing q_I, her utility from retaining the status quo is constant in q_I and does not depend on her 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 her type. This means that in equilibrium, both types of incumbents use threshold strategy. Furthermore, they use the same threshold.

8.2 Election Outcome Affects Policy

Suppose the election outcome affects policy: if the incumbent is reelected, the policy she 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 a higher expected quality of policy conditional on policy change and a higher probability the incumbent has high 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 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 reelect the incumbent or replace them with a challenger without observing the quality of the incumbent's policy. In the second period, 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 her alternative policy. This is similar to the extension described in Section 8.2, 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 the voter does not observe the quality of the status quo when he votes.

Second, as discussed briefly in Section 5, one could allow the incumbent to choose when, if at all, to change the status quo after learning the quality of her alternative policy. In Section 5, I showed that if the incumbent chooses when to develop an alternative policy and then chooses whether to change the status quo, she sometimes delays development until the end of her term, and she sometimes starts development immediately. When the incumbent chooses when to develop a policy and then whether to change the status quo, the timing conveys no information about quality. But if the incumbent decides when, if at all, to change the status quo after learning the alternative policy's quality, things are more complicated. One might think that if the incumbent can only enact a low-quality policy, she waits until the end of her term to change the status quo to minimize the probability the quality is revealed.

However, waiting to change the status quo will convey that the quality of policy is low.