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# What is Opposition Good For?

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What is Opposition Good For?  
by  
Betul Demirkaya

A dissertation presented to  
The Graduate School  
of Washington University  
in partial fulfillment of the  
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Betul Demirkaya  
Washington University, May 2017

# ABSTRACT OF THE DISSERTATION

What is Opposition Good For?

by

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Professor Matthew Gabel, Chair

Democratically elected governments may sometimes give in to pressures from extreme constituents thereby failing to adopt policies congruent with the median voter's preferences. This situation is exacerbated by the inability or the reluctance of voters to acquire information about the consequences of policy alternatives. Opposition parties, in principle, could help remedy this problem using the prerogatives at their disposal such as participating in legislative debates and proposing bills, amendments or no confidence motions. In practice, however, they may have incentives to mislead the voters for policy or election purposes. Given the critical role of opposition parties to remedy problems of incongruence, it is essential to gain theoretical clarity and empirical knowledge as to when and how opposition parties use the tools available to them in legislatures. My dissertation contributes to the recently growing literature that studies the behavior of opposition parties in different institutional contexts, and the implications of that behavior for democratic representation. In particular, I examine the conditions under which opposition parties provide the voters with accurate information, thereby inducing the government to act in accordance with voters' demands and interests. My analysis reconsiders the conventional wisdom that the influence of opposition parties on policy making is commensurate with their electoral strength or seat share in the legislature.

In the first paper, I develop a formal model that examines the interaction between a government with control over a policy proposal and an opposition party faced with the decision whether to attract voters' attention to the proposal by objecting to its adoption. The model assumes that the government has incentives to pursue policies divergent from voter preferences and that voters face non-trivial costs in monitoring the government's legislative proposals. Voters can use the objection of the opposition party as a signal to identify adverse government proposals. However, for the mechanism to work, the opposition party should be responsible, i.e. not alarm the voters too frequently. I show that confrontation between the government and the opposition party is more likely when the chances of election for the opposition party are sufficiently low and the opposition activists are sufficiently distant in terms of their ideological positions from the government (as well as the voter and the opposition party itself). In addition to providing useful signals, the presence of a responsible opposition party may increase voters' welfare by inducing the government to preemptively adjust its policies.

In the second paper, I propose a formal model that explores whether the voters can receive accurate information from the opposition party under further constraints. More specifically, the model assumes that the voters do not have the means to verify the accuracy of information they receive about the policy and furthermore they have limited information about the preferences of the government and the opposition party. I show that the opposition party can discipline the government to choose policies congruent with voters' preferences if the reputation of the opposition is high and the benefit of policy to the government is small relative to the benefit of winning elections. Under the same conditions, however, misleading messages of the opposition party may cause a good government to implement policies that bring about bad outcomes for the voters.

In the the third paper, I examine when legislators withdraw their support from the bills that they cosponsored using an original dataset of cosponsorship in the US House

of Representatives. I argue that the legislators take into account the preferences of their constituency in their cosponsorship decisions. Since acquiring information about the bills is costly, legislators use the cosponsorship decisions of their counterparts as signals for the acceptability of the bill for their constituency. My analysis shows that there is a relationship between the partisan composition of cosponsors and the likelihood that he/she decides to remove his/her name from the bill later. More specifically, a legislator is less likely to remove his/her name from a bill that he/she cosponsored as the difference between the number of his/her partisans that cosponsored the bill and the number of his/her opponents that cosponsored the bill increases.

# Chapter 1

## Introduction

The merits of a democratic political system stem from the opportunities it provides for the representation of everyone in the polity; therefore, a sound and viable opposition is one of its indispensable elements. Opposition parties obviously serve as alternatives for discontented voters; however, their function is more than just providing another emblem on the ballot in the next elections. They provide information about the government's policies, and point to their weaknesses. They express the demands and interests of their constituency, and contribute to the translation of these demands and interests into policy. In a political system with a functioning opposition, the government is expected to be more responsive to the demands of the population as a whole; however, there may be both institutional and motivational obstacles against the opposition's performance of these ideal functions.

Despite the important function attributed to the opposition parties, there is a perception that they have very little, if any, chance of directly influencing policy decisions. In parliamentary systems, the party or the coalition that has the majority of seats in the parliament has control over both legislative and executive power. Especially in cases with high levels of party discipline, the party in the majority usually does not have difficulty passing the bills that it proposes and the opposition's votes in the legislature cannot change the result. Nev-

ertheless, the opposition parties have the opportunity to participate in legislative debates, during which they can reveal their policy positions and offer alternatives to government's policy. The opposition's criticism of the government's policies may help voters acquire information about or have new perspective on policy outcomes. In that case, the government may have to adjust its policies in accordance with the voters' demands. Hence, opposition parties have the potential to influence policy decisions even when they do not have the majority of the seats required to change the result of legislative voting.

While the information provision function of the opposition is promising for a more responsive political system, the incentives of the opposition parties may be incompatible with this function. The opposition parties may have policy preferences that are incongruent with the voters. They may benefit from responding to the demands of the party activists that advocate extreme positions. Moreover, they may be unwilling to release information that could help the government's reelection chances. Given these motivational constraints, it is important to identify the conditions under which the presence of a legislative opposition enhances the responsiveness of the government.

In the next chapter, I develop a formal model that examines the conditions under which the opposition's objections to policy proposals help voters to monitor the government. The model assumes that the opposition needs to exert effort to attract the attention of voters, who face nontrivial costs to evaluate information. I show that an electorally strong opposition with moderate activists may fail to warn voters against policy proposals that diverge from the voters' preferences. On the other hand, if the opposition is electorally weak or has extreme activists, its messages lose credibility.

In the third chapter, I consider a situation where voters lack information about the policy preferences of the parties and the consequences of policy alternatives. Uncertainty

about the government's preferences makes it difficult for the voters to hold the government accountable. I propose a formal model that explores whether an opposition party can help solve this problem by providing information about policy alternatives. The model shows that the presence of an opposition party may induce an incongruent government to adjust its policies as long as the reputation of the opposition is sufficiently high, and the government is sufficiently concerned about reelection. When the voter does not have the means to verify the accuracy of information, however, misleading information of the opposition may cause a congruent government to implement policies that are detrimental to voter welfare.

In the fourth chapter, I use cosponsorship patterns in the US House of Representatives to analyze how the legislators respond to the demands of their constituency. In particular, I analyze when the legislators withdraw their support from the bills that they cosponsored. I argue that the legislators use cosponsorship to signal their policy positions and that they use the cosponsorship decisions of their counterparts to evaluate the content of the bills. My analysis shows that a legislator is more likely to withdraw his/her support if the number of cosponsors from the opposite party increases relative to the number of his/her copartisan cosponsors.

# Chapter 2

## Whistleblower in the Parliament

“A common theme in studies of European politics has been ‘the decline of parliaments,’ which have everywhere, according to some perceptions, lost to the grasping hands of governments the power they supposedly possessed late in the nineteenth century. By the middle of the twentieth century, it was generally agreed that governments acted while parliaments just talked.” (Gallagher et al. 2006)

“A weak parliament is the other face of strong government. What this means in practice was once nicely described (by Austin Mitchell MP in his splendidly entertaining *Westminster Man*) as like ‘heckling a steamroller’. The heckling is loud and raucous, at least from the opposition parties, but the executive steamroller takes it all in its stride and gets on with its governing business.” (Wright 2013)

### 2.1 Introduction

Parliamentary activities such as plenary debates and oral questions have long been dismissed as spectacles with little consequence for policy outcomes by politicians as well as political scientists. Parties in government certainly have exceptional power over legislation, especially in cases with majority governments or high party discipline. An exclusive emphasis on the executive, however, would result in failing to identify the role that the legislature may play in policymaking. Recent studies that study the role of the legislature mostly limit their attention to committees, particularly as a tool for coalition partners to monitor each other (Martin and Vanberg 2004, 2005, 2011; Kim and Loewenberg 2005; Fortunato et al. forth-

coming). According to these studies, there is little room for opposition parties to influence policy. Opposition parties matter only to the extent that they can bargain with minority governments over legislation or modify policy through committee work. Hence, opposition parties' influence is proportional to their seat share in the parliament and contingent on the presence of a minority government or a strong committee system (Strom 1990; Powell 2000; Martin and Vanberg 2004, 2005, 2011). In this paper, I take a different approach that considers whether the opposition's parliamentary activities may have an indirect impact on policy outcomes by mobilizing public opinion.

In parliamentary systems, opposition parties use procedural prerogatives at their disposal such as proposing bills, amendments or no confidence motions, usually without a successful outcome. Even when amendments do not pass or no confidence motions fail, they may serve as useful signals to voters about the government's policy proposals. These signals are particularly important for government responsiveness given the fact that voters usually do not pay attention to or know much about policy alternatives (Campbell 1960; Carpini and Keeter 1997). In the absence of an informed and interested constituency, parties in office may be tempted to deviate from policies that are the most beneficial for voters (Mansbridge 2003; Powell 2004). Empirical evidence shows that parties usually take positions that are more extreme than those taken by their constituents (Iversen 1994). This deviation may result from the discrepancy between the preferences of the party leadership and those of the constituency. In addition, even when the leaders are moderate, they may need to appeal to the more extreme positions of party activists that provide the party with important resources (Schofield and Sened 2006; Schumacher et al 2013).

In order to see how an opposition party can induce the government to act in accordance with public opinion, consider the Conservative-Liberal-Dem coalition's climb-down on the reorganization of the National Health System in UK. When asked a question in 2005 about voters' possible reaction to his plans for reducing the size of the state, David Cameron

answered: “I don’t think anyone gets out of bed in the morning, and thinks, ‘I wish the state was smaller tomorrow than it is today.’ Of course not.” (Financial Times, December 18, 2015). When the Health and Social Care Act was first proposed, there was hardly any attention to the bill from the general public (Economist, April 7, 2011). After a period of debate led by the Labor Party (the main opposition party), the bill had to go through several changes. Cameron had to admit the problems with the bill: “Politicians aren’t very good at saying, we didn’t get it right first time. ... But actually I think people respect a government that feels it is strong enough to say, hold on, we haven’t got every element right, we’re not taking enough people with us, let’s stop, let’s get this right.” (The Guardian, June 14, 2011) Due largely to the efforts of the opposition party, the issue became salient among voters who did not necessarily think about the size of the state first thing in the morning. As a result, Cameron had to adjust his party’s policy to align with the public opinion.

The example shows that the opposition’s parliamentary activities may be influential even in the British Parliament, which has been described as a “notoriously impotent legislature.” (Martin and Vanberg 2011:133)<sup>1</sup> It does not suggest that the government will always take into account the opinion of the opposition party. Just like the government, the opposition party has incentives to cater to its extreme constituents, which makes it harder for the opposition to send credible messages to voters. In this paper, I propose a formal model that identifies the conditions under which the voters pay attention to the opposition’s objections to the government’s policy proposals. The model assumes that the government has incentives to pursue policies divergent from voter preferences, that voters face non-trivial costs in monitoring the government’s legislative proposals, and that the opposition party must exert effort to attract the voters’ attention.

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<sup>1</sup>Eggers and Spirling (2014) argue that governments in the nineteenth century UK were able to limit the formal agenda-setting powers of the opposition only because they engaged the opposition in the parliament at increasing levels in return.

The model in this paper contributes to an extensive body of formal theory literature on electoral accountability.<sup>2</sup> In these models, the voters face the problem of monitoring the government in an environment where they have limited information about the consequence of policy alternatives as well as the characteristics of the government. Based on the policy of the government and the message of the opposition (if any), the voters update their information about the competence of the government (Canes-Wrone, Herron and Shotts 2001; Prat 2005, Ashworth and Shotts 2010; Ashworth and Shotts 2015) or its policy preferences (Maskin and Tirole 2004; Lemon 2005; Fox 2007). The main question is whether the reelection concerns of the government will induce the government to choose the right policy for the voters. Similar to these models, I identify the conditions under which the government chooses the right policy for the voters; however, the voters in my model are facing a different problem. They have to decide whether to exert effort to acquire information about the policy. The government backs down from the proposal and incurs a reputation cost if the voters find out the policy proposal does not align with their interests. The question is whether the opposition can help the voters to identify policy proposals that are worth their attention.

The design of the model in this paper is similar to previous work on compliance in the judiciary, in which a whistleblower can induce the higher court to review the decisions of a lower court (Beim et al. 2014). The key finding of their model is that the presence of the whistleblower would increase compliance only when whistleblowing is rare enough. This captures the critical tension of representative government where the majority has immense power and minority can only talk. But it leaves other questions unanswered. The differences between a whistleblower in the judiciary and an opposition party in the parliament are as follows: First, unlike the whistleblower in the judiciary, the opposition party has the chance of winning elections and making the policy in a second period. Second, in making their

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<sup>2</sup>For an excellent review of this literature, see Ashworth 2012.

decisions both the opposition and the government have to consider the reaction of their respective party activists, which usually have more extreme policy preferences.<sup>3</sup>

The model shows how the election chances of the opposition and the ideological position of its activists influence the frequency and the credibility of its messages. Contrary to conventional wisdom, an electorally strong opposition party with moderate activists may not bring about the best outcome for voters' welfare. When the opposition is sufficiently likely to win the next election, instead of paying the cost to object to the policy proposal, it may wait until the next term to overturn policy. Similarly, when the party activists are moderate, the position-taking advantage of objecting to policy proposals will be smaller. On the other hand, if the election chances of the opposition are too small or its activists are too extreme, voters will not take the messages of the opposition seriously. Hence, there is a sweet spot where the reelection chances of the opposition and the distance of its activists from the government are moderate enough for the opposition to be effective.

## 2.2 Model

### 2.2.1 Players

In order to answer the questions listed above, I consider a model in which the government chooses between two policy proposals – liberal or conservative – and the opposition party decides whether to object to the proposal by paying cost  $c > 0$ . If the opposition chooses to object to the proposal, the voter decides whether to pay attention to the proposal by paying

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<sup>3</sup>Ting (2008) provides another model on whistleblowing. In his model, the principal decides how much authority to give to the agent over the whistleblower. The preferences of the actors are over the quality of the work that partially depends on the effort of the whistleblower.

cost  $t > 0$ .<sup>4</sup> Both  $c$  and  $t$  are common knowledge. To facilitate exposition, I will use female pronouns for the government and male pronouns for the opposition and the voter.

### 2.2.2 Policy Preferences

All three players care about policy. Their preferred policies depend on their respective indifference points and the state of the world,  $\omega$ . More specifically, the utility of a player with indifference point  $i$  from a conservative policy in each period is  $\frac{i - \omega}{2}$  while her utility from a liberal policy is  $\frac{\omega - i}{2}$ . This means that each player prefers a liberal policy for values of  $\omega$  greater than her indifference point, and a conservative policy otherwise. For example, we can think of  $\omega$  as the cost of war. For each actor, if the cost exceeds a certain level, going to war would be the less-preferred option. The difference between the utility that an actor receives from the preferred policy and the less-preferred policy is  $|\omega - i|$ . Hence, as the state of the world moves away from an actor's indifference point, the relative benefit of the preferred policy increases. For example, the benefit of avoiding a war would be higher for a liberal actor when the war is more costly.

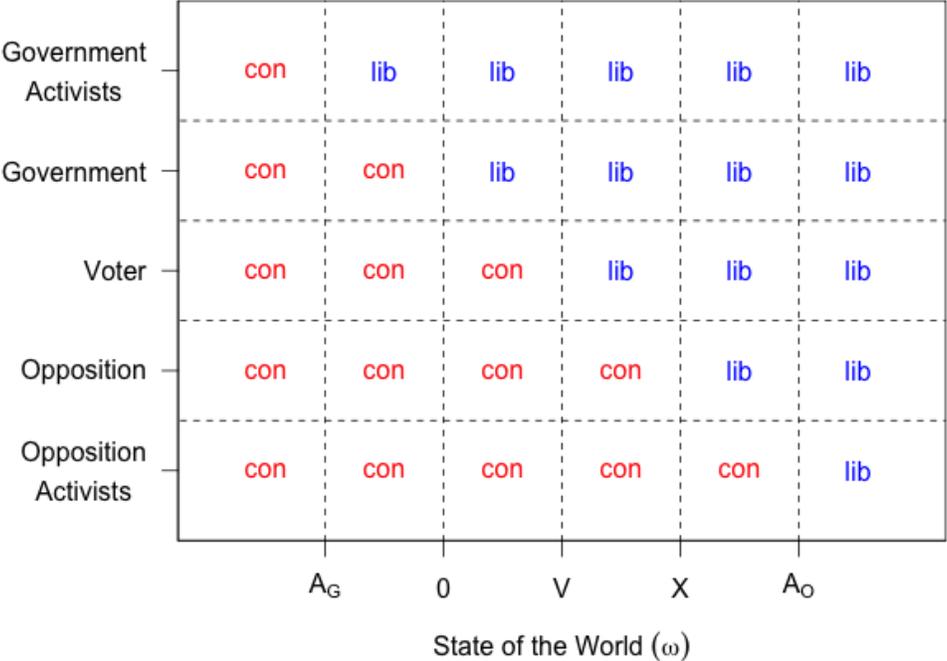
I set the indifference point of the government to 0. The voter's and the opposition's indifference points are  $V$  and  $X$ , where  $X > V > 0$ . This means that the opposition is more conservative than the government but the results would hold if the reverse were the case. The voter is placed between the government and the opposition. The indifference points of all three players are common knowledge. The state of the world,  $\omega$ , is known by the government and the opposition. The voter finds out the value of  $\omega$  only if he chooses to pay

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<sup>4</sup>Note that in the model, the voter does not have the option to pay attention unless the opposition chooses to object to the proposal. In real life, the voters may certainly pay attention to an issue without being warned by the opposition party. The activities of the opposition party is one of the several signals that can help voters identify issues that deserve attention. The focus of this paper is to identify conditions under which the presence of an opposition party enhances government responsiveness. Therefore, the model is limited to cases in which the voter would not have paid attention to an issue in the absence of an action by the opposition. We can think of the model as a simplified form of a model where the opposition party increases the probability that the voter will pay attention to an issue.

the cost  $t$ . Otherwise, he only knows that  $\omega$  is drawn from a uniform distribution  $U[\underline{\omega}, \bar{\omega}]$ , where  $\underline{\omega} < 0$  and  $\bar{\omega} > X$ . The policy preferences of the actors are shown in figure 2.1. For example, the voter will prefer a conservative policy for values of  $\omega$  smaller than his ideal point ( $V$ ) but a liberal policy otherwise.

Figure 2.1: Policy Preferences



### 2.2.3 Policies

The game consists of two periods. Depending on the actions of the players, the policy implemented in the first period is as follows: If the opposition does not object to the government’s proposal or the voter does not pay attention, the proposal becomes the policy. If the opposition objects to the proposal *and* manages to direct voter’s attention to the issue, the

government has to implement the voter's preferred policy.<sup>5</sup> If this policy is different from the proposal, i.e. the government has to climb down, she pays a climb-down cost  $d > 0$ .

At the end of the first period, an election is held and the opposition wins the election with probability  $\beta$ . If the government stays in power, the second-period policy stays the same as the first period. If the opposition is elected as the new government, the second-period policy depends on whether the voter paid attention to the proposal in the first period. If the voter didn't pay attention, the opposition implements his preferred policy without incurring any cost. If the voter did, the opposition has to implement the voter's preferred policy. In addition, he has to pay a climb-down cost  $d_O > 0$  if he objected to the voter's favorite policy in the first period.

The probability of the opposition's election,  $\beta$ , is an exogenous parameter because the opposition's election chances may be influenced by a broad set of factors beyond the individual policy in question. For example, it is influenced by valence issues such as the personal characteristics of the party leader or the state of the economy. It is reasonable to expect that the government's election chances will decrease when the it has to climb-down. The same should apply to the opposition if it is caught giving a false alarm. The most obvious implication of this would be to tame the government and the opposition, i.e. induce them to implement (or recommend) congruent policies for fear of not being reelected. This is already captured in the model by the climb-down cost.<sup>6</sup>

---

<sup>5</sup>In cases where the voters do not have the means to put enough pressure on the government to change policy, it is not possible for the opposition party to influence policy outcome through the mechanism suggested in the paper. We can consider a model that gives the incumbent the option to stick to its policy proposal (at some cost). It does not change the comparative statics of the model.

<sup>6</sup>The influence of  $\beta$  that I would like to capture in the model is different. The electoral strength of the opposition party influences its behavior in two ways: First, high prospects for being elected gives the opposition a certain degree of responsibility because it will most likely be decision-maker in the future, and be held accountable for what it said in the first period. Second, high prospects for election gives the opposition party an opportunity to change the policy, which reduces its incentives to make a fuss over less important issues. For these two mechanisms, whether  $\beta$  is endogenous or not does not make a difference.

## 2.2.4 Utility

All three players receive utility from the policy chosen as described in section 2.2.2. The voter only receives utility from the first period policy.<sup>7</sup> The government and the opposition receive utility from the policies in both periods. In addition, the utility functions of the government and the opposition have a *position-taking* component that captures the incentives of the players' to please their party activists that have more extreme policy preferences compared to voters.<sup>8</sup> The government activists' indifference point is denoted by  $A_G < 0$  and the opposition activists' indifference point is denoted by  $A_O > X$ . The utility that the government activists receive from the proposal (not the policy) is added to the government's utility function. For example, if the government proposes a conservative policy, the position-taking component of his utility will be  $\frac{A_G - \omega}{2}$ . The idea here is that the government can take credit for the position even in cases where she has to climb down because of opposition involvement. Similarly, the opposition receives utility depending on the position he takes. If he objects to a liberal proposal he will get the utility that the activists would get from a conservative policy. If not, he will get the utility that the activists would get from the liberal proposal. Similar logic applies if the opposition objects to a conservative proposal.

## 2.2.5 Sequence

The sequence of the game is as follows:

1. Nature chooses  $\omega$ .
2. The government and the opposition observe  $\omega$ .

---

<sup>7</sup>We can think of the politicians as more farsighted than the voters. I made the decision not to include the second-period utility mostly to simplify exposition. Including the second period policy utility changes the expected benefit of attention in a way that does not add to our understanding of the motivating questions. Note also that the voter can always decide to pay attention to policy after having observed a new government.

<sup>8</sup>A similar approach is used by Martin and Vanberg 2005.

3. The government chooses between a conservative or a liberal policy proposal.
4. (a) In the baseline model, the voter decides whether to pay attention at cost  $t$ .
  - (b) In the model with the opposition, the opposition decides whether to object to the proposal at cost  $c$ . The voter decides whether to pay attention at cost  $t$  only if the opposition objects to the proposal.<sup>9</sup>
5. Payoffs are realized.
  - (a) If the voter pays attention, his favorite policy is adopted. The government has to pay a climbdown cost  $d$  if the proposal is different from that policy.
  - (b) Otherwise, the proposal becomes policy.

### 2.2.6 Equilibrium Concept

The solution concept of the game is perfect Bayesian equilibrium, which requires specifying the strategies of the three players and the voter's beliefs. The government's strategy involves choosing a policy proposal for every possible value of the state of the world. The opposition's strategy involves deciding whether to object for every possible pair of state of the world and proposal. The voter's beliefs about the state of the world after having observed the policy proposal should be consistent with the strategies of the government and the opposition. The voter's strategy is a decision whether to pay attention after each of the two policy proposals, and it should be sequentially rational given his beliefs about the state of the world.

For both the baseline model and the model with the opposition, I am interested in two types of equilibria depending on the voter's strategy. In the equilibrium with an inattentive voter, the voter's strategy is to never pay attention to the policy. In the equilibrium with

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<sup>9</sup>The focus of this paper is to identify the conditions under which the opposition may help voters to notice the government's incongruent policies in situations where paying attention to all policies is too costly for the voter. Therefore, I simplify the model by limiting it to cases where the voter never pays attention when he does not observe objection from the opposition.

an attentive voter, the voter's strategy is to always pay attention after a liberal policy but to never pay attention after a conservative policy. Recall that the focus of this paper is to identify when the voter is able to prevent incongruent policies of the government because of the opposition's objections. Since the government is more liberal than the voter, the voter's concern would be to be careful about liberal policy proposals, not the conservative ones.

## 2.3 Equilibria in the Baseline Model

### 2.3.1 Baseline Equilibrium with Inattentive Voter

When the voter does not pay attention to the policy, the government's only considerations are the position-taking and policy benefits. When the preferred policies of the government and her activists are the same, the decision is straightforward: to propose her preferred policy. For values of  $\omega$  between  $A_G$  and 0 (the government's indifference point), the government has to weigh the position-taking benefit of proposing a liberal policy against the benefit she will get from a conservative policy. She will propose a conservative policy if and only if  $(2 - \beta)\omega < A_G - \omega$ .

**Proposition 1** (*Baseline Equilibrium with Inattentive Voter*) *In the baseline model, there is a perfect Bayesian equilibrium with the following strategies and beliefs:*

- *The government proposes a conservative policy for  $\omega < \frac{A_G}{3-\beta}$ , and a liberal policy otherwise.*
- *The voter updates his belief to  $\omega \sim U \left[ \underline{\omega}, \frac{A_G}{3-\beta} \right]$  after observing a conservative proposal, and to  $\omega \sim U \left[ \frac{A_G}{3-\beta}, \bar{\omega} \right]$  after observing a liberal proposal.*
- *The voter never pays attention to the policy proposal.*

*This equilibrium exists if and only if  $t > (V - \mathbb{E}(\omega|\omega < V)) * Pr(\omega < V)$  given a liberal policy proposal.*

In this equilibrium, for the values of  $\omega$  where the government and the voter disagree on policy, the government proposes her preferred policy. In addition, for some values of  $\omega$  where the government and the voter agree on a conservative policy, the government will be tempted to propose a liberal policy in order to appease her activists. Since the proposal becomes the policy, this equilibrium poses a problem for voter's welfare.

### 2.3.2 Baseline Equilibrium with Attentive Voter

When the preferred policy of the government is the same as the preferred policy of both the voter and the government activists, the choice of proposal for the government is straightforward. Since there is neither position-taking cost nor the risk of climb-down cost, the government will propose her preferred policy. Hence, for values of  $\omega$  smaller than  $A_G$ , the government will propose a conservative policy. When the value of  $\omega$  is greater than  $V$ , she will propose a liberal policy. For any value of  $\omega$  in between, a liberal policy proposal will lead to a climb down; however, it will bring position-taking benefit to the government. Taking the climb-down cost and position-taking benefit into consideration, the government proposes conservative policy if and only if  $\omega < d + A_G$ .

**Proposition 2** (*Baseline Equilibrium with Attentive Voter*) *In the baseline model, there is a perfect Bayesian equilibrium with the following strategies and beliefs:*

- *The government proposes a conservative policy for  $\omega < d + A_G$ , and a liberal policy otherwise.*
- *The voter updates his belief to  $\omega \sim U[\underline{\omega}, d + A_G]$  after observing a conservative proposal, and to  $\omega \sim U[d + A_G, \bar{\omega}]$  after observing a liberal proposal.*
- *The voter always pays attention after the opposition's objection to a liberal proposal and never pays attention after the opposition's objection to a conservative proposal.*

*This equilibrium exists if and only if  $t < (V - \mathbb{E}(\omega|\omega < V)) * Pr(\omega < V)$  given a liberal policy proposal.*<sup>10</sup>

By the setup of the model, the voter receives the policy he prefers when he pays attention to the policy. For the equilibrium to work, however, the expected benefit of paying attention to the policy for the voter must be worth the cost of attention. For a range of  $\omega$  values, the government’s liberal proposal may indeed be the preferred policy for the voter. Hence, the voter may be “wasting” his time to learn about the consequences of a policy if the government is already acting in a congruent manner. That is why the presence of an opposition may help increase the welfare of the voter. Ideally, an opposition party will always (and only) warn the voter when the government proposes an incongruent policy. Throughout the paper, I will refer to an opposition party that fails to warn the voter against an incongruent policy proposal as *insufficient opposition*. If an opposition party alarms the voter unnecessarily against a congruent policy proposal, I will refer to it as *irresponsible opposition*.

## 2.4 Equilibria in the Model with Opposition

### 2.4.1 Opposition Equilibrium with Inattentive Voter (Grandstanding Equilibrium)

In the equilibrium with an inattentive voter, the opposition knows that his action will not have any effect on policy. The only incentive he has to object to a policy proposal is to please his activists. Hence, he will object to a liberal proposal only if  $c < A_O - \omega$  and to a conservative proposal only if  $c < \omega - A_O$ . The government’s strategy in the equilibrium with inattentive voter is the same as his strategy in the baseline model. Given that the voter will

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<sup>10</sup>Note that for this condition to hold,  $d + A_G$  has to be greater than  $V$ . Otherwise, the government would be preemptively choosing a conservative policy for all values of  $\omega$  smaller than  $V$ , in which case it would not be sequentially rational for the voter to pay attention to a liberal policy. For the rest of the paper, I will assume  $d + A_G < V$ .

not pay attention to the policy, government's decision will be based only the preferences of himself and his activists.

Given the strategies of the two players, we never observe an objection against a conservative proposal. Hence, the voter's beliefs after an objection to a conservative proposal cannot be pinned down by Bayes rule. Given that the government has incentive to propose a conservative policy only when  $\omega < 0$ , we assume that is the voter's belief after observing an objection to a conservative proposal. Consistent with the strategies of the two players, voter believes that  $\omega$  is uniformly distributed between  $\frac{A_G}{3-\beta}$  and  $A_O - c$  after having observed an objection to a liberal proposal.

**Proposition 3** (*Grandstanding Equilibrium*) *In the model with opposition, there is a perfect Bayesian equilibrium with the following strategies and beliefs:*

- *The opposition objects to a liberal proposal if and only if  $c < A_O - \omega$ , and to a conservative proposal if and only if  $c < \omega - A_O$ .*
- *The government proposes a conservative policy for  $\omega < \frac{A_G}{3-\beta}$ , and a liberal policy otherwise.*
- *The voter updates his belief to  $\omega \sim U[\underline{\omega}, 0]$  after observing an objection to a conservative proposal, and to  $\omega \sim U\left[\frac{A_G}{3-\beta}, A_O - c\right]$  after observing an objection to a liberal proposal.*
- *The voter never pays attention to the policy proposal.*

*This equilibrium exists if and only if  $t > (V - \mathbb{E}(\omega|\omega < V)) * Pr(\omega < V)$  given an objection to a liberal policy proposal.*

Two observations are important about the opposition equilibrium with an inattentive voter. First, compared to the baseline model, the presence of an opposition that can object to government proposals gives some information to the voter about the state of the world; however, this information is not sufficient to convince the voter that it is worth his time to pay

attention to the policy. Second, in terms of the voter's welfare, there is no difference between the baseline model and the model with opposition as long as the voter is inattentive. The confrontation between the government and the opposition does not amount to much other than political grandstanding aimed at activists as the voter does not get any benefit.

## 2.4.2 Opposition Equilibrium with Attentive Voter (Informative Equilibrium)

### Opposition's Strategy

*Objection Against a Liberal Proposal* When the state of the world,  $\omega$ , is smaller than the voter's indifference point, the preferred policy of all three player is conservative. Hence, objecting to a liberal proposal brings both position-taking and policy benefits to the opposition. If the cost of objection is smaller than the benefit, that is  $c < A_O - \omega + (2 - \beta)(X - \omega)$ , the opposition will object to the proposal.

When  $\omega$  is between the indifference points of the voter and the opposition, the preferred policies of the voter and the opposition are not the same. Objecting to a liberal proposal is not going to change the policy. Moreover, it has the downside of bringing the voter's attention to an issue on which the voter and the opposition do not agree. When the voter is aware of the situation, the opposition will have to implement a conservative policy in the second period in case he is elected. In addition, he will have to pay a climb-down cost. Despite all the drawbacks, the opposition may object to a liberal policy if the position-taking benefit is large enough. In particular, the opposition will object to the proposal if  $c + \beta(X - \omega) + d_O\beta < A_O - \omega$ .

For values of  $\omega$  greater than the indifference point of the opposition, the preferred policy of the opposition is liberal. Hence there is no policy benefit to objecting to a liberal proposal. If  $\omega$  is smaller than the indifference point of the opposition activists, the opposition has

position-taking incentive to please the activists. Yet this will bring a climb-down cost in case the opposition is elected in the second period. Given all this, the opposition will object to the proposal if  $c + d_O\beta < A_O - \omega$ . If  $\omega$  is greater than  $A_O$ , the opposition will never object to a liberal proposal.

*Objection Against a Conservative Proposal* In the informative equilibrium, the voter never pays attention to the opposition's objection against a conservative proposal. Therefore, the policy component of the opposition's utility function is irrelevant in his decision about whether to object to a conservative proposal. All the opposition needs to take into account is the position-taking incentive. The preferred policy of both the opposition and the opposition activists is conservative for any value of  $\omega$  smaller than  $A_O$ . For other values of  $\omega$ , the opposition has to weigh the cost of objection against the position-taking benefit. He will object to the proposal if  $c < \omega - A_O$ . Lemma 1 summarizes the opposition's strategy.

**Lemma 1** (*Opposition's Strategy*) *In a perfect Bayesian equilibrium where the voter always pays attention after the opposition's objection to a liberal proposal and never pays attention after the opposition's objection to a conservative proposal, the opposition objects to*

- *a liberal proposal if and only if one of the following conditions is satisfied:*

- $\omega < V$  and  $c < A_O - \omega + (2 - \beta)(X - \omega)$

- $V < \omega < X$  and  $c < A_O - \omega - \beta(X - \omega) - d_O\beta$

- $X < \omega < A_O - c - d_O\beta$

- *a conservative proposal if and only if  $\omega > A_O + c$*

## Government's Strategy

The government's strategy involves choosing a policy proposal for every possible value of the state of the world. When the preferred policy of the government is the same as the preferred policy of both the voter and the government activists, the choice of proposal for

the government is straightforward. Since there is neither position-taking cost nor the risk of climb-down cost, the government will propose her preferred policy.

When  $\omega$  is between the indifference points of the government activists and the voter, the government has a position-taking incentive to propose a liberal policy against the interests of the voter. The calculation of the government in this region will depend on whether  $\omega$  is in a region where the opposition will object to a liberal policy or not. If  $\omega$  is in the objection region specified in Lemma 1, the resulting policy will be conservative irrespective of government's proposal. Hence, the government only needs to weigh the climb-down cost against the position-taking benefit. She will propose a conservative policy if the climb-down cost is high enough, that is  $d > \omega - A_G$ . If  $\omega$  is not in the objection region, the government's proposal becomes the policy without any climb-down cost. When  $\omega$  is greater than the government's indifference point, he will propose a liberal policy since that is the preferred policy of both the government and the government activists. Otherwise, the government needs to consider the trade-off between pleasing the activists and getting her preferred policy. She will propose a conservative policy if the influence of the activists is sufficient, that is  $A_G - \omega > (2 - \beta)\omega$ . Lemma 2 summarizes the government's strategy.

**Lemma 2** (*Government's Strategy*) *In a perfect Bayesian equilibrium where the voter always pays attention after the opposition's objection to a liberal proposal and never pays attention after the opposition's objection to a conservative proposal, government proposes*

- *a conservative policy if and only if one of the following conditions is satisfied:*
  - $\omega < A_G$
  - $A_G < \omega < A_G + d$  and  $c < A_O - \omega + (2 - \beta)(X - \omega)$
  - $A_G < \omega < \frac{A_G}{3 - \beta}$  and  $c > A_O - \omega + (2 - \beta)(X - \omega)$
- *a liberal policy otherwise.*

## Voter's Beliefs

Given the strategies of the opposition and the government, the voter never observes an objection against a conservative policy in equilibrium (remember that the opposition is assumed to be more conservative than the voter). The voter's belief about  $\omega$  cannot be pinned down by the Bayes rule. Since the government only has an incentive to propose a conservative policy when  $\omega < 0$ , I will assume this is the voter's belief after observing an objection to a conservative proposal. Given this belief, it is sequentially rational for the voter not to pay attention to an objection against a conservative proposal. In other words, the voter does not need to spend effort trying to discipline the conservative proposals of a government that is more liberal than himself.

There is a range of  $\omega$  values for which the voter will observe an objection to a liberal policy. I'll examine these values in three separate regions that are different in terms of the implications of paying attention for the voter's welfare.

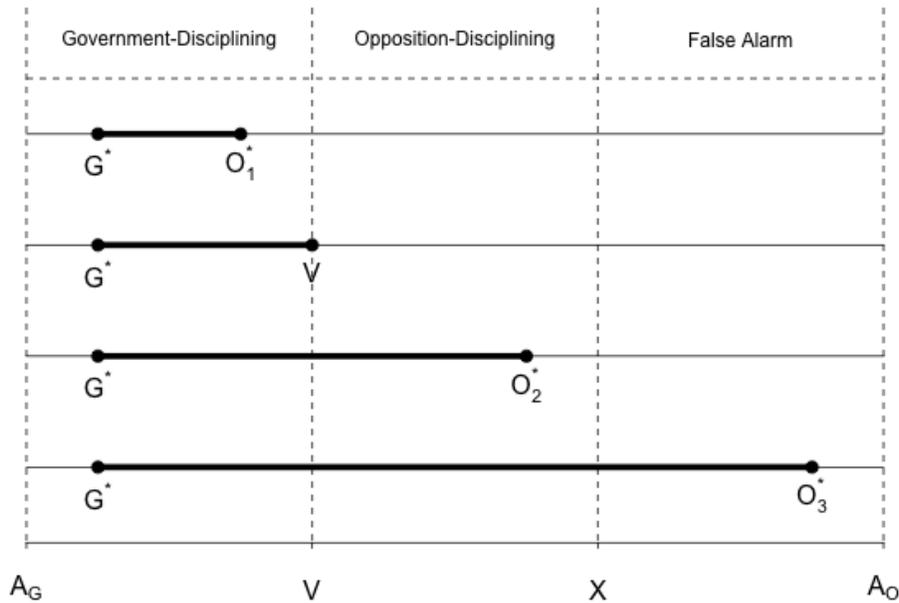
*Government-Disciplining Region:* For values of  $\omega$  between  $A_G$  and  $V$  voters prefer a conservative policy but the government (which is more liberal than the voter and the opposition) has incentives to propose a liberal policy in order to please the activists. She proposes a liberal policy even though she knows she will have to climb down. It does so only when the position-taking benefit is worth it. We can define a preemption threshold  $G^* = d + A_G$  below which the government preempts opposition by proposing a conservative policy. Similarly we can define an objection threshold,  $O_1^* = \frac{A_O - c + (2 - \beta)X}{3 - \beta}$ , such that the opposition objects to a liberal policy for any value of  $\omega$  smaller than this threshold. In the government-disciplining region, the benefit of paying attention for the voter is to correct the government's proposal.

*Opposition-Disciplining Region:* For values of  $\omega$  between  $V$  and  $X$ , the government always proposes a liberal policy. The opposition has incentive to object when the position-taking

benefit is large enough. The objection threshold in this region is  $O_2^* = \frac{A_O - c - d_O\beta - \beta X}{1 - \beta}$ . For the voter, the first-period benefit of paying attention to the proposal in this region is null since the government is already proposing the voter's preferred policy. The second-period benefit of paying attention, which is not included in the voter's utility function, is to correct the policy in case the opposition is elected in the second period.

*False Alarm Region:* Finally, for values of  $\omega$  between  $X$  and  $A_O$ , the opposition objects to a liberal policy when  $\omega$  is smaller than the objection threshold  $O_3^* = A_O - c - d_O\beta$ . There is no benefit of paying attention to the policy in this region since the voter's preferences are aligned with both the government and the opposition.

Figure 2.2: Confrontation Regions



The objection thresholds defined above do not always fall into their relevant regions. For instance, depending on the parameters of the game  $O_1^*$  may be greater than  $V$ , in which case the opposition always objects in the government-disciplining region. Or  $O_2^*$  may

be smaller than  $V$  in which case we never observe objection in the opposition-disciplining region. Considering all these, the voter knows that he is in one of the four situations depicted in figure 2.2 when he observes an objection.<sup>11</sup> The bold lines show the possible values that  $\omega$  can take conditional on an objection against a liberal proposal. Lemma 3 summarizes the voter's belief based on these values.

**Lemma 3** (*Voter's Beliefs*) *After observing an objection to a liberal policy, the voter's belief about  $\omega$ , consistent with the government's and the opposition's strategies, is as follows:*

- *If  $O_2^* \leq V$  then  $\omega \sim U[G^*, \min(O_1^*, V)]$*
- *If  $V < O_2^* < X$  then  $\omega \sim U[G^*, O_2^*]$*
- *If  $O_2^* \geq X$  then  $\omega \sim U[G^*, O_3^*]$*

The last step before specifying the equilibrium is to check whether it is sequentially rational for the voter to pay attention to an objection against a liberal proposal. As mentioned above, the voter benefits from paying attention to a proposal in the first period only if  $\omega$  is in the government-disciplining region. The benefit will be the absolute value of the difference between the expected value of  $\omega$  and voter's indifference point.

**Proposition 4** (*Informative Equilibrium*) *Given the strategies and the beliefs specified in Lemma 1-3, there is a perfect Bayesian equilibrium where the voter always pays attention after the opposition's objection to a liberal proposal and never pays attention after the opposition's objection to a conservative proposal if and only if  $t < (V - \mathbb{E}(\omega|\omega < V)) * Pr(\omega < V)$  given an objection to a liberal policy proposal.*

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<sup>11</sup>See the lemma in the appendix about why other cases are eliminated.

## 2.5 Comparative Statics

### 2.5.1 Probability of Election for Opposition ( $\beta$ )

The probability of election changes the way the opposition behaves in all three regions. In the government-disciplining region, as the probability of election increases, the opposition is less likely object to proposals that would only marginally hurt the voter. This is because an opposition party with high election chances can simply change the policy in the second-period rather than objecting to it in the first-period. In other words, an electorally strong opposition party will be more selective in terms of the issues that he brings to the voter's attention. The effect of  $\beta$  on the opposition threshold in the government-disciplining region is particularly important if the cost of objection is high. In such cases, an electorally strong opposition may be insufficient because it would fail to warn the voter against proposals that would be quite harmful for the voter.

In opposition-disciplining and false alarm regions, an opposition party with high election chances is also more selective in terms of objecting to government proposals albeit for different reasons. In the former, the opposition party will try to avoid emphasizing issues on which his preferences are different from those of the voter. In the latter, the opposition will resist objecting to proposals just for the sake of pleasing his activists because of the risk of climb-down cost in case he is elected. An opposition party with small election chances can behave irresponsibly alarming the voter for no reason without much cost. Note that in opposition-disciplining and false alarm regions, the government is already acting in a congruent manner with the voter. In other words, the voter does not really have to be concerned about paying attention to the policy as long as the government is in power. The tendency of the opposition to alarm voters in these regions can be detrimental for voter's welfare. At the very least, the voter would be wasting his time for policies that are already in accordance

with his preferences. Even worse, if the expected benefit of paying attention to the policy becomes lower than the cost of attention, the informative equilibrium will not hold anymore.

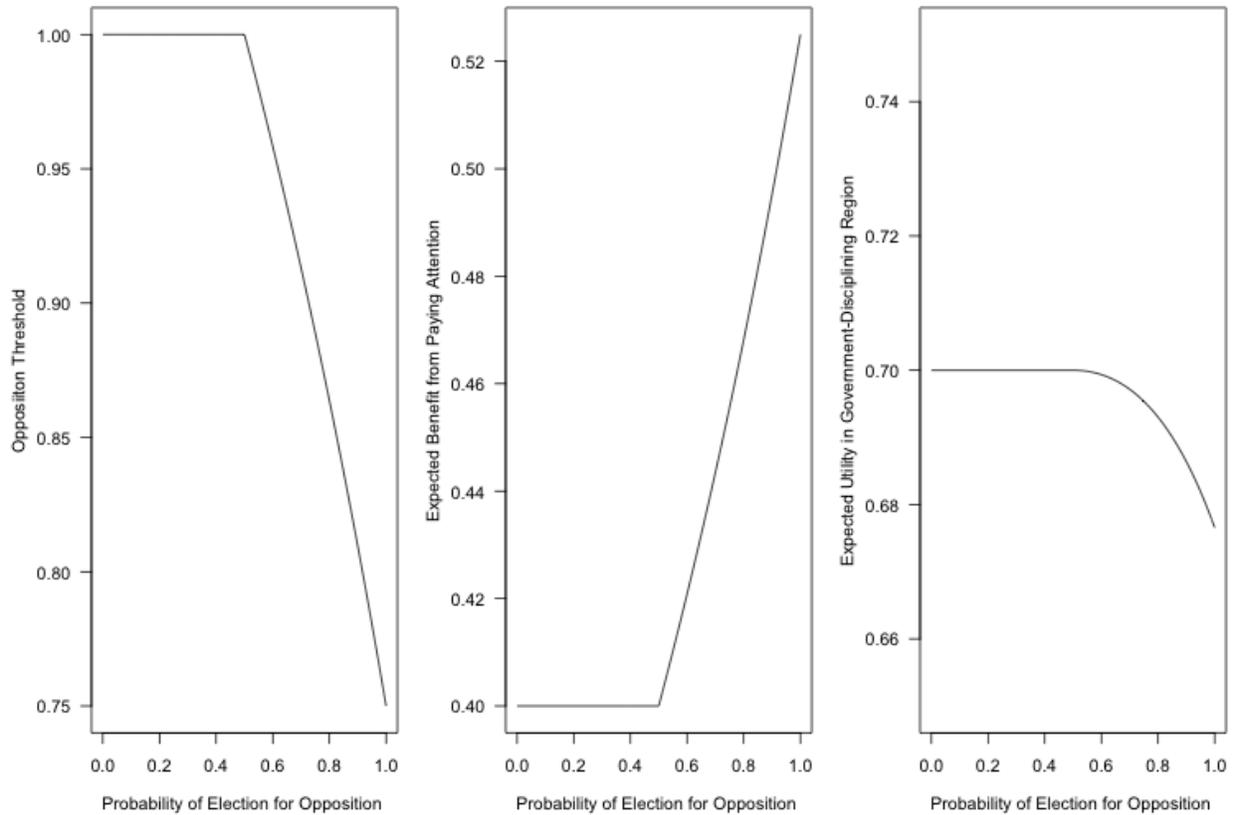
**Proposition 5** *In the informative equilibrium, the objection threshold is non-increasing in  $\beta$ .*

In order to understand the implications of Proposition 5, I first consider a case where the cost of objection is high. The first panel of figure 2.3 shows the change in opposition threshold for a game where  $c = 3.5$  and  $d = 1.2$ . The indifference points of the government activists, the voter, the opposition, and the opposition activists are  $-1$ ,  $1$ ,  $2$ , and  $3$ , respectively. Hence, the  $\omega$  values between  $-1$  and  $1$  constitute the government-disciplining region where the opposition's objection can change the government's policy if the voter pays attention. For low values of  $\beta$  the opposition objects in the whole region. As  $\beta$  gets larger, the opposition only objects to proposals under the curve that would be too costly for the voter. An electorally strong opposition has a good chance of acquiring the power to change the policy in the second period; therefore, he will not bother to pay the cost of objection for changing a mildly harmful policy in the first period. Whether an electorally strong opposition is better for the voter depends on the cost of attention for him. In order to analyze the implication of the opposition's behavior for the voter's welfare, we need to consider his expected benefit from paying attention to the policy.

The immediate implication of the change in threshold is its effect on how useful the signal is for the voter. The second panel of figure 2.3 plots the expected benefit of paying attention to an objection for different values of  $\beta$ . When the opposition objects all the time, the expected benefit of paying attention to the objection is low. As the threshold becomes lower, this means the expected value of  $\omega$  is smaller hence the voter can deduce that the government's liberal proposal will be costly. If the cost of paying attention for the voter is

high enough, the voter will only take seriously the objections coming from opposition parties with high chances of election. For other opposition parties, the informative equilibrium is not going to hold.

Figure 2.3: The Effect of the Opposition's Election Chances



Finally, the third panel shows the expected utility of the voter in the government-disciplining region assuming the equilibrium holds.<sup>12</sup> We see that the expected utility is smaller for higher values of  $\beta$ . The loss of utility results from the  $\omega$  values for which an insufficient opposition with high election chances does not warn the voter. It is important to

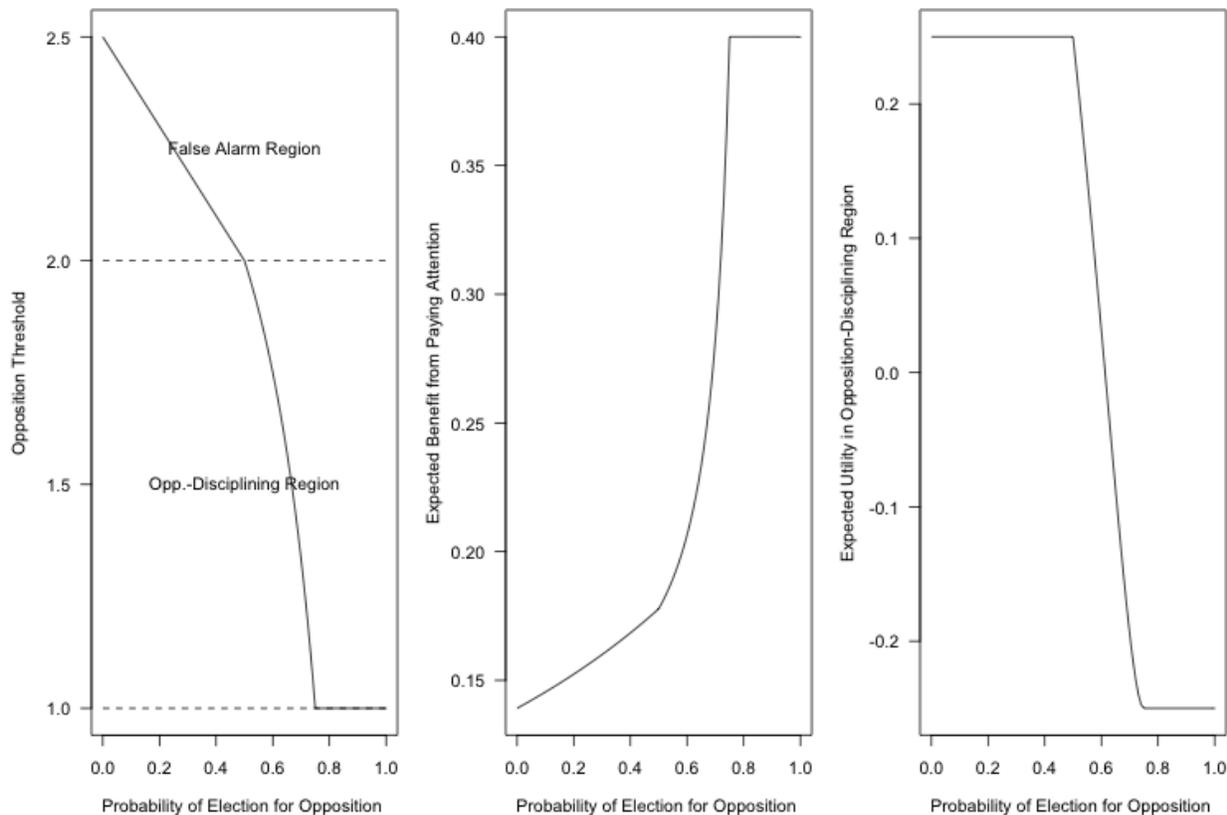
<sup>12</sup>I set  $t = 0.3$  in the figure.

realize, however, that the utility from an opposition party with low election chances is only higher if the voter paid attention to him in the first place. The frequency of the signal can be an asset or liability depending on how much attention the voter is willing to pay to politics. If the voter is content with paying attention to only issues that could result in big losses, an opposition party with small election chances will be useless because its irresponsible behavior may lead to the voter's negligence of the signal altogether. Otherwise, an opposition party with high election chances may be insufficient since it will not warn the voter in all cases that could help voters.

Second, I consider a case where the cost of objection is low. The first panel of figure 2.4 shows the change in opposition threshold for a game with the same parameters as in the first example except  $c$ , which equals 0.5 in this case. The opposition objects to a liberal proposal if the state of the world falls in the region below the line. As seen in the first panel, irrespective of the probability of election, the opposition party always objects to proposals in the government-disciplining region. As the probability of election gets smaller, the opposition party starts to object to proposals in the opposition-disciplining and false alarm regions as well, which means the signal becomes less informative for the voter. More specifically, the probability of the policy proposal in the government-disciplining region (i.e. the proposal being harmful for the voter) given the signal decreases. Since the voter does not receive any first-period benefit from paying attention to proposals in the opposition-disciplining and false regions, the benefit from paying attention gets smaller as  $\beta$  decreases.

Assuming that the equilibrium holds, the expected utility of the voter in the government-disciplining region is constant. However, for small values of  $\beta$  the opposition may lose his influence on the voter. Finally, we consider the changes in the expected utility of the voter in the opposition-disciplining region. Since parties with lower chances of election are more likely to give away themselves by opposing in this region, the voter is better able to discipline the opposition.

Figure 2.4: The Effect of the Opposition's Election Chances



## 2.5.2 Indifference Point of Opposition Activists ( $A_O$ )

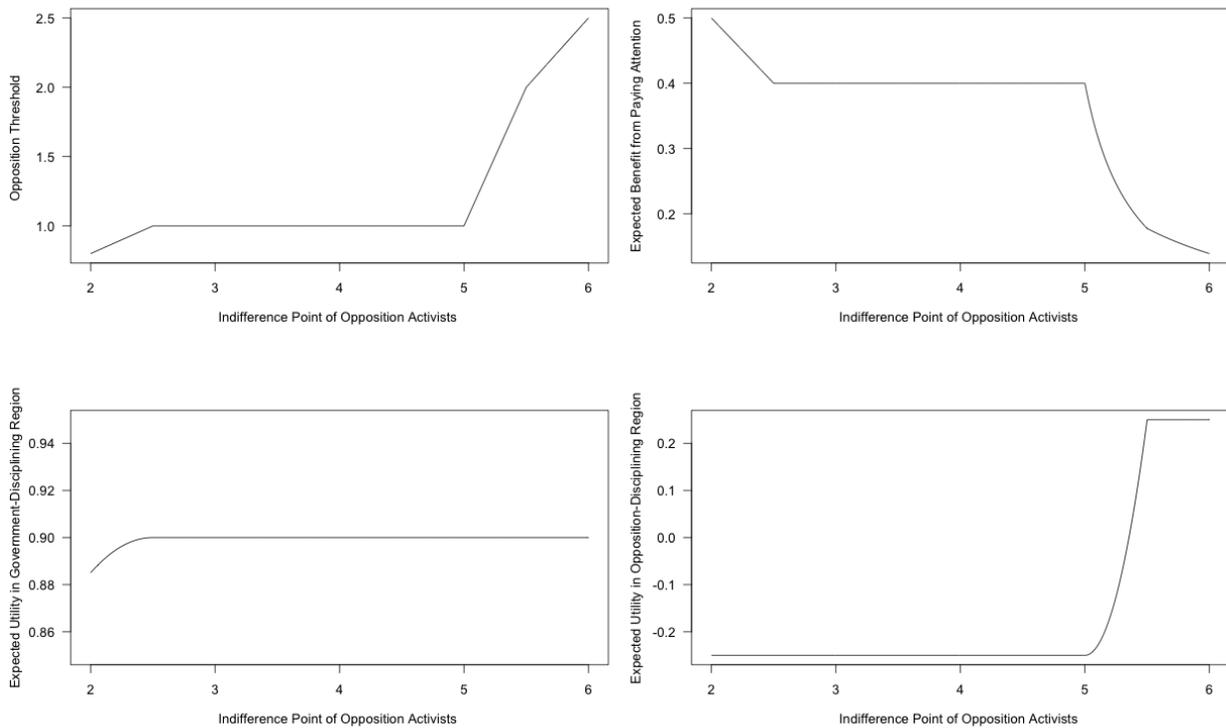
The effect of the opposition activists on the objection threshold is pretty straightforward. The opposition receives position-taking benefit from opposing to liberal policies. As the opposition activists moves away from the voter, the opposition party will be willing to object to proposals for a broader range of  $\omega$  values.

**Proposition 6** *In the informative equilibrium, the objection threshold is non-decreasing in  $A_O$ .*

The upper left part of figure 2.5 shows this for a game with the parameters the same as the first example except  $c = 3$  and  $\beta = 0.5$ . The effect of the opposition activists

on the voter's welfare is mixed. On the one hand, activists encourage the opposition to object to policies that would be costly for the voter in cases where the opposition would not have bothered to object otherwise. On the other hand, extreme activists may lead to an irresponsible opposition party that does not have any influence on the voter. Assuming that the activists are not extreme enough for the opposition party to completely lose his influence, the expected utility of the voter increases in both the government-disciplining and opposition-disciplining regions.

Figure 2.5: The Effect of Opposition Activists



## 2.6 Conclusion

The model in this paper shows that the presence of an opposition party may improve the voters' welfare by warning them against incongruent policy proposals of the government. More specifically, the confrontation between the government and the opposition party is more likely when (i) the chances of election for the opposition party are low, and (ii) opposition activists are ideologically distant from the government (as well as the voter and the opposition party). Voters can use the objections of the opposition party as signals to identify the government's proposals that do not align with their interests. However, for the mechanism to work, the opposition party should be responsible, i.e. not alarm the voters too frequently. In the presence of a responsible opposition party, voter's welfare also increases because the government will have to preemptively adjust its policies.

The model helps us reevaluate the role of legislative opposition in policymaking in two ways. First, the position of opposition parties as contenders for political power places them in a unique position that is different from other political actors in democratic systems such as interest groups or media. The possibility that the opposition party may be held accountable for its objections (if it comes to power) dampens its tendencies to act irresponsibly. Second, opposition party's incentives to respond to party activists may be helpful for constituents since it motivates the party to put the effort to object to incongruent policy proposals. If the activists are too extreme, however, this may lead to irresponsible behavior on the part of the opposition.

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# Chapter 3

## What is Opposition Good For?

“The pure idea of democracy, according to its definition, is the government of the whole people by the whole people, equally represented. Democracy, as commonly conceived and hitherto practiced, is the government of the whole people by a mere majority of the people exclusively represented. The former is synonymous with the equality of all citizens; the latter, strangely confounded with it, is a government of privilege in favor of the numerical majority, who alone possess practically any voice in the state.” (J.S. Mill, 1862)

“The opposition has the responsibility of providing *criticism* and posing useful alternatives to government policies. This function, properly performed, helps government to set goals best qualified to produce public satisfaction. On matters of budget, welfare and other major concerns, criticism keeps the government responsive to the public and aware of weaknesses in its program.” (Apter 1962)

### 3.1 Introduction

Democratically elected governments may propose policies that are incongruent with the median voter’s preferences. When the voters do not pay attention to politics, the government may get away with implementing these policies. An opposition party may help solve the problem of incongruence by warning the voters against incongruent policy proposals. The previous chapter shows that an opposition party’s message would be credible only when the opposition party has sufficient chance of being elected and its activists are not extreme. In

this chapter, I introduce additional problems that the voters face. First, the voters may not always have the means to verify the information that they receive from the opposition. Second, the voters may have limited information about the preferences of the government and the opposition party, which makes it harder to keep the government responsive.

When the voters do not have the means to verify information about policy alternatives, the opposition may mislead the voters. The opposition may do this for policy or electoral purposes. If the opposition has information that would make it more difficult to justify its preferred policy, it may prefer to misinform voters in order to facilitate the adoption of its preferred policy. Similarly, if the opposition has information that would support the preferred policy of the government, it would not be willing to admit that the government is implementing the policy that is good for the public. Instead, it would be inclined to sabotage the reelection chances of the government. With these motivational obstacles in mind, this paper asks whether the opposition can contribute to the responsiveness of the political system through its participation in parliamentary debates. More specifically, this question can be divided into two parts: (1) Under which conditions do opposition parties provide voters with useful information about the consequences of policies? (2) Do government parties have to adjust their policy decisions in accordance with the newly available information?

In order to answer these questions, I propose a formal model that explores the effect of the opposition party on policy decisions in an environment where voters have limited information about the consequences of policies and about the policy bias of politicians. The model tackles two types of informational asymmetry between voters and politicians. First, there is a discrepancy in policy expertise, which makes it difficult for voters to discipline politicians. Second, politicians may be biased in favor of certain policies irrespective of the consequences for voters. The model compares policy decisions that occur with and without parliamentary debate.

The following example illustrates the motivation for this paper. An investment decision has to be made in a parliamentary system with two parties: a majority and a minority. The majority party in the parliament forms the government, so they have control over both the legislature and the executive. The majority party has an agenda that emphasizes economic development whereas the minority party has an agenda that emphasizes environmental protection. Hence the majority party is likely to discount the environmental costs of an investment, whereas the minority party is likely to discount economic benefits. The reason for this bias may be due to ideological concerns or the influence of interest groups. The voters have a more balanced view: they want the investment as long as the environmental costs are not too heavy; however, they have incomplete information about the costs of the investment. Given the institutional setup and high party discipline, the majority party seems to have all the power. The minority party cannot change the outcome by voting. In this chapter, I explore the conditions under which (1) the minority party provides truthful information about the cost of investment to voters and (2) this information has an effect on the policy outcome.

Using a principal agent model, I show that the opposition party can discipline the government to choose policies congruent with voters' preferences if the reputation of the opposition is high, and the benefit of policy to the government is small relative to the benefit of winning elections. Under the same conditions, however, misleading messages of the opposition party may cause a good government to implement policies that bring about bad outcomes for the voters.

## 3.2 Literature

Information transmission in debates has been the topic of several formal theoretical models. We can divide these models into two categories: signaling models and principal agent models.

Signaling models assume multiple legislators with different policy preferences, who need to make a decision in an imperfect information environment (Austen-Smith 1990, Dellis 2007, Stasavage 2007). The players in these models have equal voting weight. In addition, they can influence others' decisions through changing their beliefs about the consequences of policies. My motivating question is different in two respects. First, political actors in the model do not have equal decision-making power: the majority party makes the policy decision in the first period while the minority party can only announce its position. Second, I introduce voters into the model, which is critical because the minority party is expected to influence the decision of the majority party by changing the beliefs of voters about the consequences of policies.

The second category of models that would be helpful in answering my question are agency models with asymmetric information. In these models, the principals face informational constraints that bring about two types of problems. First, the principal has limited information about agents; therefore, she faces the problem of choosing the agent that would make decisions in accordance with principal's preferences. Second, the principal lacks the policy expertise that the agent has; therefore, she faces the problem of monitoring the behavior of the agent. Depending on the action of the agent in the first period, the principal decides whether to retain the agent or replace him with a opposition. In what follows, I'll review models in which voters are the principals and politicians are the agents.<sup>1</sup>

The opposition in many of the principal-agent models is rather passive. It does not take any action that may affect its election chances. Hence, the only information source for the principal is the government. (Canes-Wrone, Herron and Shotts 2001, Prat 2005, Schults 2008). In some models, there is a third party, such as a newspaper or an auditor, that gives

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<sup>1</sup>There are other agency models in which politicians are the agents. See Gilligan and Krehbiel 1987 for a game between the floor and the committee; Grossman and Helpman 2001 for a game between politicians and special interest groups; Morris 2001 for a game between politicians and advisors; Huber and Shipan 2002 for a game between politicians and bureaucrats.

information about the government and the opposition (Ashworth and Shotts 2010, Warren 2012). The obvious difference in this setup is that the third party does not compete with the government. Finally, there are models in which the opposition makes an announcement about his policy preference before the elections (Lemon 2005, Ashworth and Shotts 2015, Dewan and Hortala-Valve 2013). My model falls into this final category; however, it differs from these studies with respect to the type of agents.

As discussed above, principals (voters) have limited information about agents (politicians), who come in different types. One characteristic that distinguishes politicians from one another relates to the quality of information that they have about the mapping between policies and consequences (Canes-Wrone, Herron and Shotts 2001, Prat 2005, Ashworth and Shotts 2010, Ashworth and Shotts 2015).<sup>2</sup> Another characteristic that distinguishes politicians is the level of competence in implementing policies (Dewan and Hortala-Valve 2013). Finally, politicians may differ in terms of whether they are biased in favor of a certain policy irrespective of its consequences (Lemon 2005).

The study that comes closest to answering the question asked in this paper is Lemon (2005); therefore, it would be worth discussing his model in detail. In Lemon's model, the government chooses a policy from two alternatives. One of these policies is the correct policy that will bring about positive outcome for the voter while the other policy will bring about negative outcome. The government knows which policy is the correct policy whereas the voter only knows that both policies are equally likely to be correct. After the policy decision is made, the voter makes a decision about whether to replace the government with the opposition. The opposition has the same information about the policy that the government does. The opposition does not have a say in the policy decision; however, he can make a policy recommendation to the public. There are three versions of the model with different

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<sup>2</sup>In Ashworth and Shotts 2015, politicians may differ in terms of information; however, they decide on the level of effort they will put into acquiring information. Hence, the situation in their model is different from other models in which the type of the politician is determined by the nature.

timing of the policy recommendation. I am interested in the version where the opposition is the agenda setter, that is, where the opposition makes the policy recommendation before the government's policy decision.

The politicians (the government and the opposition) in the model benefit from both policy and office. They differ in terms of their policy preferences. Bad politicians always benefit from the wrong policy whereas good politicians always benefit from the correct policy. The voter does not know the types of politicians; however, each politician has some public reputation. The voter wants to elect good politicians. After having observed the policy decision, the voter reconsiders the reputation of the two politicians. The voter's decision in the elections is not completely determined by the reputation of the politicians after this particular policy decision. That is, the voter does not always reelect the government if she believes the government is more likely to be good than the opposition. A higher reputation increases the chances of reelection for the government but does not guarantee reelection. Similarly a higher reputation increases the chances of election for the opposition but does not guarantee election. The reason for this probabilistic decision is because the voter also cares about other issues but the politician does not know the voter's preferences on these issues.

Based on this model, Lemon identifies several equilibria where the opposition's policy recommendation is informative, that is, the policy recommendation gives some information about the correct policy. He divides these equilibria into three categories: (i) If the opposition's recommendation gives information about the type of the government, the equilibrium is *politician revealing*. (ii) If the opposition's recommendation motivates the bad government to choose correct policy more frequently than he would have done otherwise, the equilibrium is *bad-government disciplining*. (iii) If the opposition's recommendation motivates the good government to choose wrong policy more frequently than he would have done otherwise, the equilibrium is *good-government disciplining*.

Lemon's work provides a good starting point to answer questions related to the role of opposition in policy making; however, the model does not capture the types of issues that are the most pertinent to political debate. The most obvious example to the type of problem captured in Lemon's model would be when corrupt politicians extract resources for their own consumption. Many policy issues as illustrated by the example in the previous section differ from this problem in important respects. First, depending on the circumstances, biased politicians' preferences may not be in conflict with the interests of the voters. The government party may prefer to make an investment because it is biased in favor of economic development yet in some cases making an investment is actually beneficial for the voters. Second, politicians differ from each other in terms of their policy preferences. The policy biases of the government and the opposition parties are usually in different directions. In my example, the bad government party always wants to make the investment whereas the bad opposition party always opposes the investment. Finally, voters know the preferred policies of biased parties, which makes it easier for the voters to identify biased parties. Going back to my example, the voter knows that a biased government party will never choose not to make the investment except for reelection purposes. The model in this chapter explained in the next section incorporates these aspects of the parties' preferences. For the rest of the paper, I'll assume that political parties are unitary actors. I'll refer to the majority party as the government and the minority party as the opposition.

### 3.3 Model

There are three players in the model: a government (G), an opposition (O) and a representative voter (V). In the baseline model, the opposition has no role. In the deliberative model, the opposition sends a costless message  $m \in \{0, 1\}$  about his preferred policy. In both models, the government chooses a policy  $x \in \{0, 1\}$ . The outcome of the policy de-

depends on whether the policy matches the state of the world  $\omega \in \{0, 1\}$ . The state of the world is observed by the government and the opposition but not by the voter. The voter only knows that both states of the world are equally likely to occur. The preferred policies of the government and the opposition depend on their respective types. The government and the opposition can be one of two types  $t \in \{b, g\}$ . The bad government always prefers  $x = 1$  whereas the bad opposition always prefers  $x = 0$ . The good government (or opposition) prefers the policy that matches the state of the world. The type of the government is private information. The opposition and the voter only know that the probability that the government is good is  $\beta_G$ . The same is true for the opposition's type. The prior belief that the opposition is good is  $\beta_O$ .

Timing of the game in the baseline model is the following:

1. Nature chooses the government's type, the opposition's type and the state of the world.
2. The government and the opposition observe the state of the world.
3. The government chooses a policy  $x \in \{0, 1\}$ .
4. The voter decides whether to reelect the government or not.

Timing of the game in the deliberative model is the following:<sup>3</sup>

1. Nature chooses the government's type, the opposition's type and the state of the world.
2. The government and the opposition observe the state of the world.
3. The opposition announces his preferred policy  $m \in \{0, 1\}$ .

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<sup>3</sup>The timing of this model is a good approximation of the real world where debate precedes the policy decision. One can argue that the government also participates in political debate before making its policy decision. If the government does not pay any cost for implementing a policy that is different from what it advocated during debate, the message of the government would not provide any information. The voters would take into account the policy decision rather than the message. A model where the government pays a cost for reversal is left for future research.

4. The government chooses a policy  $x \in \{0, 1\}$ .
5. The voter decides whether to reelect the government or not.

The utility functions of players are the same for both games.

The politicians' utility has two components. First, they receive non-negative utility from the policy depending on their types. The good politicians receive utility  $b_g > 0$  from policy that matches the state of the world. The bad politicians receive utility  $b_b > 0$  from their preferred policies. Second, politicians receive utility of 1 from winning elections.

Utility functions of the two types of governments are the following:

$$u_{G_g}(x, m, \omega) = \begin{cases} b_g + \Pr(\text{reelect}|x, m) & \text{if } x = \omega \\ 0 + \Pr(\text{reelect}|x, m) & \text{if } x \neq \omega \end{cases}$$

$$u_{G_b}(x, m) = \begin{cases} 0 + \Pr(\text{reelect}|x, m) & \text{if } x = 0 \\ b_b + \Pr(\text{reelect}|x, m) & \text{if } x = 1 \end{cases}$$

Similarly, utility functions of the two types of oppositions are the following:

$$u_{O_g}(x, m, \omega) = \begin{cases} b_g + 1 - \Pr(\text{reelect}|x, m) & \text{if } x = \omega \\ 0 + 1 - \Pr(\text{reelect}|x, m) & \text{if } x \neq \omega \end{cases}$$

$$u_{O_b}(x, m) = \begin{cases} b_b + 1 - \Pr(\text{reelect}|x, m) & \text{if } x = 0 \\ 0 + 1 - \Pr(\text{reelect}|x, m) & \text{if } x = 1 \end{cases}$$

The voter receives positive utility from electing good politicians. After having observed the opposition's message  $m$  and the government's policy  $x$ , the voter updates her beliefs about the types of the government and the opposition. The updated beliefs of the voter about the government and the opposition are indicated by  $\widehat{\beta}_G(m, x)$  and  $\widehat{\beta}_O(m, x)$ , respectively. For ease of notation, I indicate the arguments of the updated beliefs by superscripts. For example, in the baseline model  $\widehat{\beta}_G^0$  refers to the updated belief about the government after observing policy  $x = 0$ . In the model with debate,  $\widehat{\beta}_G^{01}$  refers to the updated belief about

the government after observing message  $m = 0$  and policy  $x = 1$ . The voter reelects the government according to her updated beliefs; however, her decision is not completely determined by her beliefs. The voter's decision is probabilistic: she reelects the government with probability  $H(\widehat{\beta}_G, \widehat{\beta}_O)$ , where  $H$  is a cumulative distribution function increasing in the first term and decreasing in the second term. An example for  $H$  would be  $H = \frac{1 + \widehat{\beta}_G - \widehat{\beta}_O}{2}$ . Hence, when the voter's updated beliefs about both politicians are the same, the voter flips a coin. When, the voter believes that the government is more likely to be good than the opposition, she will reelect the government with  $p > 1/2$ ; however,  $p$  will never be 1 unless  $\widehat{\beta}_G = 1$  and  $\widehat{\beta}_O = 0$ .

The solution concept for the game is perfect Bayesian equilibrium. When beliefs are not pinned down by Bayes' rule, I calculate the beliefs assuming that both the opposition and the government are purely policy-oriented. The next section shows the equilibria in the baseline model where the opposition does not take any action.

### 3.4 Baseline Model

In the absence of political debate, the voter does not acquire any information about the position of the opposition party. The only information she gets is the policy decision of the government, which may give clues about whether the government is good or not. The voter does not know the type of the government or the state of the world; however, she knows that the bad government prefers policy  $x = 1$  irrespective the state of the world. Hence, the bad government has incentive to choose policy  $x = 0$  only if this increases its reelection chances. The probability that the voter will reelect the government is determined by her belief that the government is good. In perfect Bayesian equilibrium, the beliefs of the players should be consistent with the strategies of other players. Hence, in any perfect Bayesian equilibrium, the probability that the voter reelects the government after observing

$x = 0$  should be (weakly) greater than the probability that she reelects the government after observing  $x = 1$ .<sup>4</sup> If we go back to our example, the voter would reelect the government with (weakly) higher probability when the investment is not made.

In order to find the equilibria in the baseline model, we need to think about the incentives of the government given the reelection decision of the voter. The good government's decision is pretty straightforward when  $\omega = 0$ . It will choose policy  $x = 0$  since doing so will benefit it on both policy and reelection grounds. When  $\omega = 1$ , however, the good government's policy and reelection incentives contradict each other. Choosing  $x = 1$  will bring the government policy benefits; however, it will decrease its reelection chances. A similar trade-off is the case for the bad government irrespective of  $\omega$ . Hence, the equilibrium strategy of the good government when  $\omega = 1$ , and of the bad government will depend on how much they value policy relative to winning elections. If the electoral benefit of choosing policy  $x = 0$  is higher than the policy benefit of choosing  $x = 1$ , the government will give up its preferred policy of  $x = 1$ . Following this logic, Proposition 1 shows all the equilibria in pure strategies for the baseline model.

**Proposition 1:** In the baseline model, the following equilibria exist in pure strategies:

(a) Both types of governments always choose their preferred policies, provided:

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<sup>4</sup>To see why this is the case, let us assume that this statement is not true, i.e., the voter reelects the government with higher probability after observing  $x = 1$ . Then, the bad government will never choose policy  $x = 0$  while the good government may choose  $x = 0$  depending on the value it assigns to policy relative to winning elections. If the good government does not value reelection a lot, it will choose  $x = 0$  when  $\omega = 0$ . Hence, the voter will know that she is facing a good government whenever she observes policy  $x = 0$ . Therefore, she should reelect the government with higher probability after observing  $x = 0$ . If the good government values reelection enough to choose  $x = 1$  when  $\omega = 0$ , the voter will never observe  $x = 0$ . Hence, the beliefs are not pinned down by Bayes' rule. In this case, I calculate beliefs assuming that both parties are policy-oriented. Given this assumption, the voter should reelect the government with higher probability after observing  $x = 0$ , as well.

$$\begin{aligned}
H(1, \beta_O) - H(\widehat{\beta}_G^1, \beta_O) &\leq b_b \quad (\text{for } b_g \geq b_b) \\
H(1, \beta_O) - H(\widehat{\beta}_G^1, \beta_O) &\leq b_g \quad (\text{for } b_g \leq b_b)
\end{aligned} \tag{3.1}$$

where

$$\widehat{\beta}_G^1 = \frac{\beta_G/2}{1 - \beta_G/2}$$

(b) The good government chooses  $x = 0$  and the bad government chooses  $x = 1$  irrespective of the state of the world, provided:

$$b_g \leq H(1, \beta_O) - H(0, \beta_O) \leq b_b \tag{3.2}$$

(c) The good government always chooses  $x = 0$  irrespective of the state of the world, and the bad government chooses the policy that matches the state of the world,<sup>5</sup> provided:

$$b_g \leq b_b \tag{3.3}$$

$$H(\widehat{\beta}_G^0, \beta_O) - H(0, \beta_O) = b_b \tag{3.4}$$

where

$$\widehat{\beta}_G^0 = \frac{2\beta_G}{\beta_G + 1}$$

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<sup>5</sup>There is also an equilibrium in which the bad government chooses the policy that does not match the state of the world. That is, the bad government will choose  $x = 1$  when  $\omega = 0$  and  $x = 0$  when  $\omega = 1$ . For the purposes of this paper, this equilibrium is not particularly interesting.

(d) Both types of governments choose  $x = 0$  irrespective of the state of the world, provided:

$$\begin{aligned} H(\beta_G, \beta_O) - H(\widehat{\beta}_G^1, \beta_O) &\geq b_g \quad (\text{for } b_g \geq b_b) \\ H(\beta_G, \beta_O) - H(\widehat{\beta}_G^1, \beta_O) &\geq b_b \quad (\text{for } b_g \leq b_b) \end{aligned} \quad (3.5)$$

where 
$$\widehat{\beta}_G^1 = \frac{\beta_G/2}{1 - \beta_G/2}$$

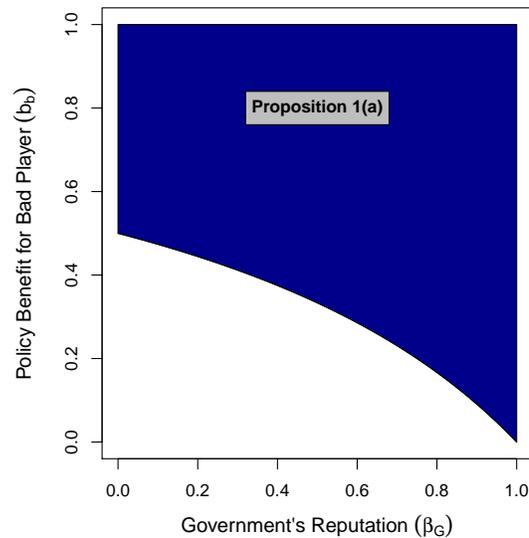
When the electoral benefit of choosing  $x = 0$  is smaller than the benefit that both the good and the bad governments receive from their preferred policies, electoral incentives cannot convince the governments to give up their preferred policy of  $x = 1$ . Therefore, there is an equilibrium where both types of governments choose their preferred policy in equilibrium when the conditions shown in Proposition 1(a) are satisfied. To see how this works, let us assume that both types of governments choose their preferred policy. When the voter observes policy  $x = 0$ , she knows for sure that the government is good. When she observes policy  $x = 1$ , her updated belief that the government is good will be smaller than the initial reputation of the government. Therefore, choosing  $x = 1$  will be costly for the government. Since the benefit that both good and bad governments get from their preferred policy is greater than the electoral benefit of choosing  $x = 0$ , both types of governments will choose their preferred policies. Figure 3.1 shows the parameters for which this equilibrium holds when the voter's decision function is  $H = \frac{1+\beta_G-\beta_O}{2}$ <sup>6</sup>. When the initial reputation of the government is high, the voter's updated belief that the government is good remains high. Therefore, the electoral cost that the government incurs for choosing its preferred policy is relatively small. This means that the government will continue to choose its preferred policy even if it assigns relatively small values to policy. As the initial reputation of the government decreases, however, the electoral cost of choosing policy  $x = 1$  will be higher,

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<sup>6</sup>For  $b_g < b_b$ , the y axis should be replaced by policy benefit for good player( $b_g$ ).

hence the governments whose preferred policy is  $x = 1$  will only choose their preferred policy if the value that they assign to policy is high enough.

Figure 3.1: Proposition 1(a) for  $b_g > b_b$  and  $H = \frac{1 + \beta_G - \beta_O}{2}$



If the good government values policy less than the bad government, we may encounter a situation where the electoral benefit of choosing  $x = 0$  is greater than the amount the good government values policy but smaller than the amount the bad government values policy. In this case, the good and bad governments will choose policies  $x = 0$  and  $x = 1$ , respectively, irrespective of the state of the world. After observing the policy  $x = 0$ , the voter will know for sure that the government is good, and reelect the government with higher probability than she would do after observing policy  $x = 1$ . The condition for this equilibrium is given

in Proposition 1(b).<sup>7</sup> When the voter's decision function is  $H = \frac{1+\beta_G-\beta_O}{2}$ , this condition requires that  $b_g$  be smaller than  $1/2$  and  $b_b$  be greater than  $1/2$ .

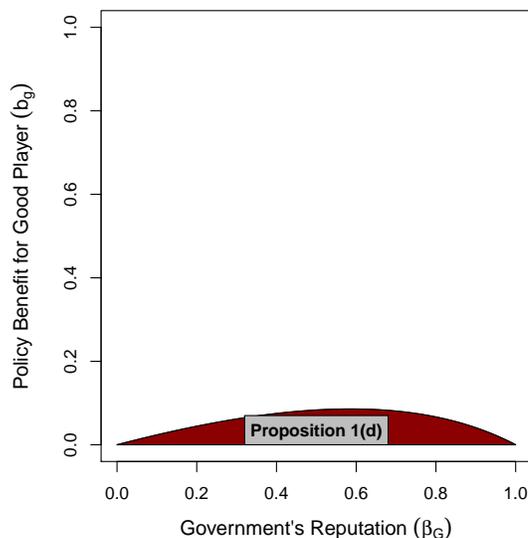
When the electoral benefit of choosing  $x = 0$  is greater than the amount the good government values policy but exactly equal to the amount the bad government values policy, the good government will always choose  $x = 0$ . The bad government will be indifferent between choosing  $x = 0$  and  $x = 1$  in both states of the world. Given the type of problem discussed in this chapter, I will ignore the case where the government chooses the policy that does not match the state of the world. This would be the case where the government party decides to make the investment when it is not beneficial for the voters but not to make the investment when it is beneficial for the voters. It would make more sense to think, however, that the government would be more in favor of the investment when it is beneficial for the voters. When we look at the case where the bad government chooses the policy that matches the state of the world, we see that the voter will find out that the government is bad upon observing policy  $x = 1$ . When  $x = 0$ , however, the voter's belief that the government is good will go up. If the knife-edge condition stated in Proposition 1(c) is satisfied, we can have the equilibrium where the bad government always chooses the correct policy.

Finally, the electoral benefit of choosing  $x = 0$  may be greater than the policy benefit of  $x = 1$  for both good and bad governments. In that case, both governments will choose policy  $x = 0$  irrespective of the state of the world. The condition for this equilibrium to hold is given in Proposition 1(d). Since both types of governments always choose policy  $x = 0$ , the

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<sup>7</sup>When the electoral benefit of choosing  $x = 0$  is greater than the amount the bad government values policy but smaller than the amount the good government values policy, there is no equilibrium. In this case, the bad government will always choose policy  $x = 0$ . The good government will choose the policy that matches the state of the world. When the voter observes policy  $x = 1$ , she will know for sure that the government is good. When she observes policy  $x = 0$ , she will know that she is facing one of the following two situations: 1) The government is good, and chooses policy  $x = 0$  because  $\omega = 0$ . 2) The government is bad, and chooses policy  $x = 1$  for fear of electoral cost. Hence, the updated beliefs of the voter upon observing policy  $x = 1$  will be lower than the initial reputation of the government. This will no longer be an equilibrium because the voter will have incentive to reelect the government with higher probability after observing policy  $x = 1$ .

Figure 3.2: Proposition 1(d) for  $b_g > b_b$  and  $H = \frac{1 + \beta_G - \beta_O}{2}$



voter does not obtain any information about the government's type by observing the policy  $x = 0$ . Hence, the reputation of the government stays the same after policy  $x = 0$ . Since  $x = 1$  is never chosen in equilibrium, the voter's belief is not pinned down by Bayes' rule. If the voter assumes that deviation from equilibrium is caused by a purely policy-oriented government, her updated belief will be lower than the government's initial reputation. If the difference between the two values is greater than the value that both types of governments assign to policy, it will be worth for the government to give up its preferred policy. As shown in Figure 3.2, the parameters for which this equilibrium holds are quite limited for the decision function  $H = \frac{1 + \beta_G - \beta_O}{2}$ <sup>8</sup>.

It is important to note that in the baseline model there are no equilibria where both types of governments choose the correct policy. If there were such an equilibrium, the voter would not acquire any information about the government. Hence, the voter would reelect

<sup>8</sup>For  $b_g < b_b$ , the y axis should be replaced by policy benefit for bad player( $b_b$ ).

the government with equal probability after observing  $x = 0$  and  $x = 1$ . When the bad government does not have any electoral incentive to choose the correct policy, it would deviate to its preferred policy of  $x = 1$  irrespective of the state of the world. In all the equilibria described in Proposition 1, there is welfare loss for the voter. The next section identifies equilibria in the model with debate to see whether introduction of political debate can improve the welfare of the voter.

### 3.5 Model with Debate

The previous section shows that there are no equilibria in the baseline model where both governments choose the policy that matches the state of the world. In a world with no debate, the voter's lack of information limits her ability to discipline the government to make decisions in accordance with her interests. The focus of this paper is to explore whether this situation may be improved when the opposition party gives the voter information about the state of the world. More specifically, I look into the existence of bad government-disciplining equilibria, that is, equilibria where the opposition's message motivates the bad government to choose the correct policy in a situation where it would not have done so if the message had been different. It is important to note that disciplining the bad government becomes an issue only when  $\omega = 0$ . When  $\omega = 1$ , the policy preferences of the government are already aligned with those of the voter. Hence, in this section, I am looking at situations where the opposition's message  $m = 0$  induces the bad government to choose policy  $x = 0$  for electoral concerns.

First, I consider the possibility of bad government-disciplining equilibria where the opposition is always truthful. In such an equilibrium, both types of opposition announce the policy that matches the state of the world. In addition, when  $\omega = 0$  the bad government chooses policy  $x = 0$  with some positive probability after  $m = 0$ , and policy  $x = 1$  after

$m = 1$ . In other words, the bad government's electoral incentives outweigh its policy incentives only when the opposition announces the policy that matches the state of the world, hence the disciplining effect of the debate. Proposition 2 states that there exist no equilibria that satisfy these conditions when  $b_g \neq b_b$ .<sup>9</sup>

**Proposition 2:** If  $b_g \neq b_b$ , there are no bad government-disciplining equilibria where the opposition is always truthful. That is, there are no equilibria where (i) both types of opposition always announce the policy that matches the state of the world, and (ii) when  $\omega = 0$ , the bad government chooses policy  $x = 0$  with positive probability after  $m = 0$ , and policy  $x = 1$  after  $m = 1$ .

For a bad government-disciplining equilibrium with truthful opposition to exist, the opposition should have incentives to announce the correct policy. At the very least, announcing the correct policy should not hurt the opposition. Given that the bad opposition's preferred policy is not always the correct policy, it will have stronger incentives to deviate from such an equilibrium. In particular, admitting that  $\omega = 1$  may be costly for the bad opposition because it makes it less costly for the government to choose policy  $x = 1$ . If announcing  $m = 1$  induces the government to choose  $x = 1$  instead of  $x = 0$  without incurring any reputation costs, then the bad opposition would deviate from the truthful equilibrium in order not to lose his preferred policy. If the announcement  $m = 1$  does not change the policy choice of the government but increases its reelection chances, then the opposition would also deviate from the truthful equilibrium.<sup>10</sup> There are cases where the bad opposition does not have incentive to deviate from the truthful equilibrium. If the good government cares enough about reelection to choose policy  $x = 0$  when  $\omega = 1$  irrespective of the opposition's announcement, the announcement  $m = 1$  does not help the reelection of government. In

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<sup>9</sup>See Appendix for the proof of Proposition 2.

<sup>10</sup>See all the cases where  $b_g > b_b$ , and the cases (i-a) and (iii-a) where  $b_g < b_b$  in the proof of Proposition 2.

these cases, the good opposition will incur a cost for revealing the correct state of the world, and hence will have incentive to deviate from the truthful equilibrium.<sup>11</sup>

Second, I consider the possibility of bad government-disciplining equilibria where only the good opposition is truthful. In particular, let us think of a situation where the good opposition always announces the policy that matches the state of the world, and the bad opposition announces  $m = 0$  irrespective of the state of the world. Given the incentives of the bad opposition to mislead the voters, this situation is plausible. The question then becomes whether such behavior of the opposition would have a disciplining effect on the bad government's policy decision. That is, whether we can find an equilibrium where the bad government chooses the correct policy when  $\omega = 0$  only when the bad opposition announces  $m = 0$ . Proposition 3 identifies such an equilibrium and specifies the conditions for its existence.

**Proposition 3:** In the model with debate, there exists an equilibrium where (i) the good opposition always makes the announcement that matches the state of the world, (ii) the bad opposition always announces  $m = 0$ , (iii) both types of governments choose policy  $x = 0$  when  $m = 0$ , (iv) the good government chooses the policy that matches the state of the world when  $m = 1$ , and (v) the bad government chooses policy  $x = 1$  when  $m = 1$ . This equilibrium exists, provided:

$$H(\beta_G, \widehat{\beta}_O^{00}) - H(\widehat{\beta}_G^{01}, \widehat{\beta}_O^{01}) \geq b_g \quad (\text{for } b_g \geq b_b) \quad (3.6)$$

$$H(\beta_G, \widehat{\beta}_O^{00}) - H(\widehat{\beta}_G^{01}, \widehat{\beta}_O^{01}) \geq b_b \quad (\text{for } b_g \leq b_b)$$

$$H(\beta_G, \widehat{\beta}_O^{00}) - H(\beta_G, 1) \leq b_b(1 - \beta_G) \quad (\text{for } b_g \geq b_b) \quad (3.7)$$

$$H(\beta_G, \widehat{\beta}_O^{00}) - H(\beta_G, 1) \leq b_g(1 - \beta_G) \quad (\text{for } b_g \leq b_b)$$

where

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<sup>11</sup>See cases (i-c-i),(i-c-iii),(iii-c-1) and (iii-c-iii) in the proof of Proposition 2.

$$\widehat{\beta}_O^{00} = \widehat{\beta}_O^{01} = \frac{\beta_O}{2 - \beta_O} \text{ and } \widehat{\beta}_G^{01} = \beta_G \cdot \frac{1 - \beta_O}{2 - \beta_O}$$

In this equilibrium, both types of opposition always follow the message  $m = 0$  whereas they continue to choose their preferred policy when  $m = 1$ . Notice that message  $m = 1$  is announced only by the good opposition when  $\omega = 1$ . Since the preferred policies of both types of governments are the same when  $\omega = 1$ , the behavior of good and bad governments are identical on the equilibrium path. Hence, on the equilibrium path, the voter only observes the message-policy pairs  $(0, 0)$  and  $(1, 1)$ . In either case, the voter does not receive any information about the type of the government. In the former case, the voter updates her belief about the opposition to  $\frac{\beta_O}{2 - \beta_O}$ , which is smaller than the initial reputation of the opposition. In the latter case, the voter knows for sure that the opposition is good. The beliefs of the voter are not pinned down by the Bayes' rule for the message-policy pairs  $(0, 1)$  and  $(1, 0)$ . I calculate the beliefs of the voter assuming that both the opposition and the government are policy-oriented. The updated beliefs about the opposition and the government after the pair  $(0, 1)$  are both lower than their respective initial reputation.<sup>12</sup> The updated beliefs after the pair  $(1, 0)$  are the same as those after  $(1, 1)$ .<sup>13</sup>

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<sup>12</sup>Holding the government's strategy constant, the opposition does not have any incentive to deviate from  $m = 1$ . Remember that  $m = 1$  is observed only when  $\omega = 1$  and the opposition is good. In this case, deviating to  $m = 0$  would result in the government's choosing policy  $x = 1$ , which is not the preferred policy of the good opposition. Therefore, when the voter observes  $(0, 1)$ , she assumes that the opposition did not deviate. Hence, the updated belief about the opposition stays  $\frac{\beta_O}{2 - \beta_O}$ . Given the opposition's strategy, when the message  $m = 0$  is observed, the voter knows that  $\omega = 0$  with probability  $\frac{1}{2 - \beta_O}$ , and  $\omega = 1$  with probability  $\frac{1 - \beta_O}{2 - \beta_O}$ . When  $\omega = 0$ , the good government does not have any incentive to deviate to  $x = 1$ . When  $\omega = 1$ , both types of governments have incentive to deviate to  $x = 1$ . Hence, the voter's belief about the government after  $(0, 1)$  equals  $\beta_G \cdot \frac{1 - \beta_O}{2 - \beta_O}$ .

<sup>13</sup>Holding the government's strategy constant, the opposition does not have any incentive to deviate from  $m = 0$ . The good opposition announces  $m = 0$  only when  $\omega = 0$ . If he deviates to  $m = 1$ , this will result in bad government choosing  $x = 0$ , which is against the policy interests of the good opposition. The bad opposition always announces  $m = 0$ . If he deviates to  $m = 1$ , either only the bad government (when  $\omega = 1$ ) or both types of governments (when  $\omega = 0$ ) choosing  $x = 0$ , which is also against the policy interests of the bad opposition. Hence, after observing the pair  $(1, 0)$ , the voter concludes that the government is good after observing and  $\omega = 1$ . In this case, neither type of government has reason to deviate to  $x = 0$ . Therefore, the voter's belief about the government equals the government's initial reputation.

Having calculated the voter's beliefs about the opposition and the government, I can now check whether their strategies are consistent with the incentives. First, I consider the incentives of the government after observing  $m = 0$ . For both types of governments to choose  $x = 0$  after  $m = 0$ , the benefit that they get from their preferred policy should be sufficiently low. The left hand side of the inequality in condition (1) of the Proposition 3 gives the difference in the probability of reelection between when the government chooses  $x = 0$  and  $x = 1$  after observing  $m = 0$ . Even though the bad opposition's message can be misleading information in this equilibrium, the message  $m = 0$  gives some information to the voter about the state of the world. Based on this information, the voter updates her belief about the government in a way that would hurt government's reputation when  $x = 1$  is chosen after  $m = 0$ .<sup>14</sup> If the increase in the reelection chances of the government acquired by choosing  $x = 0$  instead of  $x = 1$  is greater than benefit that both types of governments get from their preferred policy, then both types of governments will follow the message  $m = 0$  irrespective of the state of the world. Second, I consider the incentives of the government after observing  $m = 1$ . As explained in the previous paragraph, the voter's belief about the government is the same after policy pairs  $(1, 0)$  and  $(1, 1)$ , which means that the government's reelection probability does not depend on his policy choice after  $m = 1$ . In this case, both types of governments choose their preferred policy after the message  $m = 1$ .

Given the beliefs of the voter and the strategy of the government, I now check the incentives of the opposition. First, I consider the incentives of the opposition when  $\omega = 0$ . Note that both types of opposition prefer the policy  $x = 0$  in this case. When they announce  $m = 0$ , they get their preferred policy because both types of governments always follow the message. The downside of announcing  $m = 0$  for the opposition is the reputation damage. When they announce  $m = 1$ , they get their preferred policy only when they are facing

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<sup>14</sup>As explained in the previous footnotes, the voter's belief about the government after the pair  $(0, 1)$  is the government initial reputation multiplied by the probability that  $\omega = 1$ , which is given by  $\frac{1-\beta_O}{2-\beta_O}$

a good government because the bad government would take advantage of the situation to choose  $x = 1$ . They will, however, enjoy a reputation advantage no matter what policy the government chooses. The voter will always think that the opposition is good after observing the message  $m = 1$ . Hence, the question becomes whether the policy advantage of announcing  $m = 0$  is big enough to cancel out the electoral advantage of announcing  $m = 1$ . The left hand side of the inequality in condition (2) of Proposition 3 gives the electoral loss as a result of announcing  $m = 0$ .<sup>15</sup> The right hand side of the inequality shows the policy gain from announcing  $m = 0$ . If the electoral loss is smaller, then the opposition will announce  $m = 0$ .

Second, I consider the incentives of the opposition when  $\omega = 1$ . In particular, I check whether the good opposition announces  $m = 1$ , and the bad opposition announces  $m = 0$  in this case. As discussed above, announcing  $m = 1$  when  $\omega = 1$  results in both types of governments choosing policy  $x = 1$ . Given the policy pair  $(1, 1)$ , the voter believes that the opposition is good. Hence, announcing  $m = 0$ , which would be followed by the policy  $x = 0$  hurts the reputation of the opposition. The good opposition does not have any reason to go through this damage because deviating to  $m = 0$  would lead both types of government to switch to policy  $x = 0$ , which would result in the loss of the positive utility that the good opposition receives from policy  $x = 1$ . The bad opposition, however, announces  $m = 0$  when the policy benefit that it gets is greater than the electoral loss. This condition is a weaker condition than the condition (2) of Proposition 3.

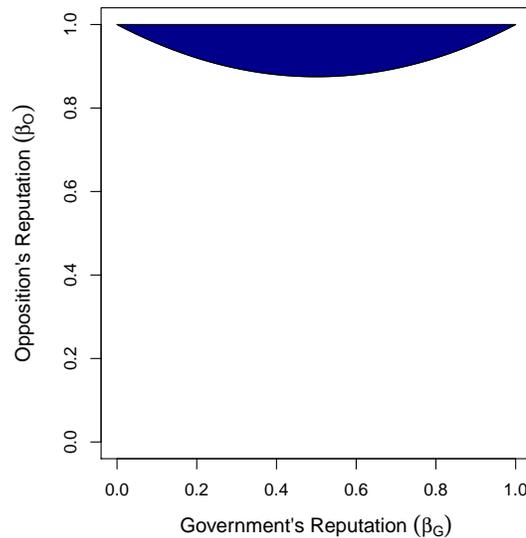
Bringing the two conditions of Proposition 3 together, it is important to note that the equilibrium requires that the opposition's reputation be sufficiently high and that the utility that the government receives from policy be sufficiently low. Figure 3.3 shows the range of  $\beta_O$

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<sup>15</sup>Note that the function  $H$  gives the probability of reelection for the government. Since the function is decreasing in the second term, the difference in the left hand side of the equation will always be positive, which points to an increase in the reelection probability of the government and hence a decrease in the election probability of the opposition.

(opposition's reputation) values for which the equilibrium holds when the voter's decision-making function is  $H = \frac{1+\beta_G-\beta_O}{2}$ . To understand why the opposition's reputation is critical, think about the situation where the voter knows for sure that the opposition is good. That would mean that the voter always finds out the correct policy; therefore, the government cannot get away with choosing its preferred policy against the interest of the voter. As the reputation of the opposition decreases, however, the quality of the information that the voter, and the disciplining effect of that information deteriorates.

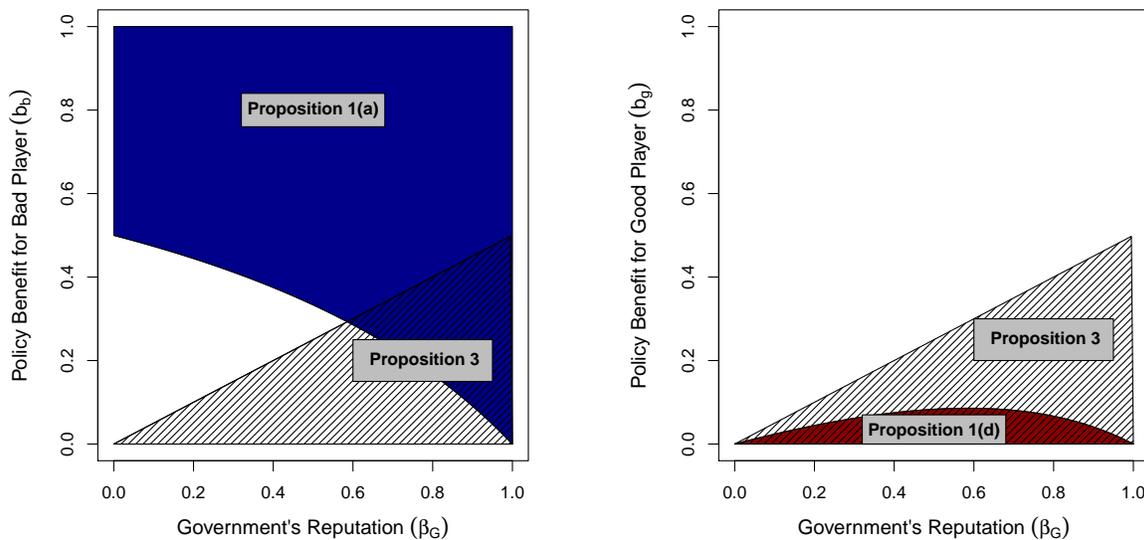
Figure 3.3: Proposition 3 for  $H = \frac{1 + \beta_G - \beta_O}{2}$



In addition to the quality of information, the utility from their preferred policy is critical in determining the disciplining effect of the opposition's message. If the benefit that the government gets from its preferred policy is high compared to electoral benefit, it is not possible to discipline the government. The striped area in Figure 3.4 shows the range of policy benefit values for which the equilibrium holds when the opposition's reputation equals 1 and

the voter's decision-making function is  $H = \frac{1 + \beta_G - \beta_O}{2}$ .<sup>16</sup> As the government's reputation increases, the maximum policy benefit value for which equilibrium holds increases as well. When the government's reputation is 0, the government does not have anything to lose by choosing the policy that is perceived to be bad for the voters. Hence, it may as well choose its preferred policy and settle for the policy benefit. For governments with higher reputation, the stakes are higher. Choosing a policy that is perceived as bad for the voters will decrease reelection chances; therefore, the government will be willing to choose its preferred policy only if it brings high benefit.

Figure 3.4: Proposition 3 for  $H = \frac{1 + \beta_G - \beta_O}{2}$  and  $\beta_O = 1$



To summarize, Proposition 3 shows that the inclusion of opposition in political debate give the voters ability to discipline the government. For the disciplining effect to occur, the opposition's information should be credible, that is, the opposition's reputation should be

<sup>16</sup>As the opposition's reputation decreases, the maximum policy benefit value for which the equilibrium holds decreases as well.

high enough. Moreover, the government should not care too much about policy. The next section compares the welfare of voters under the models with and without debate.

## 3.6 Discussion

In a political system where the voters have limited information about the consequences of policies, the responsiveness of government is hard to sustain. Governments that are biased in favor of certain policies irrespective of the consequences for voters may get away with choosing policies against the interests of the voters. When the opposition party does not participate in the debate about policy, the situation becomes even more difficult for the voters. The only information that the voter has is the direction of the government's policy bias. In the motivating example of this paper, the voters know that the government may be biased in favor of economic development. This information leads voters to suspect the soundness of the policy decision whenever the government makes an investment.

The policy position of the government may help the voter to discipline the government to be more responsive to her demands; however, the disciplining effect of this information is rather limited. Table 3.1 shows the policies chosen by different types of governments in the equilibria of the baseline model<sup>17</sup>. In all cases the government is punished by the voter for making the investment because the voter takes into account that the bad government would be willing to make the investment even when it is bad for the voters. The equilibrium may be different depending on the severity of this punishment.

If the punishment is not severe enough for the governments to forego their preferred policies as in Proposition 1(a), both types of governments continue to choose their preferred policies. Hence, the voter loses when she faces a bad government under circumstances

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<sup>17</sup>The policy that is good (bad) for the voter is denoted in blue (red).

Table 3.1: Proposition 1

		$\omega = 0$	$\omega = 1$
Proposition 1(a)	Good Government	$x = 0$	$x = 1$
	Bad Government	$x = 1$	$x = 1$
Proposition 1(b)	Good Government	$x = 0$	$x = 0$
	Bad Government	$x = 1$	$x = 1$
Proposition 1(c)	Good Government	$x = 0$	$x = 0$
	Bad Government	$x = 0$	$x = 1$
Proposition 1(d)	Good Government	$x = 0$	$x = 0$
	Bad Government	$x = 0$	$x = 0$

where the environmental costs of investment are very high. If the punishment is severe enough for both governments to forego their preferred policies as in Proposition 1(d), neither type of government ever chooses to make the investment. Ironically, when the voter is able to discipline the government, her welfare loss is even greater. Since governments are too concerned about reelection to make the investment, the voter never gets the benefit of investment. In cases (b) and (c), the punishment is severe enough to discipline the good government but not the bad government. In these cases, the voter's loss results from the good government never making the investment. In case (b), the voter faces an additional cost since the bad government makes investment that are too costly for the environment.

An opposition party giving truthful information to voters would greatly help the voters to discipline the government. If the voter knows the environmental costs of an investment, she can punish the government for making the investment when it is too costly. The problem arises, however, because the opposition party has incentives to give misleading information.

When the investment is beneficial, announcing the true state of the world would make it less costly for the government to make the investment. When the voter learns that the investment is beneficial, the government will not suffer reputation costs for making the investment. Hence, by announcing the correct policy, the opposition increases the reputation of the government, thereby decreasing his chances for holding office. Moreover, it encourages the government to choose a policy that the bad opposition does not benefit from.

Because of the incentives of the opposition, there are no bad government-disciplining equilibria that are always truthful. There is, however, a bad government-disciplining equilibrium where only the good opposition is truthful. In this equilibrium, the government never makes the investment unless it is supported by the opposition. When the opposition supports the investment, the good government makes the investment provided that it is not too costly while the bad government always makes the investment. Table 3.2 shows the decisions of both parties on the equilibrium path in this equilibrium. The involvement of opposition in decision making in this equilibrium solves the problem of investment decisions that are too costly for the environment. If the voter faces a bad opposition, however, both types of governments follow its advice and refrain from making the investment even when it is beneficial for the voters. For the partially truthful bad government-disciplining equilibrium to hold, there are two important conditions. First, the government should care enough about winning the elections to give up their preferred policies. Second, the opposition's reputation should be high enough for the information to be credible.

Table 3.2: Proposition 3 - Equilibrium Path

	$\omega = 0$		$\omega = 1$	
	Good Opposition	Bad Opposition	Good Opposition	Bad Opposition
Good Government	$m = 0$ $x = 0$	$m = 0$ $x = 0$	$m = 1$ $x = 1$	$m = 0$ $x = 0$
Bad Government	$m = 0$ $x = 0$	$m = 0$ $x = 0$	$m = 1$ $x = 1$	$m = 0$ $x = 0$

### 3.7 Conclusion

The goal of this chapter is to explore whether the participation of opposition parties in parliamentary debate has influence on policy decisions. The premise of my argument is that the representative voter cares about the consequences of policies but that she has limited information on the mapping between the policy alternatives and their consequences. In contrast, political parties have better information yet some political parties may be biased in favor of certain policies irrespective of their consequences. Given this information and preference structure, the responsiveness of the political system is at stake. The inclusion of an opposition party in political debate may improve responsiveness in the following way: The opposition party may provide information to voters about the consequence of policies that the government is going to implement. If this information is credible enough to change the voters' policy preference, the government may need to adjust their policy decisions accordingly.

The credibility of the opposition's message depends on the voters' belief about whether the opposition is congruent or not. If the reputation of the opposition is high enough, the government will be obliged to follow its recommendation. This is consistent with the finding in the second chapter that the voters take the opposition's message seriously only when the opposition activists are moderate. There is, however, a fundamental difference between the two models. The model in the second chapter assumes that the opposition's intervention

is costly. In that situation, the incongruence of the opposition (or the opposition activists) may benefit the voter to a certain extent since this could motivate the opposition to exert the effort necessary to warn the voters. The model in this chapter is a cheap talk model and the incongruence of the opposition only decreases its credibility.

The model in this chapter also shows that for the disciplining effect of the opposition to work, the government should be concerned about winning the elections. This finding is also consistent with the model in the first chapter where the reputation cost of climbing down induces the government to choose congruent policies preemptively. An important difference between the two models is that the disciplining effect in this chapter works even when the opposition is not truthful. When the voter is facing moral hazard and adverse selection problems simultaneously, the government may have to follow the misleading messages of the opposition.

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# Chapter 4

## When Do Cosponsors Climb Down?

### 4.1 Introduction

One of the key normative benchmarks for the performance of a democratic political system is congruence between the preferences of citizens, and the policy positions and decisions of politicians. Reelection concerns are expected to ensure that representatives act in accordance with the preferences of their constituencies. We have empirical evidence to support that in very broad terms the political system works as expected in Western democracies. Ideological positions of individual parties, as delineated in their manifestos, change in the same direction as the shifts in public opinion over time (Adams et al. 2004, 2009). Similarly, the position of the median party in the legislature corresponds to the preferences of the median citizen (McDonald et al. 2004, McDonald and Budge 2005). While these results are promising, they do not necessarily imply that policy outcomes are in agreement with the preferences of citizens. Parties do not always implement the policies outlined in their manifestos. (Blais et al. 1993, Imbeau et al. 2001, Tavits and Letki 2009). Research on policy congruence exists for a smaller number of cases. We have evidence of congruence between public opinion and policy across American states (Erikson et al. 1993, Lax and Philips 2011) as well as over time at the national level in UK and US (Soroka and Wlezien 2005, Erikson et al. 2002).

Despite the rich body of literature on congruence, we do not know whether or how individual representatives respond to the demands of their constituencies in their decisions about specific policies. Cross-sectional studies do not examine whether the representatives take into account changes over time. It is important to learn about the dynamic aspect of responsiveness because new issues may emerge or public opinion may change. Studies that examine the shift over time focus on the change from one election to another, hence they do not answer questions about how representatives act once they are in office. Moreover, the existing studies are at the level of the party, the legislature or the government. The relationship between an individual representative and his/her constituency is also important for the satisfaction of citizens with the political system.

Studying the responsiveness of individual representatives is difficult due to data restrictions. We do not have public opinion data on all policy proposals at the electoral district level. In this paper, I take advantage of the data on cosponsorship in the US House of Representatives to examine how representatives respond to their constituencies. More specifically, I examine when representatives decide to withdraw their support from the bills that they cosponsored. Some scholars use cosponsorship patterns to measure the ideological position of representatives (Desposato et al. 2012). This does not necessarily mean that voters use cosponsorship decisions as the primary source of information to assess their representatives. Nevertheless, if a bill becomes unpopular, the cosponsors of a bill may be held responsible by voters and interest groups, and the challengers may use this as an opportunity to criticize the incumbents. With these concerns in mind, the representatives may decide to remove their names from the bills that they cosponsored. The decisions to climb down from cosponsorship are important because they give us information about how representatives adjust their decisions when they face criticism from their constituencies.

Anecdotal evidence shows that representatives reconsider their cosponsorship decisions when their constituency opposes the bill. Consider the case of Breast Cancer Awareness

Commemorative Coin Act. In June 2015, the bill was introduced to the House by Carolyn B. Maloney (D-NY), and cosponsored by representatives from both parties. The bill proposed that the proceeds of the coin would go to the Susan G. Komen Foundation. Several conservative groups opposed the bill on the grounds that the foundation had links to Planned Parenthood. As a result, 26 Republicans decided to withdraw their support from the bill in July 2015.<sup>1</sup> This case is important in showing that representatives respond to the reaction of their constituency but that they cannot always predict the reaction accurately.

My argument in this paper is as follows: Representatives use cosponsorship as an opportunity to take positions that would appeal to their constituency. At the time that they make their cosponsorship decisions, they have some information about the bill but they cannot perfectly assess all its aspects. They can use the partisan composition of the cosponsors as a measure for the position of the bill; however, the composition may change over time. Based on this change, the representatives may learn that they signed on to a bill that would not be appealing to their constituency. Since the representatives are concerned about reelection, they should take into account the changes over time to decide whether to remain as a cosponsor or climb down from cosponsorship. As the change over time increases, the likelihood for climbdown is expected to increase as well. The effect of change on the likelihood of climbdown is mediated by whether the representative is challenged in the general elections or the primaries. When the primaries are the main concern, an increase in the number of cosponsors from the opposite party is expected to be associated by an increase in the likelihood of climbdown.

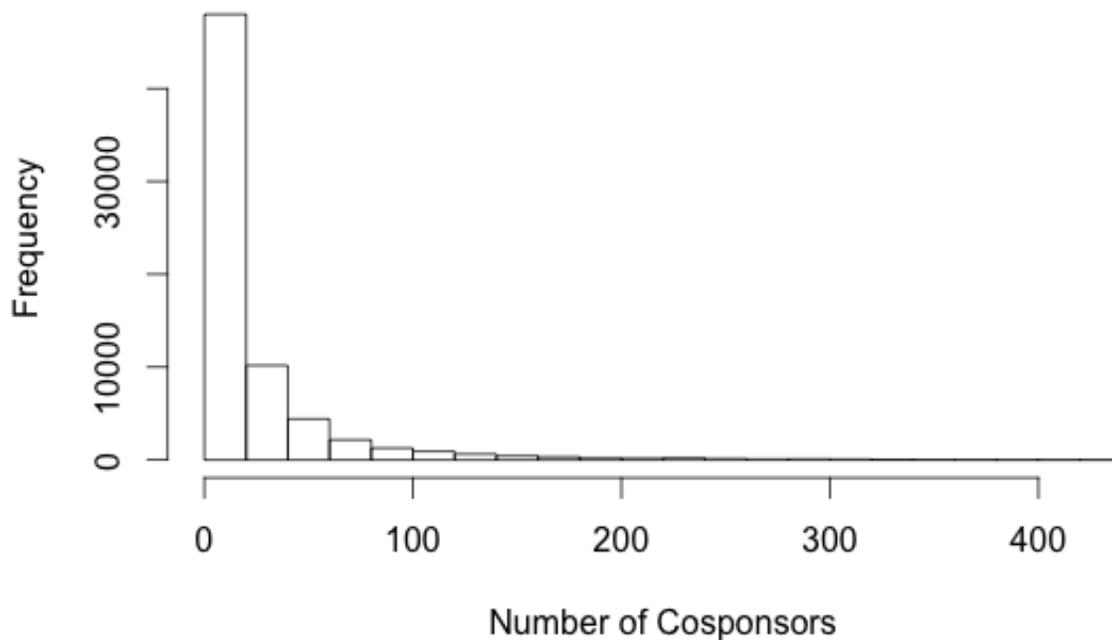
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<sup>1</sup><http://thehill.com/blogs/floor-action/house/247878-house-pulls-breast-cancer-research-bill>

## 4.2 Change in Partisan Composition and the Probability of Climbdown

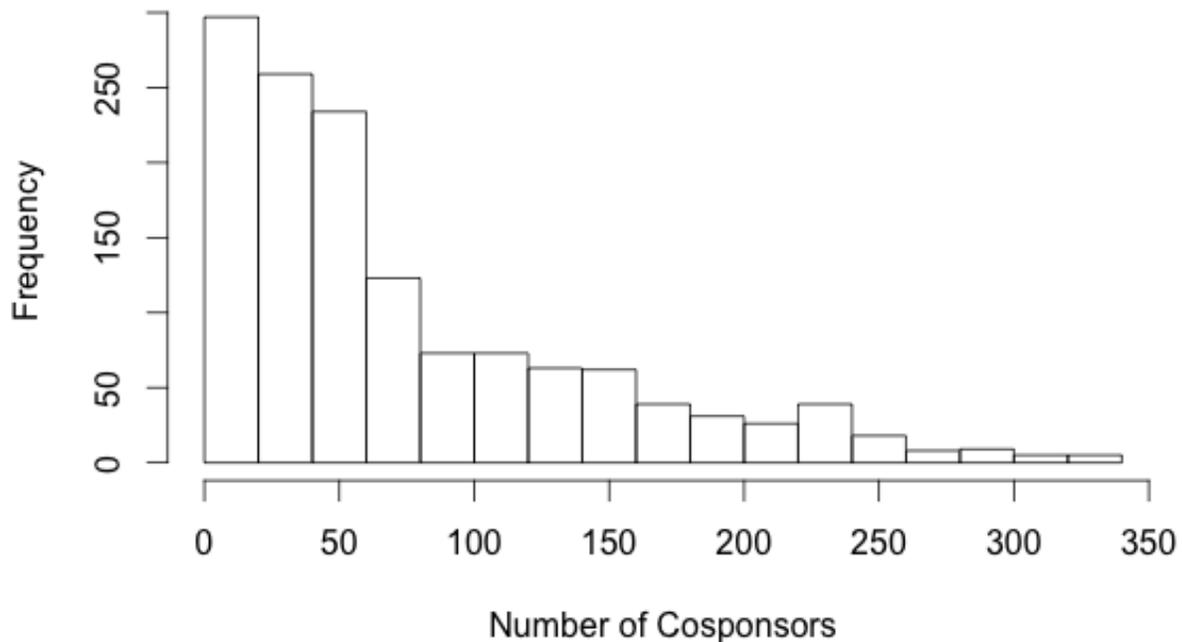
Cosponsorship is a very common legislative activity. Around 64% of the bills that were introduced in the US House of Representatives between 1981 and 2016 were cosponsored by at least one representative – out of the 108327 bills that were introduced in this period, 69374 had at least one cosponsor. Figure 4.1 shows the distribution of the number of cosponsors for this subset of bills. The distribution is skewed to the right with a mean of 23.59 and a standard deviation of 39.72. The number of cosponsors range between 1 and 432, and the median is 9.

Figure 4.1: Distribution of Cosponsors



Among the bills that had at least one cosponsor, about 2% at least one cosponsor withdrew his or her support from the bill. This seems like a small percentage; however, one should note that climbdowns are not equally distributed across bills. If we limit our analysis to bills with more than 100 cosponsors, the proportions of bills with at least one climbdown goes up to about 11%. Figure 4.1 shows the distribution of the number of cosponsors for bills with at least one climbdown. Compared to Figure 4.1, the distribution is less skewed with a mean of 75.3 and a standard deviation of 69.57. The number of cosponsors range between 1 and 337. Half of the bills in this subset have 50 cosponsors or more.

Figure 4.2: Distribution of Cosponsors for Bills with Climbdowns



While cosponsoring a bill does not directly influence its prospects, it provides legislators with an opportunity to signal their positions. The target audience of these signals is twofold. Earlier studies show how the cosponsorship decision of a legislator can give information to

other legislators about the content of the bill and influence its success (Kessler and Krehbiel 1996, Wilson and Young 1997). More recent studies examine how legislators use cosponsorship to build their reputation for electoral gains (Crisp et al. 2004, Goodliffe et al. 2005, Crisp et al. forthcoming). Interviews with legislators reveal that the two mechanisms may interact. Even if legislators make their decisions to cosponsor a bill with electoral considerations in mind, their decisions may influence the opinion of other legislators (Koger 2003). My argument relies on another way that the internal and the external audiences of the cosponsorship decisions interact. I argue that the legislators may rely on other legislators' cosponsorship decisions in order to figure out whether their constituency would approve the bill.

A legislator can take credit for cosponsoring bills that are favored by his/her constituency. However, the decision to cosponsor a bill may backfire if the aspects of the bill that were not obvious are revealed over time in a way that would cause objections from the constituency. These cases can be used against the legislator at the time of election. After having made the cosponsorship decision with the best available information that he/she has, the legislator should be cognizant of any changes in the partisan composition of cosponsors. It is reasonable to assume that bills with more Republican cosponsors would be conceived as more conservative by voters than those with more Democrat cosponsors. If the partisan composition of the bill changes, this may point out that the information that the legislator had about the bill at the time of his/her cosponsorship decision was incomplete. If the change in information is significant enough, the legislator may have to climb down from the bill.

*Absolute Partisan Change Hypothesis:* A legislator is more likely to remove his/her name from a bill that he/she cosponsored as the change in partisan composition of cosponsors increases.

The legislator's decision to climb down from a bill is expected to be correlated also with the amount of information that he/she has about the bill at the time he/she makes

her decision. One piece of information that a legislator has about a bill is the number of cosponsors. We can argue that each cosponsorship decision provides an additional piece of information to other legislators. Therefore, we should expect uncertainty about the bill to decrease as the number of cosponsors on a bill increases. If a legislator makes his/her cosponsorship decision at a point when there is a high number of cosponsors, he/she is less likely to climb down later.

*Prior Information Hypothesis:* A legislator is less likely to remove his/her name from a bill that he/she cosponsored as the total number of cosponsors (at the time of his/her cosponsorship decision) increases.

In order to test these hypotheses, I created a dataset that includes cosponsorship information for all the bills introduced in the House of Representatives between 1981 and 2016 (from the 97th to the 114th Congress), and cosponsored by at least one representative.<sup>2</sup> The unit of analysis is cosponsor-bill. I limit the analysis to Democrat and Republican cosponsors. I run logistic regression models, where the outcome is a dichotomous variable that takes the value 1 if the cosponsor removed his/her name from the bill. During the period under study, I observe 2499 instances of climbdowns. All the models are reported with Congress fixed effects.

For the absolute partisan change hypothesis, the explanatory variable is the absolute change in the partisan composition of cosponsors. First, in order to calculate the partisan composition, I subtract the number of Republican cosponsors from the number of Democrat cosponsors. Second, for the cosponsors that climb down later, I calculate the change that occurs between the decision to cosponsor the bill and the decision to remove the name from the bill. For the cosponsors that do not climb down, the end date is the day the bill becomes a law or the day the term of the Congress ends. Finally, I take the absolute value of the

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<sup>2</sup>The data prior to the 97th Congress does not make a distinction between bills and amendment. Furthermore, before 1978 the rules of the House allowed only up to 25 cosponsors.

change. To summarize, my measure for the first explanatory variable is the following:

$$|(\text{Dem. Cosponsors} - \text{Rep Cosponsors})_{\text{End}} - (\text{Dem. Cosponsors} - \text{Rep. Cosponsors})_{\text{Cosponsor}}|$$

Since the absolute partisan change hypothesis is about the association between the likelihood of climbdown and any change that occurs after the cosponsorship decision, this measure treats the increases in the direction of more Democrats the same as the increases in the direction of more Republicans. The predicted sign of the coefficient is positive.

For the prior information hypothesis, the explanatory variable, *All Cosponsors*, is the total number of cosponsors up until the day that the cosponsor made his/her decision to sign on to the bill (including those that signed on on the same day). As the value of this variable increases, the likelihood of climbdown is expected to decrease. The correlation between the two explanatory variables is 0.079.

The results of the analysis are summarized in Table 4.1. The coefficient for the absolute change in the partisan composition of cosponsors is negative and statistically significant. Hence if the cosponsor observes more change in the partisan composition of cosponsors, he/she is less likely to remove his/her name from the bill later. This contradicts the absolute partisan change hypothesis. In order to discuss the substantive effect of change on the likelihood of climbdown, Figure 4.3 plots the predictions from Model 1 against absolute change in partisan composition. The predictions are calculated for the 97th Congress using the mean value for the number of cosponsors at the time of cosponsorship. When there is no change in the partisan composition, the predicted probability of climbdown is 0.28%. The probability goes down to 0.24% if the change in the partisan composition equals the sample mean (15.07), and to 0.19% if the change in the partisan composition is one standard deviation above the sample mean (36.2). The absolute changes in probabilities do not seem

Table 4.1: Results of Logistic Regression on the Decision to Climb Down

	Model 1	Model 2
Absolute $\Delta$ Partisan Difference	-0.0093*	
	(0.0013)	
$\Delta$ Partisan Advantage		-0.0220*
		(0.0007)
All Cosponsors	0.0007*	0.0002
	(0.0003)	(0.0003)
(Intercept)	-5.9286*	-5.9377*
	(0.0844)	(0.0842)
Congress FE	Yes	Yes
$N$	1632490	1632490
AIC	36928.6377	36283.5338
BIC	37913.0870	37267.9832
$\log L$	-18384.3188	-18061.7669

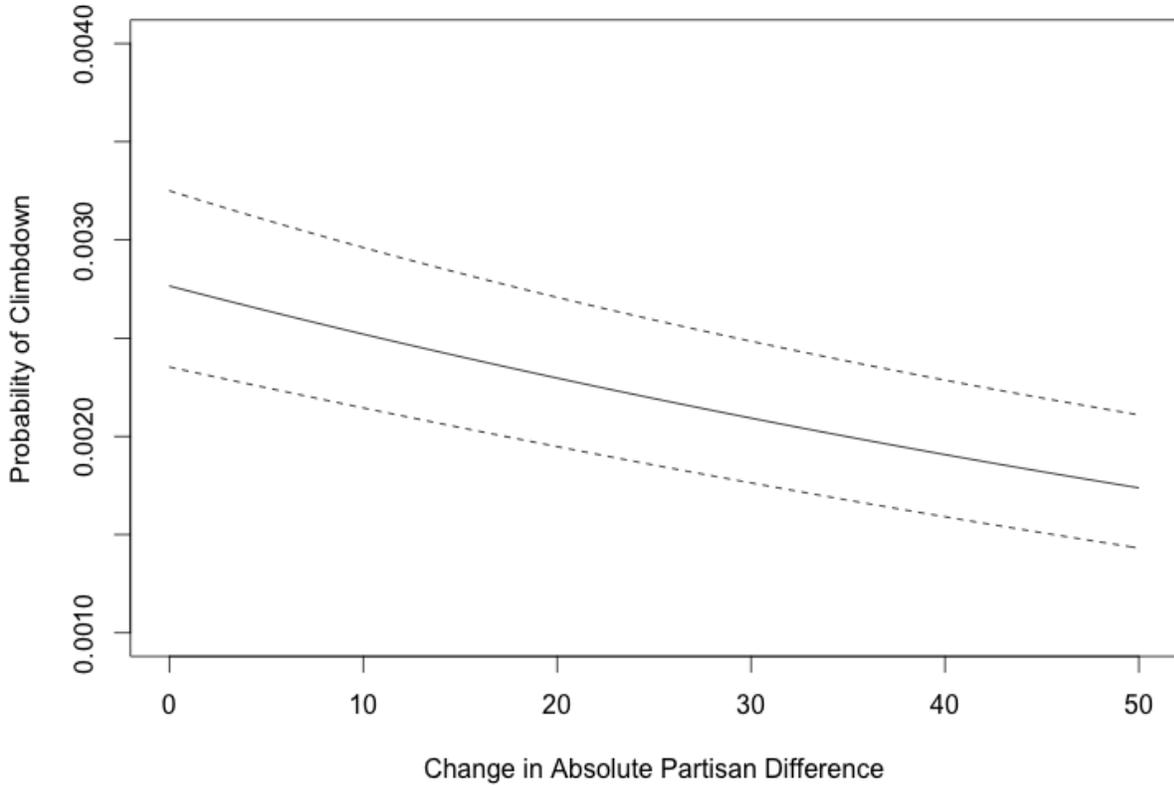
Standard errors in parentheses

\* indicates significance at  $p < 0.05$

high. Given that climbdown is a low probability event, however, the changes are quite substantial.

Model 1 shows no evidence to support prior information hypothesis. The coefficient for *All Sponsors* is statistically significant but it is positive. Hence, as the number of cosponsors at the time of cosponsorship decision increases, the cosponsor is more likely to remove his/her name from the bill later. One reason for this unexpected finding may be the variation in the availability of information. For example, original cosponsors of a bill may have a better grasp of its content. In order to consider this possibility, I provide robustness checks in the

Figure 4.3: Predictions from Model 1



appendix. Model 3 in Table A.1 repeats the analysis for a subset of the data that only includes the original cosponsors of the bills. The coefficient for *All Sponsors* is statistically significant and positive. Model 4 shows that when we limit the dataset to the cosponsors that sign on to the bills later, the coefficient changes sign and becomes insignificant. The conclusions for absolute partisan change hypothesis stay the same in both models.

In the appendix, I provide additional robustness checks. Models 5 and 6 repeat the analysis for the subsets of data that include bills proposed by the members of the majority and the minority, respectively. The coefficients for *All Sponsors* are not statistically significant in either model. Model 7 limits the analysis to major bills, defined as bills that have more than 50 cosponsors. These bills are more likely to be salient, which could make representatives

more responsive to changes in the partisan composition of cosponsorship. The coefficient for *All Sponsors* is negative and statistically significant. In Model 8, which shows the results of the analysis for minor bills, the coefficient becomes positive and not statistically significant. In all the models, the coefficients for *Absolute  $\Delta$  Partisan Difference* are negative and statistically significant.

### 4.3 Change in Partisan Advantage and the Probability of Climbdown

As discussed in the previous section, we see a decline in the predicted probability of climbdown as the change in partisan composition of cosponsors increases, which is contrary to my prediction that change increases the likelihood of climbdown. This result suggests that at least some of the change in the partisan composition of cosponsorship is perceived as positive by the constituency of the legislator. Previous research shows the cosponsorship decisions of the members of the Congress are influenced by whether they are challenged in the primaries or in the general elections (Crisp et al. forthcoming). Consider a Republican who signed on to a bill with 30 Republican and 10 Democrat cosponsors, and she is challenged in the primaries for not being conservative enough. If the difference between the Republican and Democrat cosponsors on the bill increases, this means the bill will be considered more conservative by the constituency, and hence, would not raise any questions about the conservative credentials of the candidate. If the candidate is challenged in the general elections, however, being on a conservative bill can be used against her. Given that moderate candidates are increasingly challenged in the primaries (Hall 2015), my prediction is the following:

*Change in Partisan Advantage Hypothesis:* A legislator is less likely to remove his/her name from a bill that he/she cosponsored as the difference between the number of cosponsors

from his/her party and the number of cosponsors from the opposite party increases after his/her cosponsorship decision.

Similar to the previous section, the analysis to test this hypothesis is at the cosponsor-bill level. The outcome variable is dichotomous, and takes the value 1 if the cosponsor removed his/her name from the bill. Logistic regression results are reported with fixed effects for Congress. The explanatory variable,  $\Delta$  *Partisan Advantage*, is the change in the number of cosponsors from the cosponsor's own party relative to the number of cosponsors from the opposite party. First, I calculate the difference at two different points in time by subtracting the number of cosponsors from the opposite party from the number of copartisan cosponsors. Second, I subtract the difference at the time of cosponsorship from the difference at the end, i.e. the day of climbdown, the end of the Congress or the day that the bill passed. Hence, the measure for the explanatory variable is the following:

$$(\text{Copartisan Cospon.} - \text{Other Cospon.})_{\text{End}} - (\text{Copartisan Cospon.} - \text{Other Cospon.})_{\text{Cosponsor}}$$

As this measure increases, it means that the share of the cosponsor's partisans among the cosponsors increased from the time he/she made the decision to cosponsor the bill to the time that he/she decided to withdraw (or the Congress ended / the bill passed). The expected sign of the coefficient is negative. As more and more of a cosponsor's copartisans sing on to a bill, he/she is less likely to be challenged in the primary based on this particular bill and hence less likely to climb down. To keep the models consistent, I include *All Cosponsors* in this model as well. The correlation between  $\Delta$  *Partisan Advantage* and *All Cosponsors* is -0.005.

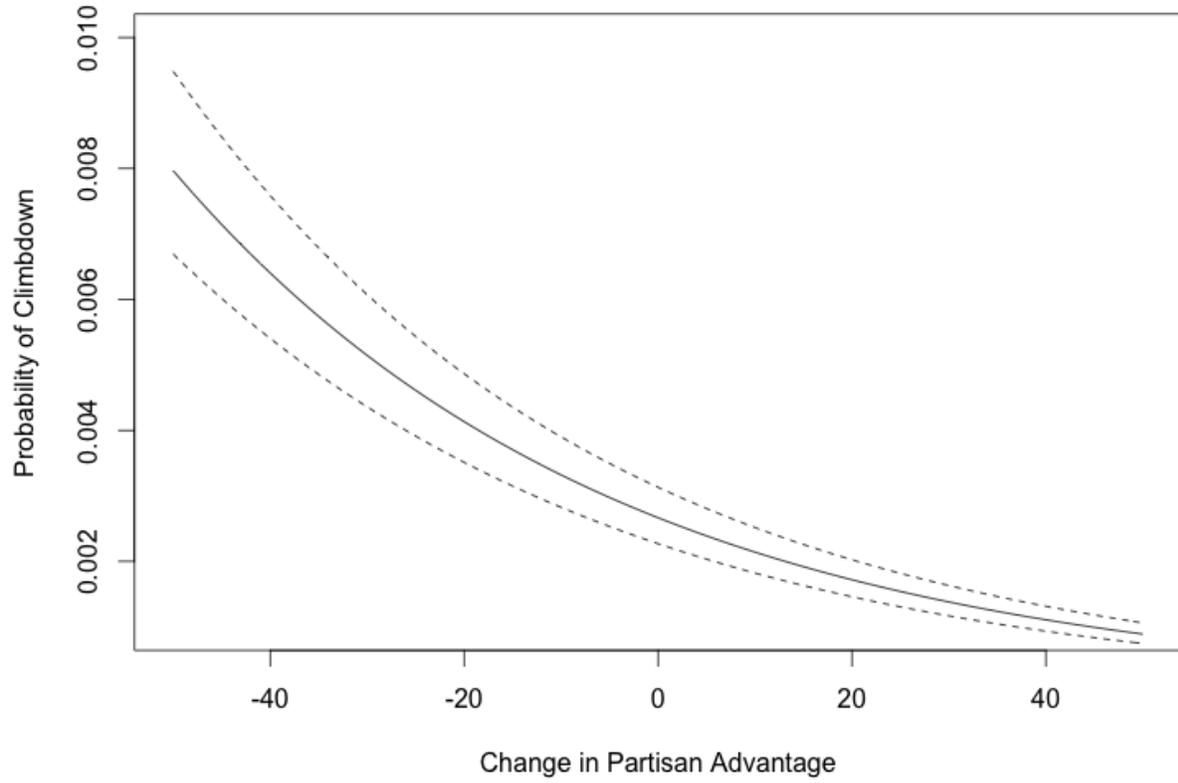
Model 2 in Table 4.1 shows the results of the analysis. The coefficient for  $\Delta$  *Partisan Advantage* is negative and statistically significant, which supports the change in partisan advantage hypothesis. Table A.2 shows the results of robustness checks for the change in

partisan advantage hypothesis. The conclusion stays the same when I split the dataset into original cosponsors and cosponsors that sign on later, majority bills and minority bills, major bills and minor bills.

In order to discuss the substantive effects, Figure 4.4 plots the predicted probability of climbdown against change in partisan advantage. I calculate the predictions for the mean value of *All Cosponsors* and the 97th Congress. When the partisan composition of cosponsors does not change, the predicted probability of climbdown is 0.27%. For the observations with positive values of  $\Delta$  *Partisan Advantage*, the mean value of this variable is 18.91 and the standard deviation is 22.61. In other words, the increase in the difference between copartisan cosponsors and cosponsors from the opposite party is around 19 representatives on average. The predicted value of climbdown goes down to 0.17% for this mean value of increase. If we increase the value of  $\Delta$  *Partisan Advantage* by one standard deviation, the predicted value of climbdown decreases further to 0.10%. For the observations, for which the number of copartisan cosponsors decrease relative to the cosponsors from the opposite party, the mean value of  $\Delta$  *Partisan Advantage* is -13.63, and the standard deviation is 18.67. For an observation with mean value for decrease, the predicted probability of climbdown is 0.35%, which is about the twice of the predicted probability for an observation with no change. If the decrease is one standard deviation away from the mean, the predicted probability of climbdown goes up to 0.54%.

Similar to Model 1, Model 2 shows no evidence for the prior information hypothesis. The coefficient for *All Cosponsors* is positive and not statistically significant. Two possible reasons for the lack of support for the prior information hypothesis are as follows. First, the number of cosponsors on a bill is not a very precise measure of information. The legislators may use other source of information at his/her disposal such as the opinion of interest groups. Second, the total number of cosponsors may indicate the salience of the bill which may be

Figure 4.4: Predictions from Model 2



confounding the results. If a bill is more salient, the legislator may be more likely to be assessed on the basis of his/her cosponsorship decision.

## 4.4 Conclusion

Legislative activities provide the representatives with important opportunities to signal their positions to voters (Mayhew 1974, Martin and Vanberg 2008), to other representatives in the legislature (Kessler and Krehbiel 1996) as well as to the party elites (Slapin and Proksch 2010). In this paper, I study the cosponsorship decisions of the representatives in the US House of Representatives to examine how they adjust their positions in response to the reaction from their constituencies by using the information that they receive from the cosponsorship decisions of other representatives.

I argue that the representatives take into account the preferences of their constituency in their cosponsorship decisions. They make their decisions using the best information that they have; however, they cannot always accurately predict how the bill will be perceived by their constituency. Moreover, the partisan composition of the bill's cosponsors may change over time. If the bill that a representative cosponsored receives more and more cosponsors from the opposite party, his/her competitor in the primaries may accuse him/her of being ideologically closer to the opposite party. In order to prevent this situation, the representative may have to climb down from the bill. My analysis shows that there is a relationship between the change in the partisan composition of cosponsors after a representative makes his/her cosponsorship decision and the likelihood that he/she decides to remove his/her name from the bill later. More specifically, a legislator is less likely to remove his/her name from a bill that he/she cosponsored as the number of cosponsors from his/her own party increase relative to the number of cosponsors from the opposite party.

Future research can take at least two directions. First, the theoretical expectation for the representative's decision to climb down depends on whether he/she is challenged in the primary or in the general election. Using the timing of elections and the margin of victory, I can provide more convincing evidence about how representatives respond to the preferences

of their constituencies. Second, the availability of data for more than three decades allows us to see whether polarization increased in this period by examining whether representatives are more likely to respond to partisan differences over time.

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# Chapter 5

## Conclusion

I examine the role of opposition parties in policy making in democratic systems, where a majority government generally enjoys exceptional power over legislation. In these systems, the legislative opposition can use the procedural prerogatives at its disposal such as proposing amendments but they typically fail. I consider the possibility that the use of these procedures, even when they fail, can enhance government responsiveness. I argue that the effectiveness of opposition parties depends on their ability to credibly transmit information, which is not always commensurate with their electoral strength or seat share in the legislature.

In the first theoretical chapter, I propose a formal model that identifies the conditions under which an opposition party can warn the voters against an incongruent policy proposal and convince them to exert the effort to put pressure on the government. The opposition party is more likely to confront the government when its chances of election are sufficiently low and the opposition activists are sufficiently distant in terms of their ideological positions from the government (as well as the voter and the opposition party itself). If the confrontations between the government and the opposition are too frequent, the opposition's message loses its credibility. The ideal situation for the voters' welfare is the presence of an electorally viable opposition party with moderate activists. The model also shows that the effect of the opposition on the voters' welfare is not always observable since the presence of a

responsible opposition party may induce the government to preemptively adjust its policies in accordance with the voters' preferences.

In the second theoretical chapter, I consider a formal model that examines when the opposition provides the voters with accurate information under different circumstances. In this model, the voters do not have the means to verify the accuracy of this information or to precisely identify the policy preferences of the government and the opposition party. Consistent with the first theoretical chapter, I find that for the opposition's messages to be credible, the voters should believe that the opposition is congruent. Similarly, the model shows that the disciplining effect of the opposition works only when the government cares enough about reelection. Unlike the first theoretical chapter, the cheap talk model shows the double-edged nature of the opposition's participation in debate. When the reputation of the opposition is sufficiently high, the government will have to follow its recommendation even in cases where it is misleading. This happens because the government does not have the means to credibly communicate that it is the congruent type and that its policy proposal is beneficial for the voters.

In the final chapter, I examine when legislators withdraw their support from the bills that they cosponsored using an original dataset of cosponsorship in the US House of Representatives. The climbdowns from cosponsorship are important in showing how the legislators respond to the preferences of their constituencies. I argue that the legislators can glean information about the bills by using the cosponsorship decisions of their counterparts. My analysis shows that a legislator is more likely to remove his/her name from a bill that he/she cosponsored when the number of his/her opponents that cosponsored the bill increases relative to the number of his/her copartisans.

My dissertation generates two sets of theoretical questions for future research. First, what are the conditions under which governments can glean useful information from opposition parties? The models in both theoretical chapters assume that the government and the

opposition have perfect information about the outcome of policy alternatives. In cases where this assumption does not hold, there is room for the parties to learn from each other. This is particularly relevant since parties may have expertise in different policy areas and information about the demands of different constituencies. If legislative debate can help parties learn from each other, this may be another way in which the presence of an opposition improves the voters' welfare. Given the policy and election incentives of the parties, this potential salutary effect may not always take place.

Second, when does the presence of an opposition party benefit the government? This question is particularly important for institutional change. There is variation both across countries and over time in the opportunities for the participation of the opposition in legislative policymaking. The rules regulating the opposition's participation are at least partly determined by the party in government. Therefore, the potential benefit that the government receives from the participation of the opposition would be critical in explaining the institutional variation.

# Appendix A

## Additional Material for Chapter 2

### A.1 Proof of Proposition 5

**Lemma:** In the informative equilibrium, if there is an objection, then one of the following is true:

- (a)  $G^* < \omega < O_1^* < V$
- (b)  $G^* < \omega < V < O_1^*$
- (c)  $G^* < \omega < O_2^*$  and  $V < O_2^* < X$
- (d)  $G^* < \omega < O_3^*$  and  $X < O_3^* < A_O$

**Proof:** Case (a): If  $O_1^* < V$ , then by substitution  $O_2^* < V$  and  $O_3^* < X$ . Case (c): If  $O_2^* < X$ , then by substitution  $O_3^* < X$ . Case (d): If  $O_3^* > X$ , then by substitution  $O_2^* > X$ .

**Proof of Proposition 5:** Consider the cases in Lemma. Case (a): If  $O_1^* < X$ , then  $X > A_O - c$ . If  $X > A_O - c$ , then  $\frac{\partial O_1^*}{\beta} < 0$ . Case (b): The threshold is  $V$ . Case (c): If  $O_2^* < X$ , then  $X > A_O - c - d_O$ . If  $X > A_O - c - d_O$ , then  $\frac{\partial O_2^*}{\beta} < 0$ . Case (d):  $\frac{\partial O_3^*}{\beta} < 0$ .

### A.2 Proof of Proposition 6

Consider the cases in Lemma. In cases (a), (c), and (d), the threshold is increasing in  $A_O$ . In case (b), the threshold is  $V$ .

# Appendix B

## Additional Material for Chapter 3

### B.1 Proof of Proposition 2

Let  $a$ ,  $b$ ,  $c$ , and  $d$  be the probabilities that the voter will reelect the government upon observing message and policy pairs  $(0,0)$ ,  $(0,1)$ ,  $(1,0)$ , and  $(1,1)$ , respectively.

Let  $\alpha_1$  through  $\alpha_8$  be the probabilities that the government will choose policy  $x = 0$  under the following conditions:

$$\alpha_1 = Pr(x = 0 | \omega = 0, t_I = U, m = 0)$$

$$\alpha_2 = Pr(x = 0 | \omega = 0, t_I = U, m = 1)$$

$$\alpha_3 = Pr(x = 0 | \omega = 0, t_I = B, m = 0)$$

$$\alpha_4 = Pr(x = 0 | \omega = 0, t_I = B, m = 1)$$

$$\alpha_5 = Pr(x = 0 | \omega = 1, t_I = U, m = 0)$$

$$\alpha_6 = Pr(x = 0 | \omega = 1, t_I = U, m = 1)$$

$$\alpha_7 = Pr(x = 0 | \omega = 1, t_I = B, m = 0)$$

$$\alpha_8 = Pr(x = 0 | \omega = 1, t_I = B, m = 1)$$

Case 1:  $b_g > b_b$  :

First, consider an equilibrium where  $\alpha_3 = 1$  and  $\alpha_4 = 0$ .

Given the incentives of the government,  $\alpha_3 = 1$  implies  $\alpha_1 = 1$ . Similarly,  $\alpha_4 = 0$  implies  $\alpha_6 = 0$ .

Consider the three values that  $\alpha_8$  can take. First, assume  $\alpha_8 = 1$ . Then I have  $c = H(0, B_C)$  and  $d = (\widehat{\beta}_G^{11}, \beta_O)$ . Given the government's incentives,  $c < d$  implies  $\alpha_8 = 0$ . Contradiction. Second, assume  $\alpha_8 = q > 0$ . Then I have  $c = H(0, \beta_O)$  and  $d = (1, \beta_O)$ .  $c < d$  implies  $\alpha_8 = 0$ . Contradiction. Third, assume that  $\alpha_8 = 0$ . Then I have  $d = H(\beta_G, \beta_O)$ . Bayes' rule does not pin down the beliefs for  $c$ . Hence, the only value that  $\alpha_8$  can take is 0.

Given the values  $\alpha_1$ ,  $\alpha_3$ ,  $\alpha_6$  and  $\alpha_8$ , using the Bayes' rule, I have  $a = d = H(\beta_G, \beta_O)$ . Bayes' rule does not pin down the beliefs for  $b$  and  $c$ .

Given  $\alpha_1 = \alpha_3 = 1$ , there are five different pairs of values that  $\alpha_5$  and  $\alpha_7$  can take:

(i)  $\alpha_5 = \alpha_7 = 0$

(ii)  $\alpha_5 = 0$  and  $\alpha_7 = q > 0$

(iii)  $\alpha_5 = 0$  and  $\alpha_7 = 1$

(iv)  $\alpha_5 = q$  and  $\alpha_7 = 1$

(v)  $\alpha_5 = \alpha_7 = 1$

In all these cases,  $a > b$  and  $a = d$ , which implies  $b < d$ . For these values, the bad opposition announces  $m = 0$  when  $\omega = 1$ .

Second, consider an equilibrium where  $\alpha_3 = q > 0$  and  $\alpha_4 = 0$ .

Given the incentives of the government  $\alpha_3 = q > 0$  implies  $\alpha_1 = 1$  and  $\alpha_5 = 0$ . Similarly,  $\alpha_4 = 0$  implies  $\alpha_6 = 0$ . For the same reasons as above, the only value that  $\alpha_8$  can take is 0.

Given the values  $\alpha_1$ ,  $\alpha_3$ ,  $\alpha_6$  and  $\alpha_8$ , using the Bayes' rule, I have  $a = H(\widehat{\beta_G}^{00}, \beta_O) > H(\beta_G, \beta_O)$ ,  $b = H(0, \beta_O)$  and  $d = (\beta_G, \beta_O)$ . Bayes' rule does not pin down the beliefs for c.

There are three different values that  $\alpha_7$  can take:

(i)  $\alpha_7 = 0$

(ii)  $\alpha_7 = q > 0$

(iii)  $\alpha_7 = 1$

In cases (i) and (ii),  $b < d$ ; therefore, the bad opposition announces  $m = 0$  when  $\omega = 1$ . In case (iii), for the bad opposition to announce  $m = 1$  when  $\omega = 1$ , i need to have  $a - d \geq b_b$ . In order to have  $\alpha_3 = q > 0$ , i need to have  $a - b = b_b$ . Given the values of  $a$ ,  $b$  and  $d$  calculated above,  $a > d > b$ . Contradiction.

Case 2:  $b_g < b_b$  :

First, consider an equilibrium where  $\alpha_3 = 1$  and  $\alpha_4 = 0$ .

Given the incentives of the government,  $\alpha_3 = 1$  implies  $\alpha_1 = 1$  and  $\alpha_5 = 1$ . Given  $\alpha_1 = \alpha_3$ , I have  $a = H(\beta_G, \beta_O)$ . Bayes' rule does not pin down the beliefs for b. The utilities of the good and bad oppositions from announcing  $m = 0$  when  $\omega = 0$  are the following:

$$u_{O_g}(m = 0, \omega = 0) = b_g + 1 - a$$

$$u_{O_b}(m = 0, \omega = 0) = b_b + 1 - a$$

There are three values that  $\alpha_7$  can take:

(i)  $\alpha_7 = 0$ : Given the government's incentives, I should have  $a - b = b_b$ . The utilities of the good and bad oppositions from announcing  $m = 0$  when  $\omega = 1$  are the following:

$$u_{O_g}(m = 0, \omega = 1) = \beta_G(-b_g - b_b) + b_g + 1 - b$$

$$u_{O_b}(m = 0, \omega = 1) = 1 - b$$

(ii)  $\alpha_7 = q_7 > 0$ . Given the government's incentives, I should have  $a - b = b_b$ . The utilities of the good and bad oppositions from announcing  $m = 0$  when  $\omega = 1$  are the following:

$$u_{O_g}(m = 0, \omega = 1) = (b_b + b_g)[\beta_G(q_7 - 1) - q_7] + b_g + 1 - b$$

$$u_{O_b}(m = 0, \omega = 1) = 1 - b$$

(iii)  $\alpha_7 = 1$ . Given the government's incentives, I should have  $a - b \geq b_b$ . The utilities of the good and bad oppositions from announcing  $m = 0$  when  $\omega = 1$  are the following:

$$u_{O_g}(m = 0, \omega = 1) = 1 - a$$

$$u_{O_b}(m = 0, \omega = 1) = b_b + 1 - a$$

Similarly, there are three values that  $\alpha_6$  can take:

(a)  $\alpha_6 = 0$ . Given the government's incentives,  $\alpha_4 = \alpha_6 = 0$  implies  $\alpha_8 = 0$  and I should have  $c - d \leq b_g$ . Bayes' rule does not pin down the beliefs for c. I have  $d = H(\beta_G, \beta_O)$ .

The utilities of the good and bad oppositions from announcing  $m = 1$  when  $\omega = 1$  are the following:

$$u_{O_g}(m = 1, \omega = 1) = b_g + 1 - d$$

$$u_{O_b}(m = 1, \omega = 1) = 1 - d$$

(b)  $\alpha_6 = q_6$  where  $0 < q_6 < 1$ . Given the government's incentives,  $\alpha_4 = 0$  and  $\alpha_6 = q_6 > 0$  implies  $\alpha_8 = 0$  and I should have  $c - d = b_g$ . Using Bayes' rule, I have  $c = H(1, \beta_O)$  and  $d = (\widehat{\beta}^{11}, \beta_O) < H(\beta_G, \beta_O)$  The utilities of the good and bad oppositions from announcing  $m = 1$  when  $\omega = 1$  are the following:

$$u_{O_g}(m = 1, \omega = 1) = b_g + 1 - d - 2\beta q_6 b_g$$

$$u_{O_b}(m = 1, \omega = 1) = \beta q_6 (b_b - b_g) + 1 - d$$

(c)  $\alpha_6 = 1$  In this case,  $\alpha_8$  can take one of the three values:

(c-i)  $\alpha_8 = 0$  Given the government's incentives,  $b_g \leq c - d \leq b_b$ . Using Bayes' rule I have  $c = H(1, \beta_O)$  and  $d = H(0, \beta_O)$  The utilities of the good and bad oppositions from announcing  $m = 1$  when  $\omega = 1$  are the following:

$$u_{O_g}(m = 1, \omega = 1) = \beta_G (d - c - b_g) + (b_g + 1 - d)$$

$$u_{O_b}(m = 1, \omega = 1) = \beta_G (b_b + d - c) + (1 - d)$$

(c-ii)  $\alpha_8 = q_8$  where  $0 < q_8 < 1$  Given the government's incentives,  $b_g \leq c - d = b_b$ . Using Bayes' rule I have  $c = H(\widehat{\beta}_G^{10}, \beta_O) > H(\beta_G, \beta_O)$  and  $d = H(0, \beta_O)$  The utilities of the good and bad oppositions from announcing  $m = 1$  when  $\omega = 1$  are the following:

$$u_{O_g}(m = 1, \omega = 1) = \beta_G [(b_b + b_g)(q_8 - 1)] + b_g + 1 - d - q_8 (b_g + b_b)$$

$$u_{O_b}(m = 1, \omega = 1) = 1 - d$$

(c-iii)  $\alpha_8 = 1$  Given the government's incentives,  $c - d = b_b$ . Using Bayes' rule I have  $d = H(0, \beta_O)$  Bayes' rule does not pin down the beliefs for  $c$  The utilities of the good and bad oppositions from announcing  $m = 1$  when  $\omega = 1$  are the following:

$$u_{O_g}(m = 1, \omega = 1) = 1 - c$$

$$u_{O_b}(m = 1, \omega = 1) = b_b + 1 - c$$

Now I need to pair each of the cases (i), (ii), and (iii) with each of the cases (a), (b), (c-i), (c-ii) and (c-iii).

Cases (i-a), (ii-a) and (iii-a): I have  $a = d > b$ . The bad opposition announces  $m = 0$  when  $\omega = 1$ .

Cases (i-b), (ii-b) and (iii-b): When I write the incentive constraints of the bad opposition in the cases when  $\omega = 0$  and  $\omega = 1$ , I obtain two inequalities. Summing up the two inequalities, I reach  $q_6 \geq 1$ , which contradicts the assumption that  $q_6 < 1$ .

Cases (i-c-i), (ii-c-i) and (iii-c-i): When I write the incentive constraints of the good opposition in cases when  $\omega = 0$  and  $\omega = 1$ , I obtain two inequalities. When I sum the two inequalities, I reach  $b_b \leq b_g$ , which contradicts my initial assumption.

Cases (i-c-ii) and (ii-c-ii): I have  $b < d$ , which implies that the bad opposition will announce  $m = 0$  when  $\omega = 1$

Case(iii-c-ii): For the bad opposition to announce  $m = 1$  when  $\omega = 1$ , I need  $a - d \geq b_b$ . Since I also have  $c > a > d$  and  $c - d = b$ , there is a contradiction.

Cases (i-c-iii) and (ii-c-iii): For the good opposition to announce  $m = 1$  when  $\omega = 1$ , I need  $b - c \geq \beta_G(-b_g - b_b) + b_g$ . Since  $a = c = H(\beta_G, \beta_O)$ , I should have  $b - a \geq \beta_G(b_g - b_b) + b_g$ . If I plug  $a - b = b_b$ , I have  $\beta_G(b_g + b_b) \geq b_g + b_b$ . Contradiction.

Case (iii-c-iii): For the good opposition to announce  $m = 0$  when  $\omega = 0$ , I need  $a - d \leq b_g - \beta_G(b_g + d - c)$ . Since  $a = c = H(\beta_G, \beta_O)$ , I should have  $c - d \leq b_g - \beta_G b_g + \beta_G(c - d)$ . Hence  $c - d \leq b_g$ . Since  $c - d = b_b$  and  $b_g < b_b$ , there is a contradiction.

Second, I consider an equilibrium where  $\alpha_3 = q > 0$  and  $\alpha_4 = 0$ . The proof is similar.

## B.2 Proposition 4

In the baseline model, the following equilibria exist in mixed strategies:

(a) The good government always chooses the policy that matches the state of the world. The bad government chooses policy  $x = 0$  with probability  $q$  when  $\omega = 0$ , and with probability  $r$  when  $\omega = 1$ , respectively. This equilibrium exists, provided:

$$b_g \geq b_b \tag{B.1}$$

$$H(\widehat{\beta}_G^0(q^*, r^*), \beta_O) - H(\widehat{\beta}_G^1(q^*, r^*), \beta_O) = b_b \tag{B.2}$$

where

$$\widehat{\beta}_G^0 = \frac{\beta_G}{\beta_G + (q+r)(1-\beta_G)} \text{ and } \widehat{\beta}_G^1 = \frac{\beta_G}{\beta_G + (2-q-r)(1-\beta_G)}$$

(b) The good government always chooses  $x = 0$  irrespective of the state of the world. The bad government chooses policy  $x = 0$  with probability  $q$  when  $\omega = 0$ , and with probability  $r$  when  $\omega = 1$ , respectively. This equilibrium exists, provided:

$$b_g \leq b_b \tag{B.1}$$

$$H(\widehat{\beta}_G^0, \beta_O) - H(0, \beta_O) = b_b \tag{B.2}$$

where

$$\widehat{\beta}_G^0 = \frac{2\beta_G}{2\beta_G + (q+r)(1-\beta_G)}$$

(c) The good government always chooses  $x = 0$  when  $\omega = 0$ , and chooses  $x = 1$  with probability  $q$  when  $\omega = 1$ , respectively. The bad government always chooses  $x = 1$  irrespective of the state of the world. This equilibrium exists, provided:

$$b_g \leq b_b \tag{B.1}$$

$$H(1, \beta_O) - H(\widehat{\beta}_G^1, \beta_O) = b_g \tag{B.2}$$

where

$$\widehat{\beta}_G^1 = \frac{(1-q)\beta_G}{(1-q)\beta_G + 2(1-\beta_G)}$$

# Appendix C

## Robustness Checks

The tables below repeat the analysis in Chapter 4 for different subsets of the dataset.

Table A.1: Robustness Checks for Change in Partisan Composition

Subset	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
	Original Cosponsors	Not Original Cosponsors	Majority Bills	Minority Bills	Major Bills	Minor Bills
Absolute $\Delta$	-0.0074*	-0.0114*	-0.0099*	-0.0068*	-0.0125*	-0.0740*
Partisan Diff.	(0.0019)	(0.0017)	(0.0015)	(0.0023)	(0.0014)	(0.0079)
All Cosponsors	0.0048*	-0.0008	0.0001	0.0019*	-0.0017*	0.0037
	(0.0005)	(0.0004)	(0.0004)	(0.0006)	(0.0004)	(0.0027)
(Intercept)	-6.0911*	-5.8105*	-5.8143*	-6.1573*	-5.9274*	-5.6568*
	(0.1256)	(0.1141)	(0.1004)	(0.1557)	(0.1393)	(0.1156)
Congress FE	Yes	Yes	Yes	Yes	Yes	Yes
$N$	544932	1087558	1038955	593535	916464	716026
AIC	12703.4128	23995.7649	25373.3982	11240.5253	21967.5362	14687.3223
BIC	13600.0862	24947.7205	26321.6963	12144.0334	22905.7985	15605.8400
$\log L$	-6271.7064	-11917.8824	-12606.6991	-5540.2626	-10903.7681	-7263.6611

Standard errors in parentheses

\* indicates significance at  $p < 0.05$

Table A.2: Robustness Checks for Change in Partisan Advantage

	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14
Subset	Original Cosponsors	Not Original Cosponsors	Majority Bills	Minority Bills	Major Bills	Minor Bills
$\Delta$ Partisan Advantage	-0.0222* (0.0011)	-0.0221* (0.0009)	-0.0194* (0.0009)	-0.0277* (0.0013)	-0.0201* (0.0007)	-0.0742* (0.0045)
All Cosponsors	0.0045* (0.0005)	-0.0015* (0.0004)	-0.0003 (0.0004)	0.0009 (0.0006)	-0.0013* (0.0004)	0.0062* (0.0027)
(Intercept)	-6.0994* (0.1253)	-5.8200* (0.1139)	-5.8299* (0.1003)	-6.1373* (0.1552)	-6.0595* (0.1375)	-5.8135* (0.1156)
Congress FE	Yes	Yes	Yes	Yes	Yes	Yes
$N$	544932	1087558	1038955	593535	916464	716026
AIC	12426.6206	23625.5456	25032.7826	10940.7776	21449.6354	14561.6385
BIC	13323.2939	24577.5013	25981.0807	11844.2858	22387.8977	15480.1562
$\log L$	-6133.3103	-11732.7728	-12436.3913	-5390.3888	-10644.8177	-7200.8192

Standard errors in parentheses

\* indicates significance at  $p < 0.05$