

# An Exit, Voice, and Loyalty Model of Politics\*

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## ABSTRACT

Political scientists typically develop different models to examine distinct political phenomena such as lobbying, protests, elections, and conflict. These specific models can provide important insights into a particular event, process, or outcome of interest. In this article, we take a different tack. Rather than focus on the specificities of a given political phenomenon, we construct a model that captures the key elements common to most political situations. Our model represents a reformulation and extension of Albert Hirschman's famous *Exit, Voice, and Loyalty* framework. To highlight the value that comes from focusing on the commonalities that exist across apparently disparate political phenomena, we apply our model to several issues in the democratization literature related to modernization theory, the political resource curse, inequality, foreign aid, and economic performance.

Key words: exit, voice, loyalty; power; modernization theory; resource curse; inequality; foreign aid

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# 1 Introduction

Political scientists typically develop different models to examine distinct political phenomena such as lobbying, protests, elections, and conflict. Each of these specific models can provide important insights into a particular event, process, or outcome of interest. In this article, we take a different tack. Rather than focus on the specificities of a given political phenomenon, we construct a model that captures the key elements common to most, if not all, political situations. In doing so, we seek to highlight the value that comes from recognizing the commonalities that exist across apparently disparate political phenomena.

Politics has been defined in many different ways over the years. Most definitions, though, share the intuition that it comprises the subset of human behavior that involves the use of power. Broadly speaking, power is involved whenever individuals cannot accomplish their goals without either trying to influence the behavior of others or trying to wrestle free from the influence exerted by others. The model of politics that we introduce emphasizes the strategic interdependencies involved in the use of power.

Our model represents a reformulation and extension of Albert Hirschman's (1970) famous *Exit, Voice, and Loyalty* (EVL) framework. Hirschman's ideas have sparked enormous interest among political scientists that continues to this day (Barry 1974, Birch 1975, Laver 1976, Dowding & John 1996, Dowding et al. 2000, Dowding & John 2012).<sup>1</sup> Our analysis, though, is unusual in that it explicitly formalizes his conceptual framework in game-theoretic terms. The failure of Hirschman and others to formalize the EVL framework has contributed to much theoretical confusion and inconsistent empirical results (Dowding & John 2012).

To our knowledge, Gehlbach (2006) provides the only other game-theoretic analysis of Hirschman's exit, voice, and loyalty framework.<sup>2</sup> While there are several differences between our models, the principal one has to do with how closely we hew to Hirschman's original argument. This is most clearly seen in how we treat loyalty. Gehlbach faithfully follows Hirschman in assuming that actors have two potential responses when confronted with a deleterious change in their environment — exit and voice — and that loyalty is a psychological characteristic that increases an actor's propensity to choose voice over exit. In contrast, we deviate from Hirschman's original argument. We do so by building on an influential and well-established

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<sup>1</sup>Hirschman's book has also generated a huge literature in economics, psychology, management studies, public administration, and other fields. According to *Google Scholar*, his original book has been cited over 17,000 times. For a good summary of this literature, see Dowding and John (2012).

<sup>2</sup>Slapin (2009) also provides a game-theoretic model that builds on Hirschman's ideas. However, his model addresses only exit and voice; it ignores loyalty.

line of research that treats loyalty as a potential behavioral response in its own right, on a par with exit and voice. In other words, our models do not so much compete as offer two different conceptualizations of the EVL framework (Dowding & John 2012).

The dominant approach in studies that treat loyalty as a behavioral response has been to assume that individuals actually have *four* responses when confronted with a deterioration in their environment — exit, voice, loyalty, and *neglect* (EVLN). Originally employed to explore how individuals respond to discontent in love, marriage, and workplace relationships (Rusbult, Zembrodt & Gunn 1982, Rusbult & Lowery 1985), the EVLN framework has subsequently been used to examine responses to dissatisfaction in a wide variety of settings, including service provision in local governments (Lyons, Lowery & DeHoog 1992) and performance in urban schools (Matland 1995). This line of research is largely descriptive and social-psychological in nature (Dowding & John 2012). In addition to building a taxonomy of reactions to dissatisfaction, empirical studies typically seek to correlate responses to discontent with personality traits and psychological dispositions. The behavioral responses of actors are often viewed through an ethical or normative lens, with loyalty and neglect, for example, treated as constructive and destructive responses.

Our approach differs from the EVLN framework in at least three significant ways. While studies employing the EVLN framework focus almost exclusively on the behavioral choices of the actor who is dissatisfied with some aspect of a relationship, our model explicitly incorporates the strategic interaction that occurs between actors on both sides of a relationship. This is important because it enables us to better evaluate the conditions under which actors can exert influence over others. The second difference is that the actors in our model have only three possible responses to a deleterious change in their environment: exit, voice, and loyalty. These responses are both mutually exclusive and logically exhaustive. From our perspective, neglect is simply a form of exit and not a distinct behavioral response category. The third major difference is that we eschew the normative and social-psychological foundation underpinning much of the EVLN framework. The actors in our model who demonstrate loyalty, for example, do so not because they wish to respond constructively to dissatisfaction, but because they are simply powerless to do otherwise.

Our EVL model of politics is quite general. Among other things, it indicates the necessary conditions for actors to exert power over others, it throws light on when actors endogenously limit their own predatory behavior, and it highlights the difficulties we face when trying to draw inferences about power from real-

world observations. We illustrate these points by focusing on the generic balance of power between citizens and their governments. Our analysis draws attention to several issues that are relevant to the study of power across the political science subfields. To highlight how our model can capture commonalities across apparently disparate political phenomena in a specific substantive realm, we apply our model to several issues in the democratization literature related to modernization theory, the political resource curse, inequality, foreign aid, and economic performance. Among other things, our model offers a potential explanation for why inequality does not necessarily harm democratization, why foreign aid tends to deter democratization but can sometimes promote limited democratic reforms, and why economic performance in dictatorships is much more heterogeneous than in democracies.

## **2 An EVL Model of Politics**

Hirschman asks how an individual will react to a deleterious change in her environment. While he conceived of this deterioration as accidental or random, we choose to think of it as resulting from a deliberate choice by some actor. Specifically, we think of it as resulting from a policy choice made by an incumbent government. For example, the government might choose to increase taxes, cut services, or devalue the currency. Naturally, not all citizens will view such policy choices in a negative light. While consumers in the domestic market, for instance, are likely to suffer when the national currency is devalued because imports are more expensive, exporters are likely to benefit because their goods are now more competitive. Indeed, it is almost always the case that political choices result in some individuals benefiting at the expense of others. The question here, though, is how a citizen will respond to a government policy that negatively affects her welfare.

Broadly speaking, a citizen has three possible responses — *exit*, *voice*, or *loyalty*. Choosing to *exit* means that she accepts the deleterious change but alters her behavior to optimize in the new environment. While the physical exit of citizens, as took place in East Germany in 1989 and is happening in Syria today, is the most dramatic and tangible form of exit, it is important to emphasize that we conceive of exit as occurring any time the citizen denies the government her loyalty. Depending on the situation, exit can take the form of voting against the incumbent or abstaining, re-allocating financial assets in response to a tax hike, substituting leisure for labor, or sending one's child to a private school. Choosing to use *voice* means that the citizen does not accept the deleterious change and instead seeks to 'persuade' the government to

reinstate her original environment. For example, a citizen might respond to a tax hike by participating in an anti-tax protest or a letter-writing campaign with the goal of pressuring the government into reversing its tax increase. Choosing to demonstrate *loyalty* means that the citizen accepts the deleterious change and makes no change to her pre-existing behavior.<sup>3</sup> For example, the citizen might respond to a tax hike by paying the new tax rate and continuing to allocate her assets in the same way as before.<sup>4</sup>

Behavior is political whenever individuals attempt to influence, or escape the influence of, others. Voice is inherently political because the objective is to change the behavior of others. Behavior, though, is also political whenever individuals think about using voice even if they do not use it in the end. If an individual would benefit from the successful use of voice but instead chooses to exit or remain loyal, then the situation is political as the state has exercised sufficient resolve to deter the individual's use of voice. In effect, the decision to respond to a deleterious change with exit, voice, or loyalty is always a political decision.<sup>5</sup> Politics does not just begin when voice is chosen, it begins when voice is considered. One could argue that politics is even more pervasive than this. People sometimes choose to exit or remain loyal without even thinking of voice as an option simply because it would not occur to them that they could successfully change the behavior of others. This type of situation might be referred to as 'hegemony' (Gramsci 1971).

## 2.1 Structure and Payoffs

Consider a situation where the government introduces a policy that negatively affects one of its citizens (or a group of citizens).<sup>6</sup> The citizen can respond by exiting, using voice, or remaining loyal. Obviously, much depends on what the citizen expects the government to do if she uses voice. The government might

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<sup>3</sup>Barry (1974, 91,97) is critical of Hirschman for claiming that individuals face a single choice between exit and voice. Instead, he argues that individuals have two dichotomous choices, either exit or non-exit, and if non-exit then either voice or silence. This is similar to our framework and Barry's concept of "silent non-exit" is effectively the same as our concept of loyalty.

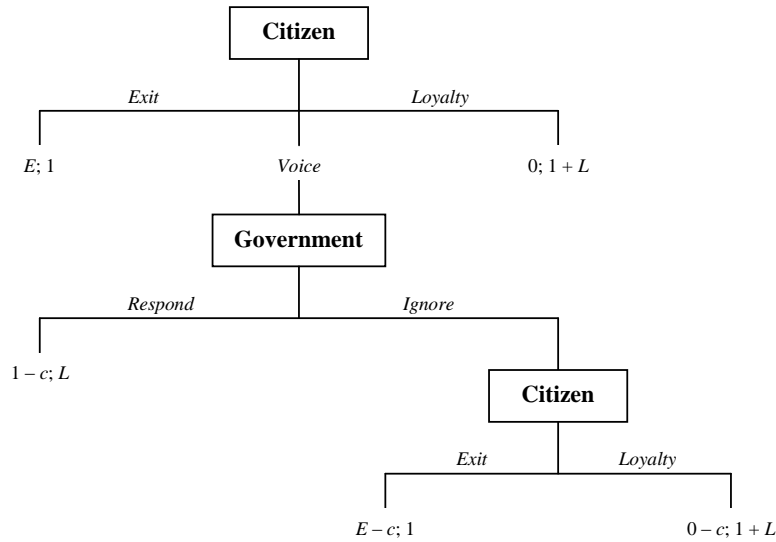
<sup>4</sup>One way in which our model differs from the exit, voice, loyalty, and neglect (EVLN) framework has to do with how loyalty and neglect are conceptualized. Within the EVLN framework, loyalty involves passively, but optimistically, waiting for conditions to improve, while neglect involves exerting less effort, developing negative attitudes, and exhibiting less interest (Dowding & John 2012). In some ways, the EVLN conceptualization of loyalty is similar to our own in that individuals accept the deleterious change to their environment and do not change their pre-existing behavior. The difference is that we see no reason to assign a psychological disposition such as optimism, as opposed to, say, resignation, to this particular behavioral response. The difference with respect to neglect is more stark. From our perspective, neglect is simply a form of exit, not a distinct behavioral response. This is because individuals who engage in neglect accept the deleterious change to their situation but alter their behavior — they reduce their effort, display increasingly negative attitudes, and exhibit less interest — to optimize as best they can in the new environment.

<sup>5</sup>Hirschman (1970, 19) differs on this point in that he refers to exit and voice as "economic and political mechanisms" respectively. Our reasoning would suggest that exit can be just as political as voice.

<sup>6</sup>We use the term 'government' quite broadly to refer to the set of people who run the state at a particular point in time.

*respond* positively by reversing its policy change and returning the citizen’s environment to its original state. Alternatively, the government might *ignore* her use of voice, at which point the citizen must decide whether to exit or remain loyal. This situation is modeled as an extensive form game in Figure 1.

Figure 1: Exit, Voice, and Loyalty Game



*Note:*  $E$  is the citizen’s exit payoff, 1 is the value of the benefit that the government takes from the citizen in the pre-history of the game,  $L$  is the value the government obtains from having a loyal citizen who does not exit, and  $c$  is the citizen’s cost of using voice. It is assumed that  $c, L > 0$ .

The pre-history of the game is that the government has caused a deleterious change in the citizen’s environment, resulting in a transfer of some benefit from the citizen to the government. Without loss of generality, we set the value of this benefit to 1. The game begins with the citizen deciding how to respond. If the citizen decides to exit, she receives her exit payoff,  $E$ , and the government gets to keep the benefit, 1, that it seized in the game’s pre-history. Citizens naturally differ in the attractiveness of their exit options. Skilled workers, for example, are likely to have a more valuable exit option than unskilled workers due to the fact that they can more easily switch careers if there is a negative change in their work environment.

If the citizen decides to remain loyal, she accepts the loss of her benefit and receives her status quo payoff, which we normalize to 0. In these circumstances, the government keeps the benefit, 1, that it seized, but also obtains an additional payoff,  $L > 0$ , for retaining a loyal citizen who does not exit. This additional payoff recognizes that governments value loyal citizens. Loyal citizens can help governments by supplying

them with the political support necessary to retain power or by providing them with what some might call ‘legitimacy.’ For example, the decision to remain loyal might mean continuing to vote for government parties. Loyal citizens can also be valuable in other ways, perhaps because they continue to invest in the economy or other activities that provide meaningful resources to the government. For instance, one can think of the loyalty payoff as capturing the present value of the future stream of benefits that accrue from having a citizen continue to invest her assets in the economy. Whatever the precise source of this loyalty payoff, its value is likely to vary across governments and citizens. Some governments desire more support from their citizenry than others, and some citizens are more valuable to government officials than others.

If the citizen decides to use voice, then she pays a cost,  $c > 0$ . We assume that voice is costly because activities like protesting, complaining, and lobbying all require effort that could be put to an alternative use. Voice might be costly in other respects as well. For example, one’s involvement in a protest might be met by imprisonment, loss of employment, or even death. In other words, the degree of government repression will influence the citizen’s cost of using voice. It is reasonable to think that the citizen’s use of voice will impose a cost on the government, and that the magnitude of this cost will vary depending on the particular type of voice used. However, we choose not to incorporate this imposed cost into the EVL game shown in Figure 1 because the fact that it would be added to all of the terminal nodes associated with the only subgame where the government gets to move means that it would not affect the government’s decisions.

If the citizen uses voice, the government must decide whether to respond positively to her demands or ignore them. If the government responds positively, it returns the benefit it seized to the citizen. In this situation, the citizen receives the value of the benefit, 1, minus the cost of having used voice,  $c$ , while the government obtains a loyal citizen,  $L$ . If the government ignores her use of voice, then the citizen chooses to either exit or remain loyal. We could allow the citizen to use voice again, but this would add nothing new to the game and our inferences would be unaffected. If the citizen decides to exit, she receives her exit payoff,  $E$ , minus the cost of having used voice,  $c$ , while the government gets to keep the benefit, 1, it seized. And if she chooses to remain loyal, the citizen accepts the loss of her benefit, 0, but has to pay the cost of having used voice,  $c$ , while the government gets to keep both the benefit, 1, and a loyal citizen,  $L$ .

## 2.2 Equilibria and Interpretation

Solving the game through backward induction yields four subgame perfect Nash equilibria, which are shown in Table 1.<sup>7</sup> The outcome depends on the government's type, the citizen's type, and whether voice is a realistic option. There are two types of government, those that are *dependent* and those that are *autonomous*. If  $L > 1$ , the government is dependent on the citizen in that it values the citizen's loyalty more than the benefit it took from her. And if  $L \leq 1$ , the government is autonomous in that it values what it seized at least as much as the citizen's loyalty. To illustrate this distinction substantively, consider a situation where the citizen has an asset she is investing in the economy. Unlike an autonomous government, a dependent government values the citizen's continued investment more than what it would obtain from simply taking the citizen's asset today. Note that government dependence and autonomy are specific to a particular government and a particular citizen (or group of citizens). The fact that a government is dependent on a particular group of citizens says nothing about the dependence of that same government on societal groups more generally, nor does it suggest that other potential governments are necessarily dependent on this same group of citizens.

There are two types of citizen, those that have a *credible exit threat* and those that do not. If  $E \leq 0$ , the citizen has no credible exit threat in that she will never choose to exit because she can always do at least as well by remaining loyal. If  $E > 0$ , the citizen has a credible exit threat in that she *might* exit given that her exit payoff is greater than her loyalty payoff.

Finally, there are two types of scenario, one where the use of voice is a realistic option for the citizen and one where it is not. If  $E > 1 - c$ , the citizen's exit payoff is so great she would never use voice even if she were certain that it would be effective, i.e., exit is always preferred to having the government respond positively to her use of voice. If  $E \leq 1 - c$ , the citizen *might* use voice since the value associated with the successful use of voice is at least as great as that from exiting.

Several insights can be discerned from our model so far. First, the government only responds positively to the citizen when she has a credible exit threat *and* the government is dependent on her.<sup>8</sup> Hirschman

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<sup>7</sup>The proofs for all of the results presented in this article can be found in the Online Appendix.

<sup>8</sup>Collective action problems obviously arise when citizens seek to influence the government (Olson 1965). While we do not wish to underestimate the difficulties that citizens face in overcoming these problems, our primary focus here is on understanding the power relationship between citizens and governments when collective action problems either do not exist or when they have already been solved. In this respect, our model indicates that while overcoming collective action problems may be necessary for citizens to be able to influence the government, it is far from sufficient. For a critical discussion of the collective action problem in the context of Hirschman's EVL framework, see Barry (1974, 92-95).



Table 1: Equilibria in the Exit, Voice, and Loyalty Game

		Government	
		Autonomous, $L \leq 1$	Dependent, $L > 1$
		Is Voice Realistic?	
		Yes, $E \leq 1 - c$	No, $E > 1 - c$
		No, $E > 1 - c$	Yes, $E \leq 1 - c$
Citizen	Credible Exit Threat, $E > 0$	E1: (Exit, Exit; Ignore)	E2: (Voice, Exit; Respond) E3: (Exit, Exit; Respond)
	No Credible Exit Threat, $E \leq 0$	E4: (Loyalty, Loyalty; Ignore)	

Note: The equilibria are written in the following form: (Citizen's first action, Citizen's second action, Government's action). Proofs are shown in the Online Appendix.

differs on this point. He claims that “the exit option is widely held to be uniquely powerful; by inflicting revenue losses on delinquent management, exit is expected to induce that ‘wonderful concentration of mind’ akin to the one Samuel Johnson attributed to the prospect of being hanged” (1970, 21). One might infer from this claim that firms always respond positively when faced with customers who can exit. This inference, though, implicitly assumes that firms always depend on their customers. While this assumption is debatable in the economic sphere, we relax it in our model by allowing governments to depend on some citizens more than others. We do this because the potential for unequal influence is central to the study of politics.

In line with Hirschman, many scholars have argued that credible exit threats or outside options provide actors with bargaining leverage and hence power (Vanberg & Congleton 1992, Schneider & Cederman 1994, Voeten 2001, Kurrild-Klitgaard 2002, Fang & Ramsay 2010). However, as our model clearly demonstrates, a credible exit option, while necessary to exert power, is not sufficient. Individuals who have a credible exit threat are certainly advantaged over those who do not, as they have the realistic option of exiting if there is a deleterious change to their environment. However, the mere existence of a credible exit threat does not automatically give an individual the ability to exert influence over another actor. An autonomous government never responds positively to the use of voice even if the citizen has a credible exit threat.

It is the citizen’s credible exit threat that makes the effective use of voice possible. A dependent government responds positively only because it knows that the citizen will exit if it ignores her use of voice. Hirschman has this causal logic backwards when he writes (1970, 37) that “the decision whether to exit will often be taken in the light of the prospects for the effective use of voice.” Our model indicates that the effectiveness of voice depends on the prospects for a credible exit, not the other way around. As Lake and Baum (2001, 595) put it, “Without the possibility of exit, voice carries little weight.”<sup>9</sup> Note, though, that citizens may choose not to force governments to respond positively to them even if they are in a position to do so. If the cost of using voice,  $c \geq 1$ , or the citizen’s exit payoff,  $E > 1 - c$ , is sufficiently large, then the citizen will prefer to exit rather than use her voice to force the government to respond positively (see Equilibrium E3). This helps to explain why wealthy individuals living under repressive regimes often choose to leave rather than use their voice to force the government to back down, and why it is tragic when

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<sup>9</sup>Hirschman (1992, 80) came to recognize this point in later work when he writes that “The availability and threat of exit on the part of an important customer or group of members may powerfully reinforce their voice.” He concludes (1993, 14) that “such a positive relationship between increased availability of exit and increased willingness to voice rests on a structure that is more complex than the one underlying the seesaw pattern” that he had originally foreseen.

wealthy parents with the capacity to force public schools to reform instead send their children to private schools (Barry 1974, 88).

Second, our model reveals that the citizen is an easy target in the absence of a credible exit option — the government can take away her benefits and there is nothing she can do about it but accept the new status quo. Note that the benefits the government seizes can be thought of in several ways. It could be that the government has denied the citizen some of her civil rights. Alternatively, it could be that it has taken property away from the citizen, either through taxation or appropriation. To this point, we have implicitly assumed that the government has seized something that in some sense rightfully belonged to the citizen. However, this need not be the case. For example, it could be that the government has taken away the citizen's ability to seize an unfair advantage over other citizens. There is, thus, nothing inherently good about the government being responsive to the citizen's use of voice. Nor is it necessarily problematic if the government ignores the citizen's demands. In fact, the demands of some citizens are often referred to as 'special interests', and government officials are as likely to be applauded, as criticized, for ignoring them.

Third, our model highlights some limitations that scholars face when drawing inferences about power from real-world observations. On the one hand, it is always possible to infer the citizen's type from her actions. This is because the decision to exit or use voice requires a credible exit threat, whereas the decision to remain loyal implies the absence of such a threat. On the other hand, it is not so easy to infer the government's type through simple observation. Suppose one observes the citizen exit. She may exit because she knows the government is autonomous and would ignore her demands. However, it may also be the case that she exits because her exit payoff, or the cost of voice, is very large, even though the government is dependent and would respond positively to her demands if they were voiced. Similarly, it is not possible to determine whether the government is dependent or autonomous when the citizen demonstrates loyalty. This is because both government types ignore citizens who lack credible exit threats. Thus, one should not infer that governments that experience little use of voice by their citizens, such as those in China or North Korea, are autonomous and do not rely on citizen support to stay in power. These governments may well depend on their citizens, yet feel free to ignore them because their citizens lack credible exit threats.

The collapse of the communist regime in East Germany in 1989 bears this out. East Germans had, to a large extent, demonstrated loyalty throughout the post-war period, and most observers at the time

considered the communist regime to be stable and relatively autonomous from its citizens (Kuran 1991). This all changed, though, with the opening of the Hungarian border to Austria in May 1989. For the first time since the construction of the Berlin Wall in 1961, East Germans now had a credible exit option.<sup>10</sup> This change transformed the ‘loyal’ East German population into enthusiastic protesters who noisily voiced their demands on the streets of Leipzig and East Berlin. The fact that the East German Communist Party eventually responded to these protests by opening the Berlin Wall revealed to everyone that it was, in fact, dependent on the support of its citizens. This particular historical example should make one wary of inferring that a regime is autonomous when its citizens have no credible exit threat.

Similarly, our model indicates that it is inappropriate to use evidence of voice, or the lack thereof, as a straightforward revelation of citizen preferences. There are at least two reasons why citizens might be silent on a particular issue. While it could be that they are satisfied with the status quo, it could also be that they are dissatisfied but do not expect voice to be effective. Hirschman (1970, 38, 77) claims that the decision to remain loyal is “less rational” than the decision to use exit or voice, and that those who choose loyalty do so either because they “are confident that things will soon get better” or because they have a “special attachment to an organization.” Neither of these claims are true in our model. In our setup, it is entirely rational for citizens to be loyal when they lack a credible exit threat (Barry 1974, 91-92). Moreover, citizens do not choose loyalty due to a special attachment to the government or because they think that the government might eventually reverse course; instead, they choose loyalty because they are powerless to do otherwise. One reason for why our inferences differ has to do with the source of the negative change in the citizen’s environment. While we assume that it results from a deliberate choice by the government, Hirschman conceives of it as “accidental” and something that the government would like to resolve if only it knew about it. Given that the citizen could simply use voice or exit to inform the government of the deleterious change, it is easy to see why Hirschman refers to loyalty as something “less than rational”.<sup>11</sup>

Finally, our model setup contributes to long-standing debates about the conceptualization of the state (Nettl 1968, Skocpol 1979, Krasner 1984, Evans, Rueschemeyer & Skocpol 1985, Nordlinger 1981). Con-

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<sup>10</sup>By 1961, the East German regime had come to recognize that it relied on its citizens to keep the economy afloat and itself in power. By building the Berlin Wall and removing the one credible exit option available to its citizens, the communist regime was able to deprive its citizens of any influence that they might have had over it.

<sup>11</sup>The same reasoning helps to explain why Hirschman (1992, 79) thinks that voice “is, or should be, paramount in situations where exit either is not possible or is difficult, costly, and traumatic”, whereas our model clearly shows that voice is entirely ineffective without the presence of a credible exit threat (and a dependent government).

sider the set of governments that could plausibly rule,  $G$ , and the set of pressure groups,  $P$ , that exist at a particular point in time. Just because government  $g_i$  is dependent on group  $p_j$  does not mean that every conceivable government would be. If, however,  $g_i$  is dependent on  $p_j$  for every feasible (as opposed to logically possible) incumbent government, i.e., for all  $g_i \in G$ , then it might make sense to say that the *state* is dependent on  $p_j$ . Similarly, if  $g_i$  is autonomous from  $p_j$  for all  $g_i \in G$ , we could say that the *state* is autonomous from  $p_j$ . In the context of the ongoing debate about the usefulness of the state as a theoretical concept (Sabine 1934, Watkins 1968, Almond 1988, Mitchell 1991), our reasoning suggests that the state, to the extent that it exists, is an inherently relational entity, best understood in relation to societal actors, and that one can talk meaningfully about it whenever one can ascribe a characteristic (autonomy or dependence being just one example) that is invariant with respect to the identity of the incumbent government.<sup>12</sup>

### 3 An Extended EVL Model of Politics

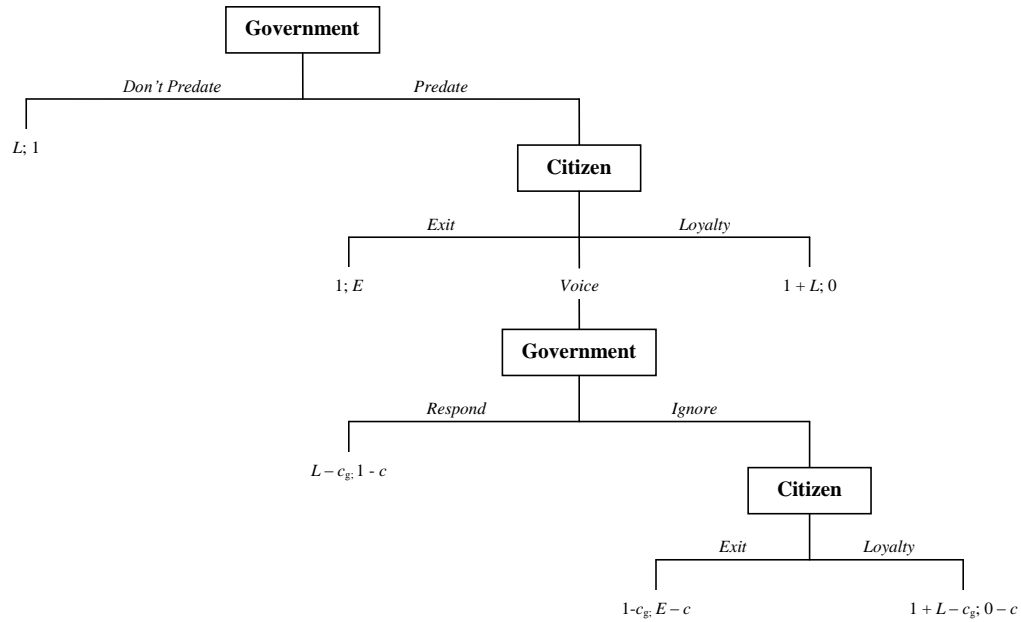
That the deleterious change in the citizen’s environment results from a deliberate policy choice by the government in our model raises an important question that does not arise in Hirschman’s original analysis: If the government will be responsive to those citizens on whom it depends for loyalty whenever those citizens possess credible exit threats, why would it ever take a benefit away from these citizens in the first place?

To address this question, we add a move at the beginning of the game in which the government decides whether to take the benefit away from the citizen. One can think of this as a decision to predate or not. If the government chooses to predate, the EVL game we have just examined begins with one small modification — we now explicitly recognize the cost,  $c_g > 0$ , imposed on the government when the citizen uses voice. To make sure that there is a citizen to play the game, we also assume that  $E < 1$ . If this were not the case, the citizen would immediately exit irrespective of whether the government predates or not. If the government chooses not to predate, the citizen continues to enjoy her benefit and the government receives the value of having a loyal citizen. This extended EVL game is shown in Figure 2. Solving the game through backward induction yields four sub-game perfect Nash equilibria, which are depicted in Table 2.

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<sup>12</sup>Our theoretical framework also allows us to provide some precision to the concept of ‘relative autonomy’ in the literature on the state (Poulantzas 1975, Miliband 1969, Skocpol 1979). We have already considered the possibility that the state or a particular government could be dependent on group  $p_j$  but autonomous from group  $p_k$ . If it were possible to enumerate the relevant groups in society and classify them as a group from which the government is dependent or autonomous, then one could think of the government’s relative autonomy as the share of groups from which the government is autonomous. Such a metric could easily be extended to capture the relative autonomy of the state.

Figure 2: Extended Exit, Voice, and Loyalty Game



Note:  $E$  is the citizen's exit payoff, 1 is the value of the benefit belonging to the citizen at the beginning of the game and which the government is deciding whether to take,  $L$  is the value the government obtains from having a loyal citizen who does not exit,  $c$  is the citizen's cost of using voice, and  $c_g$  is the cost to the government imposed by the citizen's use of voice. It is assumed that  $c, c_g, L > 0$ , and that  $E < 1$ .

An autonomous government always chooses to predate whether the citizen has a credible exit threat or not. The citizen responds to predation by an autonomous government by remaining loyal if she has no credible exit threat (Equilibrium E8) or by exiting if she does (Equilibrium E5). In contrast, a dependent government only predates if the citizen has no credible exit threat (Equilibrium E8). The dependent government predates under these conditions because it knows it can take the citizen's benefit safe in the knowledge that she cannot do anything about it — she will always remain loyal. A dependent government chooses not to predate, though, when the citizen has a credible exit threat in order to either prevent the citizen from exiting (Equilibrium E7) or to avoid having to respond positively to her use of voice (Equilibrium E6). Thus, the answer to the question with which we began this section is that a government would *not* predate on citizens upon whom it depends if they have a credible exit threat.

The extended game essentially provides the conditions under which a government will endogenously limit its own power. As such, it alleviates concerns that theorists have had with Hobbes' solution to the state

Table 2: Equilibria and Outcomes in the Extended Exit, Voice, and Loyalty Game

		Government		
		Autonomous, $L \leq 1$	Dependent, $L > 1$	
		Is Voice Realistic?		
		Yes, $E \leq 1 - c$	No, $E > 1 - c$	
		Is Voice Realistic?		
		Yes, $E > 1 - c$	No, $E \leq 1 - c$	
Citizen	Credible Exit Threat, $E > 0$	E5: PREDATION (Predate, Ignore; Exit, Exit)	E6: NO PREDATION (Don't Predate, Respond; Voice, Exit)	E7: NO PREDATION (Don't Predate, Respond; Exit, Exit)
	No Credible Exit Threat, $E \leq 0$	E8: PREDATION (Predate, Ignore; Loyalty, Loyalty)		

*Note:* The equilibria are written in the following form: (Government's first action, Government's second action; Citizen's first action, Citizen's second action). Proofs are shown in the Online Appendix.

of nature. Hobbes (1994 [1651], XIII:8-9) saw the creation of a powerful “Sovereign” who would “awe” his citizens as the solution to the “war of all against all” characterizing the state of nature. Although theorists such as Locke (1980 [1690]) recognized that the creation of a Sovereign might solve the problems citizens have with each other, they thought it created a potentially more troubling problem between the citizens and the Sovereign. By surrendering control over the means of violence to the Sovereign, what was to prevent him from using this power against his citizens? The extended EVL game illustrates that the Sovereign (government) will *voluntarily* limit his predation if he depends on citizens with credible exit threats.

As the extended EVL game makes clear, citizens who have credible exit options wield considerable power whenever the government depends on them. More significantly, they wield this power without ever needing to use their voice. Former British Prime Minister Margaret Thatcher once said that “Being powerful is like being a lady. If you have to tell people you are, you aren’t.” Her major insight that sufficiently powerful citizens never need to use their voice because the government is already doing what they want is clearly demonstrated in our model. What remains questionable is her implication that voice can be taken as a sign that citizens lack power. This is because the citizen who lacks power knows that the government will ignore her and, therefore, chooses to remain loyal rather than pay the cost of using voice. In reality, it is the decision to demonstrate loyalty, and not the use of voice, that signals a lack of power. This insight poses a challenge to those scholars who wish to empirically identify and evaluate who has power because it indicates that the most powerful actors in a society will be those who are least likely to use their voice. In effect, scholars will find it difficult to actually observe the powerful ever using their power (Barry 2002).<sup>13</sup>

Our discussion here has important implications for the study of comparative politics that run parallel to the insights gleaned from formal models of crisis bargaining in international politics. The insight that crises occur only after a deterrence failure (Achen & Snidal 1989, Signorino & Tarar 2006) has sensitized empirical international relations (IR) scholars to the difficulty of making valid inferences about the effectiveness of deterrence from a sample that only includes *general* deterrence failures (Huth 1988).<sup>14</sup> This insight has already rippled through much of the IR literature dealing with things like alliances (Smith 1996),

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<sup>13</sup>Our argument here is nicely illustrated by the motto used by the Wallenbergs, an inconspicuous Swedish family whose huge wealth and political influence go back centuries. In the late 1990s, it was reported that they controlled fully 40% of the Swedish stock market (The Economist October 12, 2006). Their family motto, ‘Esse non Videri’, is Latin for ‘To be, not to be seen’.

<sup>14</sup>International relations scholars often distinguish between general and immediate deterrence (Morgan 1977). General deterrence is about trying to prevent an adversary from making a challenge, whereas immediate deterrence is about trying to prevent an adversary from following through on a challenge that has already been made.



bilateral cooperation (Przeworski & Vreeland 2000), and treaty compliance (von Stein 2005). In addition, it has spawned a proliferation of methodological innovations to better take account of strategic interaction (Signorino 1999, Smith 1999, Lewis & Schultz 2003, Bas, Signorino & Walker 2008).

Our extended EVL model indicates that a similar logic is also fundamental to the study of comparative politics. Conflicts between citizens and the government occur only if the citizens in question are not powerful, or if the government fails to anticipate the citizens' preferred outcome. This suggests that attempts to evaluate the influence of citizens on the government that do not account for this logic are likely to produce biased estimates. This has obvious implications for the study of a whole host of topics in comparative politics such as military insurrections, protests, coups, and lobbying. Consider the literature on lobbying, where it is common for scholars to claim that actors who lack credible exit threats are the most likely to engage in lobbying (Alt et al. 1996, Frieden 1991, Drezner 2007) and that influence over policy increases with the intensity of lobbying activity (Dahl 1961, Zahariadis 2001, Hiscox 2002). As the extended EVL game demonstrates, each of these claims is deeply problematic (Bachrach & Baratz 1962, Crenson 1971).

In many ways, the argument we have presented echoes the structural Marxist view of the state (Althusser 1969, Lindblom 1977, Poulantzas 1975, Poulantzas 1980). According to this view, capitalists exercise tremendous power over the state despite speaking very softly because they possess credible exit threats and governments of all partisan hues are dependent on them for the deployment of investment that fosters job creation, economic growth, and tax revenues (Miliband 1969, Block 1977, Przeworski & Wallerstein 1988).<sup>15</sup> It is precisely because capital is generally more mobile than labor and, therefore, has more credible exit options that capitalists typically have significantly more influence over governments than workers.<sup>16</sup> This is true even if governments depend equally on labor and capital. This argument is easily extended to explain why governments do not respond equally to different sectors of the economy. For example, one reason for why the United States government acted with alacrity to bail out the banking system during the global economic crisis in 2008 while moving more cautiously and with greater reluctance to aid struggling car manufacturers was that the financial sector had more credible exit threats.

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<sup>15</sup>The contention that the state is structurally dependent on capital is equivalent, in our earlier language, to the claim that all governments  $g_i \in G$  are dependent for at least some subset,  $p_j$ , of capital owners.

<sup>16</sup>There is an interesting debate in the literature over whether capitalists receive more favorable policies because they are powerful (as our model suggests), lucky, or both (Barry 2002, Dowding 1999, Haglund & Lukes 2005, Hindmoor & McGeechan 2013).

## 4 Exit, Voice, and Loyalty Game: Incomplete Information

In some sense, the EVL game we first examined is as noteworthy for what it does not explain as for what it does. Citizens only use voice when they expect it to be effective — when they expect the government to respond positively to their demands. As a result, the model cannot explain why we sometimes observe governments being unresponsive to the public demands of their citizens. It only requires incomplete information on the part of the citizen, though, to obtain an equilibrium in which the citizen uses voice but is ignored by the government.<sup>17</sup> In such an equilibrium, a citizen with a credible exit threat uses voice believing that the government is dependent, but finds herself ignored because the government is, in fact, autonomous.<sup>18</sup>

Incomplete information has an asymmetric effect on the relative power of citizens and governments — it can help citizens but not governments. When the government is unsure as to whether the citizen has a credible exit threat, there is a pooling equilibrium in which both types of citizen use voice. If the government believes that the citizen has a credible exit threat with a sufficiently high probability, it responds positively to her demands. The inability of the government to distinguish between the different types of citizen clearly enhances the power of those citizens who lack credible exit threats. Recall that under complete information, these citizens are sitting ducks in that all governments ignore their demands. This is no longer the case when they face a dependent government that is unsure about what type of citizen it is dealing with. In effect, incomplete information can give power to otherwise powerless citizens. This suggests that citizens who do not have credible exit threats should be very careful not to take actions that might reveal their type.

While citizens who lack credible exit threats can sometimes exert influence if the government is unsure of their type, dependent governments are no better off, and may actually be worse off, if the citizen is unsure about the government's type. Under complete information, a citizen with a credible exit threat either exits or uses voice when faced with a dependent government. By assumption, a dependent government always prefers to respond positively to the use of voice than have the citizen simply exit. Under incomplete

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<sup>17</sup>Due to space constraints, we offer only a limited discussion of the role played by incomplete information in our EVL game here. A more complete discussion can be found in the Online Appendix.

<sup>18</sup>As Table 2 indicates, voice is never used in equilibrium in the extended EVL game. If the citizen knows the government will ignore her, she does not use voice. And if the government knows it will respond positively to the citizen's demands, it chooses not to predate in the first place. As a result, the extended EVL game cannot explain why we ever observe citizens using voice. Again, it only takes some incomplete information on the part of the citizen to sustain an equilibrium in which the citizen uses voice. In such an equilibrium, both dependent and autonomous governments choose to predate. If a citizen with a credible exit threat believes that the government is dependent with a sufficiently high probability, she will use voice. If the government is dependent, it responds positively to the citizen's demands. And if the government is autonomous, it ignores her and the citizen exits.

information, a citizen with a credible exit threat again either exits or uses voice. The difference is that some citizens who would have used voice if they knew for sure that they faced a dependent government now choose to exit because they are not sufficiently confident of the government's type. Thus, citizens with a credible exit threat are relatively more likely to exit with incomplete information. As a result, a dependent government will be no better off, and may actually be worse off. Overall, it appears that incomplete information is, if anything, more likely to help tip the balance of power towards citizens rather than governments.

## **5 A Substantive Application to the Democratization Literature**

Our reformulation of Hirschman's EVL framework captures important commonalities across disparate political phenomena. To illustrate this in a particular substantive realm, we now apply it to several issues in the democratization literature related to modernization theory, the political resource curse, inequality, foreign aid, and economic performance.

### **5.1 Modernization Theory and the Political Resource Curse**

According to classic modernization theory, states are more likely to become democratic and stay democratic as they become wealthier (Lipset 1959).<sup>19</sup> A common criticism of modernization theory is that it lacks a clear causal mechanism and simply relies on an empirical correlation between wealth and democracy (Rueschemeyer, Stephens & Stephens 1992, 29). Acemoglu and Robinson (2006, 318) go so far as to say that "there is as yet no theoretical explanation for this empirical fact." Our EVL model is able to provide an explanation for the observed relationship between development and more representative government.

We take as our starting point a variant of modernization theory that says it is not wealth per se that encourages democracy but rather the changes in socio-economic structure that accompany economic development in the modernization process. A key structural change in the modernization process has to do with the relative size of the sectors in the economy. According to this variant of modernization theory, all economies can be divided into the same set of sectors — agriculture (the traditional sector), manufacturing and services (the modern sector). In the early stages of development, countries have large agricultural

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<sup>19</sup>Evidence in support of these predictions has been provided by many empirical analyses in recent years (Londregan & Poole 1996, Barro 1999, Ross 2001, Boix 2003, Boix & Stokes 2003, Inglehart & Welzel 2005, Epstein et al. 2006, Boix 2011, Ansell & Samuels 2014). While evidence to the contrary would seem to come from Przeworski et al. (2000), their famous claim that wealth does not increase the probability of democratic transitions is contradicted by results from their own fully-specified model (p. 124).

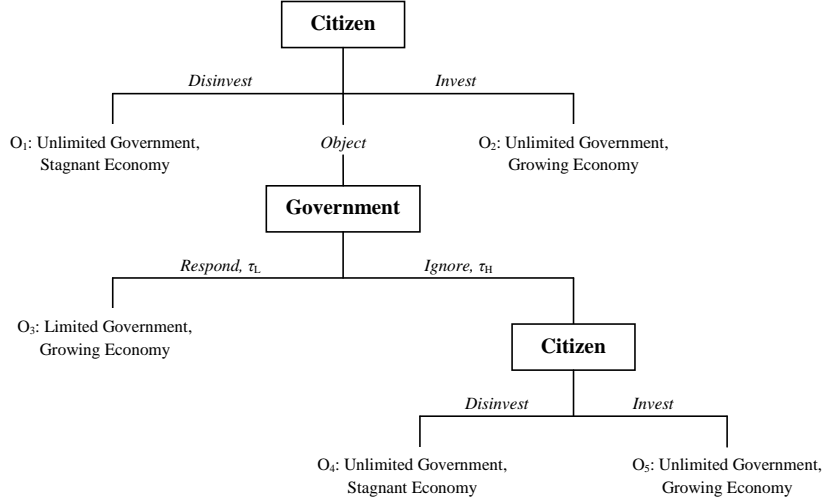
sectors but relatively small manufacturing and service sectors. As the modernization process brings about efficiencies in the agricultural sector, though, resources are freed up for use in the manufacturing and service sectors. Over time, and as countries continue to develop, the manufacturing and service sectors become larger relative to the agricultural sector. A consequence of these changes is that the economy becomes increasingly comprised of actors with mobile assets.

To understand how this affects the process of democratization, consider a general scenario where the government confronts a citizen who can choose whether or not to deploy her assets within its jurisdiction. Historically, the citizen's gross income,  $Y$ , from the investment of her assets has been taxed by the government at a low rate,  $\tau_L \geq 0$ , so that her post-tax income has been  $Y - \tau_L Y = (1 - \tau_L)Y$ . Recently, though, the government has implemented a higher tax rate,  $\tau_H > \tau_L$ . The citizen can respond to this deleterious change in her environment by disinvesting (exit), objecting to the tax hike (voice), or continuing to invest at the same level as before (loyalty). The basic structure of this strategic scenario is shown in Figure 3.

If the citizen continues to invest, she receives a per period income of  $(1 - \tau_H)Y$  for the indefinite future, while the government receives a per period tax revenue of  $\tau_H Y$ , also for the indefinite future. If the citizen disinvests, the government receives  $\tau_H Y$  in the current period, but loses the stream of future revenues that would have been generated by the citizen's investment. In effect, it takes one period for the citizen to redeploy her assets, allowing the government to benefit from confiscatory tax rates in the short run. The decision to exit means that the citizen receives  $(1 - \tau_H)Y$  in the current period, as well as the expected stream of income generated by her exit payoff,  $E$ . Her exit payoff is the return net of any taxes on the second best use of her asset, which could involve consuming or investing in some other asset or jurisdiction.

Finally, if the citizen objects to the higher tax rate, she pays a cost,  $c > 0$ . The government can respond to an objection either by ignoring it or by reverting to the low tax rate for the current and all future periods. In the first case where the government ignores the objection, the citizen either makes good on her threat to disinvest, which was at least implicit in her objection to the tax hike, or she continues to invest at the same high rate as before. If she disinvests, the citizen receives  $(1 - \tau_H)Y$  in the current period and receives her exit payoff in future periods, while the government receives  $\tau_H Y$  in the current period but forfeits the stream of tax revenues that would have been generated by the citizen's continued investment. If she continues to invest, the citizen receives  $(1 - \tau_H)Y$  in the current period and a future per period income

Figure 3: Exit, Voice, and Loyalty Democratization Game



	Citizen	Government		Citizen	Government
O <sub>1</sub>	$(1 - \tau_H)Y + \sum_{t=1}^{\infty} \delta^t E$	$\tau_H Y$	O <sub>4</sub>	$(1 - \tau_H)Y - c + \sum_{t=1}^{\infty} \delta^t E$	$\tau_H Y$
O <sub>2</sub>	$(1 - \tau_H)Y + \sum_{t=1}^{\infty} \delta^t (1 - \tau_H)Y$	$\tau_H Y + \sum_{t=1}^{\infty} \delta^t (\tau_H Y)$	O <sub>5</sub>	$(1 - \tau_H)Y - c + \sum_{t=1}^{\infty} \delta^t (1 - \tau_H)Y$	$\tau_H Y + \sum_{t=1}^{\infty} \delta^t (\tau_H Y)$
O <sub>3</sub>	$(1 - \tau_L)Y - c + \sum_{t=1}^{\infty} \delta^t (1 - \tau_L)Y$	$\tau_L Y + \sum_{t=1}^{\infty} \delta^t (\tau_L Y)$			

*Note:* The game comprises two players: (i) the citizen and (ii) the government. The citizen's payoffs depend on her pre-tax income from the first best use of her asset,  $Y$ ; the expected return on the second best use of her asset,  $E$ ; her discount factor,  $\delta$ ; the cost of objecting to the government's tax hike,  $c$ ; and whether the tax rate is low,  $\tau_L$ , or high,  $\tau_H$ . The government's payoffs depend on the citizen's pre-tax income from the first best use of her asset, its discount factor, and the tax rate. It is assumed that  $\tau_H > \tau_L \geq 0$ , and that  $0 < c \leq (\tau_H - \tau_L)Y + \sum_{t=1}^{\infty} \delta^t [(1 - \tau_L)Y - E]$ .

of  $(1 - \tau_H)Y$ , while the government receives  $\tau_H Y$  in every period, including the present. In the second case where the government reverts to the low tax rate, the citizen continues investing as before — the citizen receives  $(1 - \tau_L)Y$  in every period, while the government receives  $\tau_L Y$  in every period.

Solving the game through backward induction yields three subgame perfect Nash equilibria, which are depicted in Table 3.<sup>20</sup> The outcome of the bargaining interaction between the government and the citizen depends in important ways on the nature of the assets held. We say that the citizen has a *credible exit threat* whenever her per period 'exit' payoff is greater than her per period 'loyalty' payoff,  $E > (1 - \tau_H)Y$ . Our results show that asset holders who lack credible exit threats (those with fixed or immobile

<sup>20</sup>Given our purposes here, we restrict our attention to only those scenarios where objection is a realistic option for the citizen,  $c \leq (\tau_H - \tau_L)Y + \sum_{t=1}^{\infty} \delta^t [(1 - \tau_L)Y - E]$ . In effect, the costs of objecting must be sufficiently small that the payoff the citizen would obtain from successfully objecting to the tax hike and having the government reinstate the low tax rate weakly dominates her payoff from immediately disinvesting. This condition is equivalent to  $E \leq 1 - c$ , or  $c \leq 1 - E$ , in our original EVL game.

Table 3: Equilibria and Outcomes in the Exit, Voice, and Loyalty Democratization Game

		Government	
		Autonomous: Low Value on Investment $\delta < 1 - \frac{\tau_L Y}{\tau_H Y}$	Dependent: High Value on Investment $\delta \geq 1 - \frac{\tau_L Y}{\tau_H Y}$
Citizen	Credible Exit Threat, $E > (1 - \tau_H)Y$	E9: POOR DICTATORSHIP (Disinvest, Disinvest; Ignore)	E10: RICH DEMOCRACY (Object, Disinvest; Respond)
	No Credible Exit Threat, $E \leq (1 - \tau_H)Y$	E11: RICH DICTATORSHIP (Invest, Invest; Ignore)	

*Note:* The equilibria are written in the following form: (Citizen's first action, Citizen's second action; Government's action). It is assumed that objection is a realistic option,  $c \leq (\tau_H - \tau_L)Y + \sum_{t=1}^{\infty} \delta^t [(1 - \tau_L)Y - E]$ . Proofs are shown in the Online Appendix.

assets) have no choice but to continue investing while the government extracts from them with impunity. In contrast, asset holders who have credible exit threats (those with liquid or mobile assets) will not experience predatory tax policies so long as the government values their continued investment sufficiently highly,  $\delta \geq 1 - \frac{\tau_L Y}{\tau_H Y}$  (Block 1977, Lindbloom 1982, Peltzman 1976, Stigler 1971). In effect, our model indicates that governments will be constrained in their selection of the tax rate when they depend on mobile asset holders.

As noted earlier, structural changes in the economy that accompany the modernization process generally result in an increasing number of actors with liquid and mobile assets. Governments that are reliant on these actors to achieve their goals will, as we have seen, take their preferences into account when making policy. This does not mean that dependent governments will necessarily be democratic in the sense that they respond to the preferences of the majority. Our model indicates only that they will be responsive to those citizens with credible exit threats. This is illustrated by the history of Mexico between 1876 and 1929. Although Mexican governments in this period were responsive to those sectors of the economy that were dominated by sophisticated technologies of production — those sectors in which actors had high levels of human capital and, therefore, credible exit threats — their behavior was predatory with respect to the general population (Haber, Razo & Maurer 2003). That the number of people with credible exit threats typically increases with development, though, means that dependent governments become responsive to larger and larger sections of their society over time. The result is that the modernization process leads to the emergence of democratic governments or, at least, governments that are responsive to large sections of their citizens.

Our claim that representative government is more likely when those who rule depend upon societal groups that possess mobile and liquid assets — a middle class — echoes Barrington Moore’s (1966, 418) famous refrain, “No Bourgeois, No Democracy.”<sup>21</sup> It also fits with the story proposed by Bates and Lien (1985) to explain the emergence of representative government in England during the Glorious Revolution.<sup>22</sup> By the 17th century, the modernization process had brought about a shift in economic power from a small number of traditional elites who controlled large swathes of land producing easily quantifiable agricultural products to a rising class of wool producers, merchants, and financial intermediaries who controlled assets that were more mobile and, therefore, difficult for the crown to count and tax. The ability of the gentry to ‘hide’ their assets from state predation changed the balance of power between modernizing social groups and the traditional seats of power. Suddenly, monarchs, who needed money to keep power at home and wage war abroad, found that predation no longer worked. To continue extracting revenues, they had to become responsive to the demands of a larger segment of society, particularly the new economic elites in the towns.

Our analysis indicates that dependent ruling elites will respond to the preferences of citizens with credible exit threats. But why go further and establish representative (democratic) institutions that explicitly limit their discretion? One common story, which fits with our EVL framework, is that these institutions help overcome credible commitment problems (North & Weingast 1989, Stasavage 2002, Acemoglu & Robinson 2006). Citizens with credible exit threats exert leverage over a dependent government, but only so long as the government remains dependent on them. If there is a chance that the government will become more autonomous over time, then promises to take account of citizen preferences in the future will not be credible. Citizens with credible exit threats may simply decide to disinvest in these circumstances. Establishing democratic institutions that can constrain them in the future is one way that ruling elites can solve their credible commitment problem and gain access to the investment upon which they depend today.

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<sup>21</sup> Ansell and Samuels (2014) also highlight how the modernization process can contribute to democratization via the emergence of a bourgeoisie. Like us, they note that democratization is likely to result from competition between ruling elites and the middle class, not from competition between ruling elites and the poor as is assumed in the redistributive thesis of most economic models of democratization (Acemoglu & Robinson 2006, Boix 2003). However, their argument does not explain exactly why the ruling elites in a country would listen to the preferences of the middle class and not simply use their control of the state apparatus to predate upon them; they simply assume that the power of the middle class increases with its wealth and size. Ansell and Samuels (2014, 18) explicitly recognize that the precise source of the middle class’s leverage over the ruling elites is unclear in their story when they write that understanding the “conditions under which . . . economic elites will . . . rein in state authority remains a pressing issue for investigation.” In contrast, it is clear in our EVL democratization game that the power of the middle class comes from the mobility of its assets. A dependent ruling elite cannot simply predate on actors with mobile assets; it has to negotiate with them.

<sup>22</sup> Interestingly, Bates and Lien (1985, 60-61) explicitly differentiate their argument from that found in Hirschman (1970). As we demonstrate, though, their story is entirely consistent with our own reformulation of Hirschman’s EVL framework.

In addition to providing a causal mechanism linking the modernization process to the emergence of representative government, our model also helps to explain the political resource curse, the idea that revenues from natural resources such as oil and copper are associated with authoritarianism.<sup>23</sup> The existing literature comprises both supply-side and demand-side explanations (Ulfelder 2007). Supply-side explanations focus on how resource revenues empower authoritarian leaders to resist pressure to democratize and consolidate their hold on power. In these explanations, resource revenue is either distributed as patronage to preempt or coopt opposition groups, or it is used to build coercive power to repress opposition groups (Al-Ubaydli 2012, Bueno de Mesquita & Smith 2010, Jensen & Wantchekon 2004, Smith 2006, Wantchekon 2001).

In contrast, demand-side explanations emphasize the way in which resource revenues reduce both the demand for democratic reform from the citizenry and government responsiveness to that demand. Governments that can raise revenue from natural resources do not need to raise revenue by taxing their citizenry (Beblawi 1987, Karl 1997, Mahdavy 1970, Ross 2001). These governments are ‘autonomous’ and do not need to accept institutional limits on their political power in exchange for revenue. Low tax rates and the increased social spending that is made possible by resource revenues further alleviate social pressures that might otherwise provoke demands for government accountability (Dunning 2008, Morrison 2007, Morrison 2009, Paler 2013, Ross 2004). The underlying logic of demand-side explanations is clearly seen in our EVL model. By increasing the autonomy of the government, resource revenues undermine a government-citizen bargaining dynamic that might otherwise culminate in democratic reforms (Wiens, Poast & Clark 2014).

Our model has important implications for how scholars should test demand-side explanations of the resource curse. Existing studies either focus on resource *abundance*, which captures the absolute size of resource rents in a country (Al-Ubaydli 2012, Dunning 2008, Ramsay 2011, Ross 2012, Wright, Frantz & Geddes forthcoming), or they focus on resource *dependence*, which captures the size of resource rents relative to other sources of government revenue (Andersen & Ross 2014, Haber & Menaldo 2011, Jensen & Wantchekon 2004, Ross 2001, Smith 2004, Ulfelder 2007). Our model suggests that there are general theoretical reasons to focus on resource dependence as opposed to resource abundance. The relative bargaining power of the actors in our EVL model depends on the extent to which the government depends on mobile asset holders. If a large proportion of the government’s revenue comes from citizens with mobile assets,

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<sup>23</sup>There is also an *economic* resource curse, the idea that natural resources have a negative effect on economic performance. For an overview of the literature on the economic resource curse, see van der Ploeg (2011).



then the government has to credibly commit to policies that favor these citizens in exchange for their continued investment. However, if a large proportion of the government's revenues comes from natural resource extraction, then the government's incentive to make credible commitments to its citizens by establishing democratic institutions decreases. This implies that we should expect a country's *dependence* on resource revenues, and not necessarily resource abundance, to affect its regime type (Wiens, Poast & Clark 2014).

A second implication of our EVL framework is that the political resource curse is primarily about authoritarian stability, not democratic stability. In our model, resource rents reduce the likelihood of democratic transitions by making governments autonomous from the demands of their citizens. While resource rents hurt the emergence of democracy, they need not harm democratic stability. On the demand-side, resource rents in democracies will have come too late to prevent the emergence of institutions capable of holding governments accountable. And on the supply-side, revenue allocation in democracies is subject to popular oversight, limiting the government's ability to spend revenue on patronage or coercion. This helps to explain why resource rents have not undermined democracy in Canada, Norway, the United Kingdom, and the United States. In each of these countries, the flow of resource rents came well after democratic institutions had already become entrenched. This suggests both that the negative effects of resource rents are conditional on the quality of the institutional endowment when resource rents are first exploited and that tests of the resource curse should focus on how rents affect the emergence of democracy, not the stability or level of democracy (Mehlum, Moene & Torvik 2006, van der Ploeg 2011, Wiens, Poast & Clark 2014).

## **5.2 Inequality**

The redistributive thesis underlying most economic models of democratization states that economic inequality affects the emergence and survival of democracy (Huntington 1991, Rueschemeyer, Stephens & Stephens 1992, Acemoglu & Robinson 2000, Acemoglu & Robinson 2001, Acemoglu & Robinson 2006, Rosendorff 2001, Boix 2003, Reenock, Bernhard & Sobek 2007, Houle 2009). The underlying idea is that inequality produces political competition between the rich and the poor. Inequality provides incentives for the poor to redistribute wealth from the rich. The ability of the poor to expropriate the rich through the ballot box makes democracy appealing to the poor but costly for the rich. As a result, inequality provides incentives for the rich to block attempts at democratization or conduct coups to reverse democratization. While some

argue that inequality always has a negative effect on democracy (Acemoglu & Robinson 2001, Boix 2003), others argue that the relationship is non-monotonic, with democracy most likely to emerge at moderate levels of inequality where the poor are dissatisfied with the distribution of income but the rich are not so averse to democracy that they resort to repression to prevent it (Acemoglu & Robinson 2006).

Despite the widespread adoption of economic models of democratization, the empirical support for the redistributive thesis is rather weak. While some studies find a negative relationship between inequality and democracy, most find no relationship at all (Przeworski et al. 2000, Barro 1997, Bollen & Jackman 1985, Bollen & Jackman 1995). Even the studies that do find a negative relationship differ over whether it applies only to the emergence of democracy (Boix 2003) or only to the survival of democracy (Houle 2009). One potential explanation for this weak or nonexistent support is that the causal process underlying the redistributive thesis is flawed. There is little empirical evidence, for example, to support the claims that the demand for redistribution increases with inequality or that democracies redistribute more than dictatorships (Przeworski 1985, Roemer 1998, Moene & Wallerstein 2003, Shelton 2007, Scheve & Stasavage 2009). Even if these claims were true, the applicability of the redistributive thesis is limited by the fact that only half of the democratic transitions that have occurred during the third wave of democracy actually exhibit signs of distributive conflict between the rich and the poor (Haggard & Kaufman 2012). As predicted by our EVL model, the key actor in most democratic transitions is not the poor but the middle class, a group whose income is well above that of the average income earner and who would therefore be net contributors in the tax and redistribution system assumed in most economic models of democratization (Ansell & Samuels 2014).

The logic inherent in our EVL model also provides a second explanation for why existing studies generally fail to find a consistent negative relationship between inequality and democracy. Recall that asset holders with credible exit threats will not experience predatory tax policies so long as the government values their continued investment sufficiently highly. The fact that these economic elites can realistically withdraw their much-needed assets, either by consuming them or by investing them beyond the reaches of a predatory government, provides one explanation for why we rarely see the poor vote to expropriate them in democracies. Our argument here fits squarely within the larger literature on the structural dependence of the state on capital (Miliband 1969, Block 1977, Przeworski & Wallerstein 1988, McGuire & Olson 1996, Rosendorff 2001). In effect, full democracy, where representation extends to the poor, will only

appear costly to those with above average income, including the middle class, if they have immobile assets. Resource curse theory indicates that democracy is unlikely to emerge in countries where immobile asset holders predominate. As a result, inequality should only threaten democracy in situations where democracy is already unlikely to occur in the first place.

The fact that almost all empirical studies that examine the effect of inequality on democracy ignore the conditioning effect of asset mobility may help to explain the inconsistent results in the existing literature. To our knowledge, Freeman and Quinn (2010) provide the only explicit statistical test of a conditional argument linking inequality to democracy.<sup>24</sup> In line with the predictions from our EVL model, they find that unequal and financially integrated dictatorships are much more likely to undergo democratic transitions than unequal and financially closed dictatorships. Further support for our argument comes from Ansell and Samuels (2014), who find that income inequality fosters democratization but that land inequality hinders it. Although they do not frame their results in terms of asset mobility, it is easy to see that these results fit with our theoretical story. As Ansell and Samuels note, income inequality generally increases with the creation of a large middle class, a group that tends to have liquid and mobile assets. In contrast, land inequality typically signals the existence of a large landed aristocracy that primarily holds immobile assets. These landed elites have more to fear from democratization due to the nature of their assets. Wood's (2000) account of the democratic transition in South Africa in 1994 is also consistent with our theoretical argument. The economic assets of the white minority had become more mobile with the globalization of the South African economy in the 1980s and early 1990s. Wood argues that it was this increased mobility of the white's assets that made them willing to accept a democratic transition despite the very high levels of inequality.

### **5.3 Foreign Aid**

The growing literature on foreign aid and democratization is dominated by a debate between “aid optimists” and “aid pessimists” (Wright & Winters 2010, 62). Our EVL model demonstrates a clear causal path by which foreign aid can hinder democracy. However, it also suggests the conditions under which foreign aid might encourage limited democratization reforms.

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<sup>24</sup>Some other studies recognize that asset mobility is likely to condition the effect of inequality on democracy. However, this conditionality is ignored in their statistical analyses. Either asset mobility is entered into the model additively (Boix 2003, Ahlquist & Wibbels 2012) or there is no statistical analysis at all (Acemoglu & Robinson 2006).

Like natural resource revenue, foreign aid can hinder democratization by decreasing the demand for democratic reform from the citizenry as well as government responsiveness to that demand (Bauer 1971, Bräutigam & Knack 2004, Knack 2004, Djankov, Montalvo & Reynal-Querol 2008, Moyo 2009). By reducing their need to raise taxes and providing access to ‘slack resources’ that can be strategically used to reward supporters and coopt opposition groups, foreign aid increases the autonomy of recipient governments with respect to the demands of their citizens (Raghuram & Subramanian 2007, Smith 2008, Bueno de Mesquita & Smith 2009, Kono & Montinola 2009, Ahmed 2012). Moreover, the low taxes and increased spending that are made possible by foreign aid reduces the citizenry’s demand for democratic reforms in the first place (Boone 1996, Remmer 2004, Morrison 2007, Morrison 2009). In this way, foreign aid undermines the government-citizen bargaining dynamic in our EVL model that can result in governments accepting institutional limits on their power in return for continued investment and tax revenue.<sup>25</sup>

Many scholars claim that revenue from foreign aid is the same as revenue from natural resources in that they both represent forms of “unearned income” (Morrison 2007, Smith 2008, Bueno de Mesquita & Smith 2009, Morrison 2009). This has led some to identify a political *foreign aid curse* that mirrors the political *resource curse* (Djankov, Montalvo & Reynal-Querol 2008). There are significant differences, though, between natural resources and foreign aid (Wright & Winters 2010, Altincekic & Bearce 2014, Bermeo 2016). Importantly, these differences suggest that a foreign aid curse is not inevitable and that there are conditions under which foreign aid can actually encourage limited democratization reforms.

One important difference is that while resource revenue makes governments more autonomous in a general sense, this is not the case with foreign aid revenue.<sup>26</sup> Foreign aid may make governments *less* dependent on their own citizens, but it also makes them *more* dependent on their foreign aid donors. As our EVL model indicates, aid donors can exert influence on these recipient countries whenever they have credible exit threats. This raises important questions about aid conditionality. Specifically, what conditions do foreign aid donors impose, and can they credibly threaten to withdraw aid if their conditions are not met?

Aid donors are often as interested in achieving strategic goals as they are in achieving political

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<sup>25</sup>This line of reasoning applies primarily to aid that goes to the incumbent government in the recipient country. Some foreign aid goes to non-state actors and bypasses the government (Dietrich 2013, Dietrich 2016). Such aid does not increase government autonomy and can increase the demand for democratic reform by strengthening opposition groups (Dietrich & Wright 2014).

<sup>26</sup>Some have also argued that foreign aid is less fungible and less constant than natural resource revenue, making it less useful as a tool that incumbents can use to coopt/repress opposition groups and reward supporters (Altincekic & Bearce 2014).

reforms in the recipient country (Alesina & Dollar 2000, Bearce & Tirone 2010). To the extent that aid is purely strategic, there is little reason to believe that it would promote democratization (Wright & Winters 2010). Many aid donors, though, do demand political (and economic) reform as one of the conditions for continued foreign aid. Empirical evidence that these types of conditions are rarely enforced by the donor country (Collier 1997, Alesina & Dollar 2000, Svensson 2003) has led some to claim that foreign aid is effectively “unconditional” in practice (Morrison 2012). To the extent that this is true, there is again little reason to believe that foreign aid would promote democratization.

However, the extent to which aid donors can enforce their conditions for political reform depends on whether they have credible exit threats. Threats to withhold aid are not credible when the aid donor has a strategic interest in helping the recipient country (Bearce & Tirone 2010, Bermeo 2016). As a result, foreign aid will only be effective at promoting political reform when the donor has no strategic interests in the ‘dependent’ recipient country. This conditionality, which is implied by our EVL model, is supported by recent studies showing that aid is associated with democratic reforms in the post-Cold War period but not during the Cold War when alliance politics was more strategically important (Dunning 2004, Wright 2009).<sup>27</sup> It is also supported by studies suggesting that multilateral aid is more likely to result in political reforms than bilateral aid (Girod 2008, Carnegie, Marinov & Aronow 2014). The threat to withhold aid if the recipient country does not implement the desired political reform is more credible from multilateral aid donors because these donors are likely to have competing strategic interests. Thus, foreign aid *can* promote democratization, so long as (i) the recipient country is dependent on the aid (Girod & Tobin 2016), (ii) the aid donor wants political reform in the recipient country, and (iii) the aid donor has credible exit threats in that they can credibly threaten to withdraw aid if their conditions are not met.

Any political reforms that do occur in the recipient country, though, are likely to be limited. If the recipient country wanted to introduce democratic reforms itself, there would be little need for donor countries to provide foreign aid to encourage this.<sup>28</sup> In effect, most dictatorial leaders in recipient countries will be reluctant to introduce meaningful democratic reforms; instead, they will try to get away with implementing superficial reforms that are sufficient to satisfy their foreign aid donors but do not threaten their own hold on

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<sup>27</sup>There is evidence that foreign aid continues to hinder democratization in those recipient countries that remain strategically important in the post-Cold War period (Bermeo 2016).

<sup>28</sup>Foreign aid might still be helpful if the desired democratic reforms are politically costly and the recipient country lacks the necessary resources to compensate those who expect to lose out from the reforms and who would otherwise oppose democratization.

power. Consistent with this, Dietrich and Wright (2014) find that foreign aid tends to increase *de jure* contestation, which is central to most quantitative measures of regime type, but not *de facto* contestation. While foreign aid might encourage the emergence of multi-party politics and hence higher scores on quantitative measures of democracy, the multi-party politics that results is one in which the opposition parties are typically kept weak and the incumbent leaders continue to dominate. Also consistent with the claim that foreign aid is likely to produce only limited political reform is research showing that democratic reforms tend to stop, and are even reversed, as soon as the flow of aid is interrupted (Carnegie, Marinov & Aronow 2014).

#### **5.4 Economic Performance**

There is a large literature on the political determinants of economic performance (Alesina & Perotti 1994, Persson & Tabellini 2003), much of which focuses on the effect of regime type (Acemoglu et al. 2014, Barro 1996, Bueno de Mesquita et al. 2001, Bueno de Mesquita et al. 2003, Doucouliagos et al. 2008, Lake & Baum 2001, Przeworski & Limongi 1993, Przeworski et al. 2000, Ross 2006, Sirowy & Inkeles 1991). Our EVL model contributes to this literature by indicating the conditions under which one would expect to observe growing, as opposed to stagnant, economies.

The equilibria shown in Table 3 indicate that the economic performance of democracies will be good, whereas that of dictatorships will be more heterogeneous. As Equilibrium E10 indicates, countries in which governments are dependent on citizens with credible exit threats are likely to be democratic and have a strong growing economy. The economy grows because the citizens invest their assets, safe in the knowledge that the government will not predate on them. As Equilibrium E11 indicates, countries in which citizens lack credible exit threats are likely to be dictatorial and have a weak but growing economy. The economy grows because the citizens have little option but to continue investing, making the best of what they have and hoping that the government does not predate too much. As Equilibrium E9 indicates, countries in which governments are autonomous and citizens have credible exit threats are likely to be dictatorial and have a stagnant economy. The economy is stagnant because citizens are able to redeploy their assets elsewhere to avoid government predation. The prediction that dictatorships will exhibit more variation in economic performance than democracies has strong empirical support (Alesina & Perotti 1994, Przeworski et al. 2000, Bueno de Mesquita et al. 2003). The fact that some dictatorships are expected to have growing economies provides

a potential explanation for why so many studies have failed to find compelling evidence that democracies routinely produce better economic performance than dictatorships (Alesina & Perotti 1994, Przeworski & Limongi 1993, Ross 2006, Sirowy & Inkeles 1991). Our EVL model indicates that it is inappropriate to simply compare the economic performance of democracies and dictatorships because economic performance across these regimes should be conditional on whether or not the citizens have credible exit threats.

In many ways, the predictions of our EVL model are consistent with the theoretical claims made by selectorate theory (Bueno de Mesquita et al. 2001, Bueno de Mesquita et al. 2003). This is not surprising given that selectorate theory implicitly incorporates an exit, voice, and loyalty argument. In selectorate theory, the incumbent leader is *dependent* on members of the winning coalition but *autonomous* with respect to other citizens (the selectorate and the disenfranchised). Incumbents naturally pay no attention to the preferences of citizens who are not in the winning coalition. Whether the incumbent responds positively to the preferences of members of the winning coalition depends on whether they have credible exit threats, something that is captured in selectorate theory by the strength of the ‘loyalty norm’. The loyalty norm is weak (strong) whenever members of the winning coalition can (cannot) credibly threaten to defect to the challenger’s coalition. Incumbent leaders respond positively to the preferences of the winning coalition only when the loyalty norm is weak. Significantly, this suggests that contestation is more important than inclusion for good governance (Dahl 1971). This is exactly the same theoretical intuition as in our EVL model. Like us, selectorate theory predicts that economic performance will be better when the leader depends on a winning coalition that has credible exit threats.

## **6 Conclusion**

Human interactions are considered political whenever actors cannot accomplish their goals without considering the behavior of other actors. Under such circumstances, the attempt to influence, or to avoid the influence of, others becomes relevant. It is here that power can and will be exercised. Attempts to influence or break free of the influence of others involve three basic strategies. Like the primordial response of ‘fight or flight’, political actors can attempt to change their environment by using voice or alter their ‘location’ by using exit. ‘Voice’ and ‘exit’ are to be understood metaphorically here. A citizen’s use of exit in response to a government policy need not involve emigration; instead, a citizen might change industries, production

processes, or political parties. Similarly, a citizen's use of voice might come in the form of a host of behaviors ranging from a ballot to a bullet. Finally, a citizen's best response to government policy might be to 'keep on, keepin' on'. That is, throughout most of human history, the vast majority of humanity has often found itself between a rock and a hard place. Under such circumstances, it is possible that neither voice nor exit is a feasible option. It should be clear that here too, the term 'loyalty' is being used metaphorically; indeed, euphemistically.

As political scientists, we often construct separate and distinct models to capture various political phenomena. For example, we have multiple models to explain things like lobbying, protests, elections, conflict, and so on. Each of these specific models provides important insights into these different phenomena. In this article, we adopt a different approach. Rather than focus on the specificities of different political phenomena, we have sought to construct a model that captures the key elements common to most, if not all, political situations. Our model focuses on when and why actors choose to exit, remain loyal, or engage in voice. While our model builds on Hirschman's EVL framework, it departs from his actual causal argument by following an influential and well-established line of research that treats exit, voice, and loyalty as distinct behavioral responses to a deleterious change in one's environment. While our reformulation and extension of Hirschman's EVL framework reaffirms some of his original claims, it contradicts several others. It also highlights several points regarding the use of power that are routinely overlooked or underemphasized by scholars across various areas of political science.

Most importantly, our model highlights the strategic interdependencies involved in the use of power. Voice is only powerful when an individual has the power to exit and the threat of exit has power. If the citizen's exit threat is not credible, or if the government does not value the citizen's loyalty, then the use of voice will be ineffective. This insight points to a central irony, perhaps tragedy, about politics. Citizens who would derive the most from successfully using their voice — those whose exit options are unattractive — are unlikely to have much influence over the government. Relatedly, citizens who have the power to use voice effectively will typically not need to use their voice as the government has incentives to anticipate their desires. This suggests that much of the voice we observe on a day-to-day basis occurs in situations where citizens mistakenly think that the government values their loyalty or mistakenly believe that they can



convince the government that their exit threats are credible.<sup>29</sup> Failing to recognize these strategic dynamics will lead to specification errors in empirical models and, hence, biased inferences in virtually every area of our discipline.

To highlight the commonalities that exist in the use of power across apparently disparate political phenomena, we applied our model to several substantive issues in the democratization literature related to modernization theory, the political resource curse, inequality, foreign aid, and economic performance. Our EVL model was able to combine insights from the largely distinct literatures dealing with modernization theory and the political resource curse in the same theoretical framework. It also offered potential explanations for why inequality does not necessarily harm democratization, why foreign aid tends to deter democratization but can sometimes promote limited democratic reforms, and why economic performance in dictatorships is more heterogeneous than in democracies. Although we focused on the democratization literature, we believe that our EVL model offers a fruitful analytical framework for examining the use of power in a wide variety of other political settings as well.

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<sup>29</sup>Of course, individuals may also use voice when it is ineffective in order to invest in a long term movement by signaling their willingness to accept costs to other potential members of the movement (Chong 1991).

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## Online Appendix

### Exit, Voice, and Loyalty Game

In Table 1 in the main text, we note that there are four subgame perfect Nash equilibria in the Exit, Voice, and Loyalty Game shown in Figure 1. We now formally present the equilibria, along with their proofs. To keep things simple and avoid knife-edge scenarios, we assume throughout that (i) the citizen will only exit if her exit payoff is strictly greater than her loyalty payoff,  $E > 0$ ; (ii) the government will only respond positively to the citizen's use of voice if the value of having a loyal citizen is strictly greater than the value of the benefit it took from the citizen in the pre-history of the game,  $L > 1$ ; and (iii) the citizen will not use voice if her exit payoff is strictly greater than the payoff she would receive if the government responded positively to her use of voice,  $E > 1 - c$ . As noted in the text, we also assume that the use of voice is costly for the citizen,  $c > 0$ , and that the government values having a loyal citizen,  $L > 0$ . Equilibria are written in the following form: (Citizen's first action, Citizen's second action; Government's action).

**Equilibrium 1. (Exit, Exit; Ignore)** is the subgame perfect Nash equilibrium strategy profile if  $L \leq 1$  and  $E > 0$ .

*Proof.* The citizen chooses to exit,  $E - c$ , at the last decision node rather than remain loyal,  $0 - c$ , if  $E > 0$ . The government ignores the citizen's use of voice, 1, rather than responds positively to it,  $L$ , if  $L \leq 1$ . Knowing this, the citizen chooses to exit,  $E$ , at the initial decision node rather than remain loyal, 0, or use her voice,  $0 - c$ .  $\square$

**Equilibrium 2. (Voice, Exit; Respond)** is the subgame perfect Nash equilibrium strategy profile if  $L > 1$  and  $0 < E \leq 1 - c$ .

*Proof.* The citizen chooses to exit,  $E - c$ , at the last decision node rather than remain loyal,  $0 - c$ , if  $E > 0$ . The government responds positively to the citizen's use of voice,  $L$ , rather than ignores it, 1, if  $L > 1$ . Knowing this, the citizen chooses to use voice,  $1 - c$ , at the initial decision node rather than remain loyal, 0, or exit,  $E$ , so long as  $E \leq 1 - c$ .  $\square$

**Equilibrium 3. (Exit, Exit; Respond)** is the subgame perfect Nash equilibrium strategy profile if  $L > 1$ ,  $E > 0$ , and  $E > 1 - c$ .

*Proof.* The only difference with Equilibrium 2 is that the citizen chooses to exit at the initial decision node, which requires that  $E > 1 - c$ .  $\square$

**Equilibrium 4. (Loyalty, Loyalty; Ignore)** is the subgame perfect Nash equilibrium strategy profile if  $E \leq 0$ .

*Proof.* The citizen chooses to remain loyal,  $0 - c$ , at the last decision node rather than exit,  $E - c$ , if  $E \leq 0$ . The government ignores the citizen's use of voice,  $1 + L$ , rather than responds positively to it,  $L$ , because  $L > 0$  by assumption. Knowing this, the citizen chooses to remain loyal, 0, at the initial decision node rather than use voice,  $0 - c$ , or exit,  $E$ .  $\square$

## The Extended Exit, Voice, and Loyalty Game

In Table 2 in the main text, we note that there are four subgame perfect Nash equilibria in the Extended Exit, Voice, and Loyalty Game shown in Figure 2. We now formally present the equilibria, along with their proofs. In addition to the assumptions that we made in the Exit, Voice, and Loyalty Game to avoid knife-edge scenarios, we now also assume that the government will not predate if the value of having a loyal citizen is strictly greater than the value of the benefit it could take from the citizen,  $L > 1$ . We also now assume that the citizen's use of voice is costly for the government,  $c_g > 0$ , and that the value of the citizen's exit option is less than the value of her benefit,  $E < 1$ . Equilibria are written in the following form: (Government's first action, Government's second action; Citizen's first action, Citizen's second action).

**Equilibrium 5. (Predate, Ignore; Exit, Exit)** is the subgame perfect Nash equilibrium strategy profile if  $L \leq 1$  and  $E > 0$ .

*Proof.* The citizen chooses to exit,  $E - c$ , at the last decision node rather than remain loyal,  $0 - c$ , if  $E > 0$ . The government ignores the citizen's use of voice,  $1 - c_g$ , rather than respond positively,  $L - c_g$ , if  $L \leq 1$ . If the government predate, the citizen chooses to exit,  $E$ , rather than use voice,  $E - c$ , or remain loyal,  $0$ , because  $E, c > 0$  by assumption. Knowing this, the government chooses to predate,  $1$ , rather than not predate,  $L$ , because  $L \leq 1$ .  $\square$

**Equilibrium 6. (Don't Predate, Respond; Voice, Exit)** is the subgame perfect Nash equilibrium strategy profile if  $L > 1$  and  $0 < E \leq 1 - c$ .

*Proof.* The citizen chooses to exit,  $E - c$ , at the last decision node rather than remain loyal,  $0 - c$ , if  $E > 0$ . The government responds positively to the citizen's use of voice,  $L - c_g$ , rather than ignore it,  $1 - c_g$ , if  $L > 1$ . If the government predate, the citizen chooses to use voice,  $1 - c$ , rather than exit,  $E$ , or remain loyal,  $0$ , if  $0 < E \leq 1 - c$ . Knowing this, the government chooses not to predate,  $L$ , rather than predate,  $L - c_g$ , because  $c_g > 0$  by assumption.  $\square$

**Equilibrium 7. (Don't Predate, Respond; Exit, Exit)** is the subgame perfect Nash equilibrium strategy profile if  $L > 1$ ,  $E > 0$ , and  $E > 1 - c$ .

*Proof.* The citizen chooses to exit,  $E - c$ , at the last decision node rather than remain loyal,  $0 - c$ , if  $E > 0$ . The government responds positively to the citizen's use of voice,  $L - c_g$ , rather than ignore it,  $1 - c_g$ , if  $L > 1$ . If the government predate, the citizen chooses to exit,  $E$ , rather than remain loyal,  $0$ , or use voice,  $1 - c$ , if  $E > 1 - c$ . Knowing this, the government chooses not to predate,  $L$ , rather than predate,  $1$ , because  $L > 1$ .  $\square$

**Equilibrium 8. (Predate, Ignore; Loyalty, Loyalty)** is the subgame perfect Nash equilibrium strategy profile if  $E \leq 0$ .

*Proof.* The citizen chooses to remain loyal,  $0 - c$ , at the last decision node rather than exit,  $E - c$ , if  $E \leq 0$ . The government ignores the citizen's use of voice,  $1 + L - c_g$ , rather than respond positively,  $1 - c_g$ , because  $L > 0$  by assumption. If the government predate, the citizen chooses to remain loyal,  $0$ , rather than exit,  $E$ , or use her voice,  $0 - c$ , because  $E \leq 0$  and  $c > 0$ . Knowing this, the government chooses to predate,

$1 + L$ , rather than not predate,  $L$ . □

### The Exit, Voice, and Loyalty Democratization Game

In Table 3 in the main text, we note that there are three subgame perfect Nash equilibria in the Exit, Voice, and Loyalty Democratization Game shown in Figure 3. We now formally present the equilibria, along with the proofs. To keep things simple and avoid knife-edge scenarios, we assume that the citizen will only disinvest if her payoff from disinvesting is strictly greater than her payoff from continuing to invest at the same level as before,  $E > (1 - \tau_H)Y$ , and that the government will only respond to the citizen's objection and revert to the lower tax rate if its payoff from doing so is strictly greater than the payoff it receives from imposing the high tax rate and having the citizen disinvest,  $\delta > 1 - \frac{\tau_L Y}{\tau_H Y}$ . We also assume that the use of voice is costly for the citizen,  $c > 0$ , and that the high tax rate is strictly greater than the low tax rate,  $\tau_H > \tau_L \geq 0$ . Finally, we note in the main text that we restrict our analysis to those scenarios where voice is a realistic option,  $c \leq (\tau_H - \tau_L)Y + \sum_{t=1}^{\infty} \delta^t [(1 - \tau_L)Y - E]$ .<sup>1</sup> Equilibria are written in the following form: (Citizen's first action, Citizen's second action; Government's action).

**Equilibrium 9. (Disinvest, Disinvest; Ignore)** is the subgame perfect Nash equilibrium if  $E > (1 - \tau_H)Y$  and  $\delta \leq 1 - \frac{\tau_L Y}{\tau_H Y}$ .

*Proof.* The citizen chooses to disinvest at the last decision node rather than continue investing if she has a credible exit threat,  $E > (1 - \tau_H)Y$ . The government ignores the citizen's objection to the tax hike if

$$\tau_L Y + \sum_{t=1}^{\infty} \delta^t (\tau_L Y) \leq \tau_H Y, \quad (3)$$

which simplifies to

$$\left( \frac{1}{1 - \delta} \right) \tau_L Y \leq \tau_H Y. \quad (4)$$

Solving for  $\delta$ , we get

$$\delta \leq 1 - \frac{\tau_L Y}{\tau_H Y}. \quad (5)$$

Knowing this, the citizen chooses to disinvest at the initial decision node rather than object or continue investing. □

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<sup>1</sup>For voice to be a realistic option, it must be the case that the citizen's payoff from outcome  $O_1$  in Figure 3 is less than or equal to her payoff from outcome  $O_3$ . This will be the case if

$$(1 - \tau_H)Y + \sum_{t=1}^{\infty} \delta^t E \leq (1 - \tau_L)Y - c + \sum_{t=1}^{\infty} \delta^t (1 - \tau_L)Y, \quad (1)$$

which simplifies to:

$$c \leq (\tau_H - \tau_L)Y + \sum_{t=1}^{\infty} \delta^t [(1 - \tau_L)Y - E]. \quad (2)$$

**Equilibrium 10. (Object, Disinvest; Respond)** is the subgame perfect Nash equilibrium if  $E > (1 - \tau_H)Y$ ,  $\delta > 1 - \frac{\tau_L Y}{\tau_H Y}$ , and  $c \leq (\tau_H - \tau_L)Y + \sum_{t=1}^{\infty} \delta^t [(1 - \tau_L)Y - E]$ .

*Proof.* The citizen chooses to disinvest at the last decision node rather than continue investing if she has a credible exit threat,  $E > (1 - \tau_H)Y$ . The government responds positively to the citizen's objection to the tax hike if

$$\delta > 1 - \frac{\tau_L Y}{\tau_H Y}. \quad (6)$$

Knowing this, the citizen chooses to object to the tax hike at the initial decision node rather than disinvest or continue investing, because she has a credible exit threat,  $E > (1 - \tau_H)Y$ , and because voice is not too costly,  $c \leq (\tau_H - \tau_L)Y + \sum_{t=1}^{\infty} \delta^t [(1 - \tau_L)Y - E]$ , by assumption.  $\square$

**Equilibrium 11. (Invest, Invest; Ignore)** is the subgame perfect Nash equilibrium if  $E \leq (1 - \tau_H)Y$ .

*Proof.* The citizen chooses to continue investing at the last decision node rather than disinvest if she lacks a credible exit threat,  $E \leq (1 - \tau_H)Y$ . The government ignores the citizen's objection to the tax hike so long as

$$\tau_H Y + \sum_{t=1}^{\infty} \delta^t (\tau_H Y) \geq \tau_L Y + \sum_{t=1}^{\infty} \delta^t (\tau_L Y), \quad (7)$$

which is always the case because  $\tau_H > \tau_L$ . Knowing this, the citizen chooses to continue investing at the initial decision node rather than object or disinvest.  $\square$

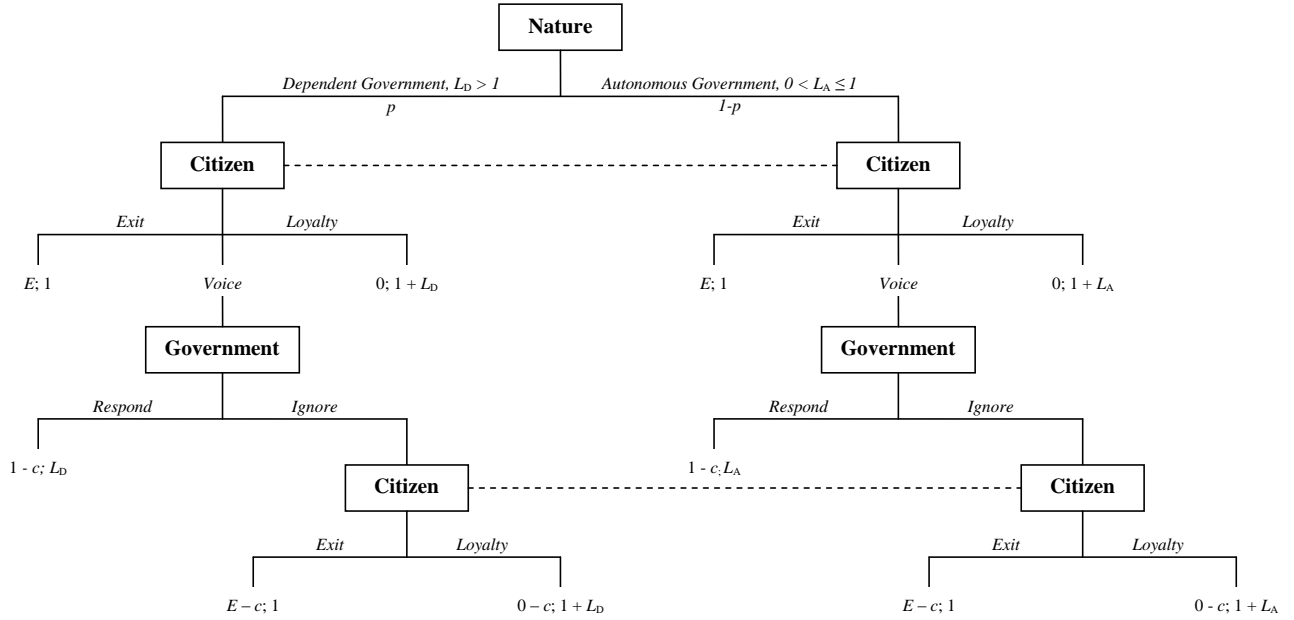
## The Exit, Voice, and Loyalty Game: Incomplete Information

In Section 4 in the main text, we discuss how incomplete information affects the power relationship between citizens and the government. We now present versions of the EVL game where (i) the citizen lacks information about whether the government is dependent or autonomous, and (ii) the government lacks information about whether the citizen has a credible exit threat or not.

### Incomplete Information on the Part of the Citizen

The EVL game where the citizen is unsure whether the government is *dependent*,  $L_D > 1$ , or *autonomous*,  $0 < L_A \leq 1$ , is shown in Figure 4. While the government knows whether it is dependent or autonomous, the citizen only has beliefs about the government's type. Specifically, the citizen believes that the government is dependent with probability  $p$  and autonomous with probability  $1 - p$ . To keep things simple and avoid knife-edge scenarios, we assume that the citizen only exits if her exit payoff is strictly greater than her loyalty payoff,  $E > 0$ , and that she only uses her voice if she believes that the government is dependent with probability  $p > \frac{c}{1-E}$ . Additionally, we also assume that the use of voice is costly for the citizen,  $c > 0$ , that a dependent government values having a loyal citizen more than the benefit that it took from her,  $L_D > 1$ , and that an autonomous government values having a loyal citizen but not strictly more than the benefit it took from her,  $0 < L_A \leq 1$ . There are three unique perfect Bayesian equilibria, which are depicted in Table 4. Equilibria are written in the following form: {(Citizen's first action, Citizen's second action), (Dependent Government's action, Autonomous Government's action), probability Citizen assigns to history (Dependent

Figure 4: Exit, Voice, and Loyalty Game when the Citizen has Incomplete Information



Note:  $E$  is the citizen's exit payoff, 1 is the value of the benefit taken from the citizen by the government in the pre-history of the game,  $L_A$  is the value an autonomous government obtains from having a loyal citizen who does not exit,  $L_D$  is the value a dependent government obtains from having a loyal citizen who does not exit, and  $c$  is the citizen's cost of using voice. It is assumed that  $c > 0$ ,  $L_D > 1$ , and that  $0 < L_A \leq 1$ .

Table 4: Perfect Bayesian Equilibria when the Citizen has Incomplete Information

#	Equilibrium	Equilibrium Type	Outcome
E9	$\{(Loyalty, Loyalty), (Ignore, Ignore), p\}$ if $E \leq 0$ for all $p$	Pooling	Citizen chooses loyalty.
E10	$\{(Exit, Exit), (Respond, Ignore), p\}$ if $E > 0$ and $p \leq \frac{c}{1-E}$	Separating	Citizen exits.
E11	$\{(Voice, Exit), (Respond, Ignore), p\}$ if $E > 0$ and $p > \frac{c}{1-E}$	Separating	Citizen uses voice. Dependent governments respond positively to voice, whereas autonomous governments ignore it. If voice is ignored, the citizen exits.

**Notes:** All equilibria are written in the following form:  $\{(Citizen's\ first\ action, Citizen's\ second\ action), (Dependent\ Government's\ action, Autonomous\ Government's\ action), probability\ Citizen\ assigns\ to\ history\ (Dependent\ Government)\}$ .



Government)}).

We now prove that the equilibria shown in Table 4 are the only perfect Bayesian equilibria. Note that the citizen has six possible strategies given that she has three possible actions at her first decision node and two at her second. We know by assumption, though, that a citizen who chooses to exit at her last decision node will not choose to remain loyal at her first decision node. We also know by assumption that a citizen who chooses loyalty at her last decision node will not choose to exit at her first decision node. Thus, we can eliminate all but four strategies for the citizen: {(Exit, Exit), (Loyalty, Loyalty), (Voice, Exit), (Voice, Loyalty)}. The government has four potential strategies given that each type of government has two possible actions at their decision nodes: {(Respond, Respond), (Respond, Ignore), (Ignore, Respond), (Ignore, Ignore)}.

Thus, we have sixteen possible strategy profiles. However, we know by assumption that an autonomous government always ignores the citizen's use of voice. We also know that a dependent government responds positively to voice if it expects the citizen to exit at her last decision node, but that it ignores voice if it expects the citizen to remain loyal. As a result, we can eliminate all but four strategy profiles:

- (Loyalty, Loyalty), (Ignore, Ignore)
- (Exit, Exit), (Respond, Ignore)
- (Voice, Exit), (Respond, Ignore)
- (Voice, Loyalty), (Ignore, Ignore)

In Table 4, we claim that the first three of these strategy profiles can be combined with a belief system to form a perfect Bayesian equilibrium. The proofs are shown below.

**Equilibrium 12.** {(Loyalty, Loyalty), (Ignore, Ignore),  $p$ } is the perfect Bayesian equilibrium if  $E \leq 0$  for all  $p$ .

*Proof.* The citizen chooses to remain loyal,  $0 - c$ , at the last decision node rather than exit,  $E - c$ , if  $E \leq 0$ . In these circumstances, both types of government ignore the citizen's use voice,  $1 + L_i$ , rather than respond positively to it,  $L_i$ , because  $L_i > 0$  for  $i = A, D$  by assumption. Knowing this, the citizen chooses to remain loyal,  $0$ , irrespective of the government's type, at the initial decision node rather than exit,  $E$ , or use voice,  $0 - c$ .  $\square$

**Equilibrium 13.** {(Exit, Exit), (Respond, Ignore),  $p$ } is the perfect Bayesian equilibrium if  $E > 0$  and  $p \leq \frac{c}{1-E}$ .

*Proof.* The citizen chooses to exit,  $E - c$ , at the last decision node rather than remain loyal,  $0 - c$ , if  $E > 0$ . In these circumstances, an autonomous government ignores the citizen's use of voice,  $1$ , rather than respond positively to it,  $L_A$ , because  $L_A \leq 1$  by assumption. In contrast, a dependent government responds positively to the citizen's use of voice,  $L_D$ , rather than ignore it,  $1$ , because  $L_D > 1$  by assumption. Knowing this, the citizen chooses to exit,  $E$ , at the initial decision node rather than remain loyal,  $0$ , or use voice,  $p(1 - c) + (1 - p)(E - c)$ , so long as  $p \leq \frac{c}{1-E}$ .  $\square$

**Equilibrium 14.** {(Voice, Exit), (Respond, Ignore),  $p$ } is the perfect Bayesian equilibrium if  $E > 0$  and  $p > \frac{c}{1-E}$ .

*Proof.* The only difference with Equilibrium 11 is that the citizen chooses to use voice rather than exit at the initial decision node. This requires that  $p > \frac{c}{1-E}$ .  $\square$

The remaining strategy profile {(Voice, Loyalty), (Ignore, Ignore)} cannot be combined with a belief system to form a perfect Bayesian equilibrium.

*Proof.* The only difference with Equilibrium 9 is that the citizen chooses to use voice rather than remain loyal at initial decision node. For the citizen to use voice,  $(p(0 - c) + (1 - p)(0 - c))$ , rather remain loyal, 0, it would have to be the case that  $0 - c > 0$ . However, this can never be the case because  $c > 0$  by assumption.  $\square$

### **Incomplete Information on the Part of the Government**

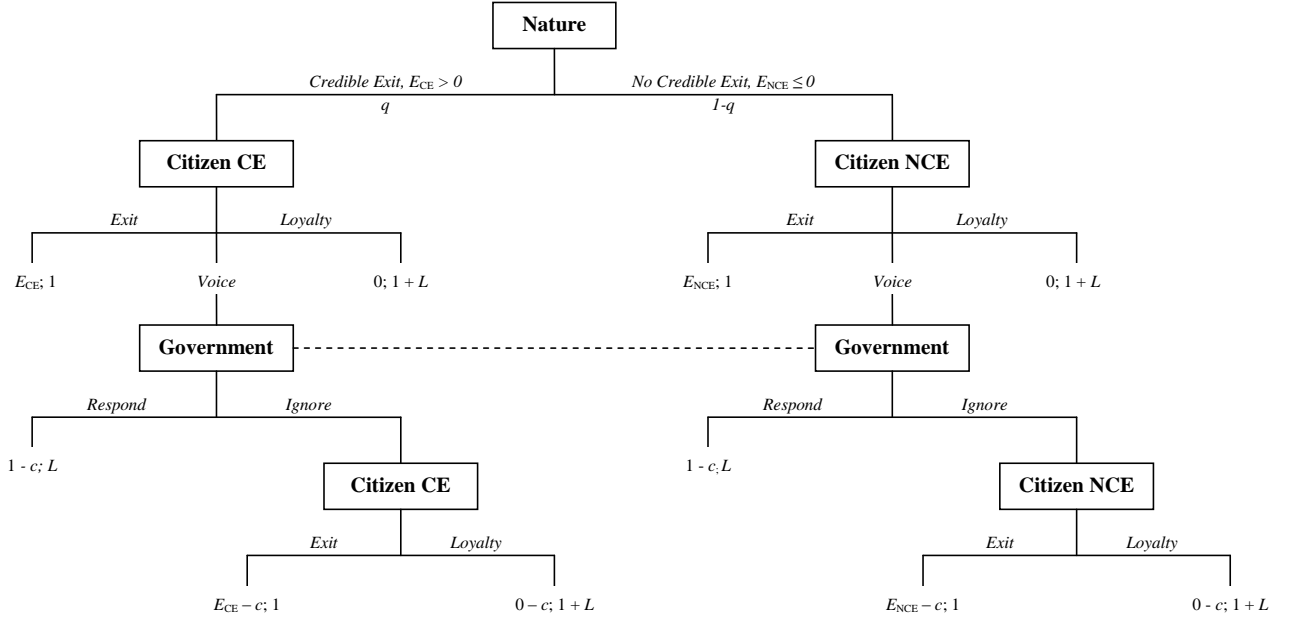
The EVL game where the state is unsure whether the citizen has a *credible exit* threat,  $E_{CE} > 0$ , or *no credible exit* threat,  $E_{NCE} \leq 0$ , is shown in Figure 5. While the citizen knows her own type, the government only has beliefs about the citizen's type. Specifically, the government believes that the citizen has a credible exit threat with probability  $q$  and does not have a credible exit threat with probability  $1 - q$ . To keep things simple and avoid knife-edge scenarios, we assume that a citizen without a credible exit threat uses voice only if the cost of using voice is strictly less than the value of her benefit,  $c < 1$ , that a citizen with a credible exit threat exits only if her exit payoff is strictly greater than the payoff she would receive if the government responded positively to her use of voice,  $E_{CE} > 1 - c$ , and that the government will respond positively to the citizen's use of voice only if it believes that the citizen has a credible exit threat with probability  $q > \frac{1}{L}$ . Additionally, we also assume that the use of voice is costly for the citizen,  $c > 0$ , that the government values having a loyal citizen,  $L > 0$ , that the Type NCE citizen's exit payoff is less than or equal to her loyalty payoff,  $E_{NCE} \leq 0$ , and that the Type CE citizen's exit payoff is strictly greater than her loyalty payoff,  $E_{CE} > 0$ . There are three unique perfect Bayesian equilibria, which are depicted in Table 5. Equilibria are written in the following form: {(Type CE's first action, Type CE's second action; Type NCE's first action, Type NCE's second action), (Government's action), probability Government assigns to history (Type CE, Voice)}.

We now prove that the equilibria shown in Table 5 are the only perfect Bayesian equilibria. Note that the citizen has 36 possible strategies given that each citizen type has three possible actions at their first decision node and two at their second. We know by assumption, though, that Type CE citizens always prefer to exit rather than remain loyal and that Type NCE citizens always prefer to remain loyal than exit. As a result, we can eliminate all but four possible strategies for the citizen: {(Exit, Exit; Loyalty, Loyalty), (Voice, Exit; Loyalty, Loyalty), (Voice, Exit; Voice, Loyalty), (Exit, Exit; Voice, Loyalty)}. The government has two potential strategies given that it has two possible actions at its information set: {(Respond), (Ignore)}.

Thus, we have eight possible strategy profiles. However, we know that both types of citizen never use voice if they expect the government to ignore them. As a result, we can eliminate all but five strategy profiles:

- (Exit, Exit; Loyalty, Loyalty), (Ignore)
- (Exit, Exit; Loyalty, Loyalty), (Respond)
- (Voice, Exit; Voice, Loyalty), (Respond)
- (Voice, Exit; Loyalty, Loyalty), (Respond)

Figure 5: Exit, Voice, and Loyalty Game when the Government has Incomplete Information



Note:  $E_{CE}$  is the exit payoff for the citizen with a credible exit threat,  $E_{NCE}$  is the exit payoff for the citizen without a credible exit threat, 1 is the value of the benefit taken from the citizen by the government in the pre-history of the game,  $L$  is the value the government obtains from having a loyal citizen who does not exit, and  $c$  is the citizen's cost of using voice. It is assumed that  $c, L > 0$ ,  $E_{CE} > 0$  and that  $E_{NCE} \leq 0$ .

Table 5: Perfect Bayesian Equilibria when the Government has Incomplete Information

#	Equilibrium	Equilibrium Type	Outcome
E12	$\{(Exit, Exit; Loyalty, Loyalty), (Ignore), q\}$ if $q \leq \frac{1}{L}$	Separating	Type CE citizen exits and Type NCE citizen remains loyal.
E13	$\{(Exit, Exit; Loyalty, Loyalty), (Respond), q\}$ if $c > 1$ for the Type NCE citizen, $E_{CE} > 1 - c$ for the type CE citizen, and $q > \frac{1}{L}$	Separating	Type CE citizen exits and Type NCE citizen remains loyal.
E14	$\{(Voice, Exit; Voice, Loyalty), (Respond), q\}$ if $c < 1$ for the Type NCE citizen, $E_{CE} < 1 - c$ for the Type CE citizen, and $q > \frac{1}{L}$	Pooling	Both types of citizen use voice and the government responds positively.

**Notes:** Equilibria are written in the following form:  $\{(Type\ CE's\ first\ action, Type\ CE's\ second\ action; Type\ NCE's\ first\ action, Type\ NCE's\ second\ action), (Government's\ action), probability\ Government\ assigns\ to\ history\ (Type\ CE, Voice)\}$ .

- (Exit, Exit; Voice, Loyalty), (Respond)

In Table 5, we claim that the first three of these strategy profiles can be combined with a belief system to form a perfect Bayesian equilibrium. The proofs are shown below.

**Equilibrium 15.** **{(Exit, Exit; Loyalty, Loyalty), (Ignore),  $q$ }** is the perfect Bayesian equilibrium if  $q \leq \frac{1}{L}$ .

*Proof.* The Type CE citizen chooses to exit,  $E_{CE} - c$ , at the last decision node rather than remain loyal,  $0 - c$ , because  $E_{CE} > 0$  by assumption. The Type NCE citizen chooses to remain loyal,  $0 - c$ , at the last decision node rather than exit,  $E_{NCE} - c$ , because  $E_{NCE} \leq 0$  by assumption. Because the government's information set is never reached in this equilibrium, the government's beliefs need only be consistent with its choice to ignore voice. The government ignores the citizen's use of voice,  $q(1) + (1 - q)(1 + L)$ , rather than respond positively,  $L$ , if  $q \leq \frac{1}{L}$ . Expecting the government to ignore her voice, a Type CE citizen chooses to exit,  $E_{CE}$ , at the initial decision node rather than remain loyal,  $0$ , or use voice,  $E_{CE} - c$ , while a Type NCE citizen chooses to remain loyal,  $0$ , rather than exit,  $E_{NCE}$ , or use voice,  $0 - C$ .  $\square$

**Equilibrium 16.** **{(Exit, Exit; Loyalty, Loyalty), (Respond),  $q$ }** is the perfect Bayesian equilibrium if  $E_{CE} > 1 - c$  for the Type CE citizen,  $c \geq 1$  for the Type NCE citizen, and  $q > \frac{1}{L}$ .

*Proof.* The only difference with Equilibrium 12 is that the government responds positively to voice. The government responds positively to voice if  $q > \frac{1}{L}$ . Expecting the government to respond positively to her use of voice, a Type CE citizen chooses to exit,  $E_{CE}$ , at the initial decision node rather than remain loyal,  $0$ , or use voice,  $1 - c$ , if  $E_{CE} > 1 - c$ , while a Type NCE citizen chooses to remain loyal,  $0$ , rather than use voice,  $1 - c$ , or exit,  $E_{NCE}$ , if  $c \geq 1$ .  $\square$

**Equilibrium 17.** **{(Voice, Exit; Voice, Loyalty), (Respond),  $q$ }** is the perfect Bayesian equilibrium if  $E_{CE} \leq 1 - c$  for the Type CE citizen,  $c < 1$  for the Type NCE citizen, and  $q > \frac{1}{L}$ .

*Proof.* The Type CE citizen chooses to exit,  $E_{CE} - c$ , at the last decision node rather than remain loyal,  $0 - c$ , because  $E_{CE} > 0$  by assumption. The Type NCE citizen chooses to remain loyal,  $0 - c$ , at the last decision node rather than exit,  $E_{NCE} - c$ , because  $E_{NCE} \leq 0$  by assumption. The government's information set is reached in equilibrium. By Bayes' rule and the fact that both types of citizens choose to use voice at their initial decision nodes, the government assigns probability  $q$  to the history (CE, Voice). Given this belief, it is optimal for the government to respond positively to voice if  $q > \frac{1}{L}$ . Expecting the government to respond positively to the use of voice, a Type CE citizen chooses to use voice,  $1 - c$ , at the initial decision node rather than exit,  $E_{CE}$ , or remain loyal,  $0$ , if  $E_{CE} \leq 1 - c$ , while a type NCE citizen chooses to use voice,  $1 - c$ , rather than remain loyal,  $0 - C$ , or exit,  $E_{NCE}$ , if  $c < 1$ .  $\square$

We now demonstrate that the two remaining strategy profiles do not form part of a perfect Bayesian equilibrium.

The strategy profile **{(Voice, Exit; Loyalty, Loyalty), (Respond)}** cannot be combined with a belief system to form a perfect Bayesian equilibrium.

*Proof.* The Type CE citizen chooses to exit,  $E_{CE} - c$ , at the last decision node rather than remain loyal,  $0 - c$ ,

because  $E_{CE} > 0$  by assumption. The Type NCE citizen chooses to remain loyal,  $0 - c$ , at the last decision node rather than exit,  $E_{NCE} - c$ , because  $E_{NCE} \leq 0$  by assumption. The government's information set is reached in this potential equilibrium. By Bayes' rule and the fact that the Type CE citizen uses voice and the Type NCE citizen remains loyal, the government assigns probability  $q = 1$  to the history (CE, Voice). Given this belief, it is optimal for the government to respond if  $L > 1$ . Expecting the government to respond positively to the use of voice, a Type CE citizen chooses to use voice at the initial decision node if  $E_{CE} \leq 1 - c$ , and a Type NCE citizen remains loyal if  $c \geq 1$ . These last two conditions are incompatible, though, because  $E_{CE} \leq 1 - c$  requires that  $1 \geq c$ .  $\square$

The strategy profile {(Exit, Exit; Voice, Loyalty), (Respond)} cannot be combined with a belief system to form a perfect Bayesian equilibrium.

*Proof.* The Type CE citizen exits,  $E_{CE} - c$ , at the last decision node rather than remains loyal,  $0 - c$ , because  $E_{CE} > 0$  by assumption. The Type NCE citizen remains loyal,  $0 - c$ , at the last decision node rather than exits,  $E_{NCE} - c$ , because  $E_{NCE} \leq 0$  by assumption. The government's information set is reached in this potential equilibrium. By Bayes' rule and the fact that the Type CE citizen exits and the Type NCE citizen remains loyal, the government assigns probability  $q = 0$  to the history (CE, Voice). Given this belief, it is never optimal for the government to respond because it obtains  $L$  if it responds positively to the use of voice and  $1 + L$  if it ignores it.  $\square$