LEADER TENURE, DOMESTIC CONSTRAINTS, AND INTERNATIONAL CONFLICT

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By
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Abstract

My dissertation provides a theory about why political leaders pursuereckless and adventurous foreign policies at some point of tenure while trying to avoid contentious and costly foreign policy in other times during their tenure. I investigate how a leader’s decision to initiate a costly military conflict is constrained by domestic audiences, how the level of domestic constraints systematically changes over the course of tenure, and how the changing pattern differs between democracies and dictatorships. More specifically, I argue that leaders are highly constrained to initiate a costly conflict when the domestic audience's replacement attempt is credible ex ante, i.e., when the replacement attempt is less costly and more likely to succeed. Early in the tenure a democratic leader's political survival is well protected by institutions and domestic consent, so that a replacement attempt is more costly and less likely to succeed than later in the election period; dictators, however, are vulnerable to violent domestic challenges before consolidating dictatorial power, so that a replacement attempt is less costly and more likely to succeed early than later. I hypothesize that the likelihood of conflict initiation decreases in a democratic leader's tenure but increases in a dictator's tenure. I conduct a series of empirical tests and find strong empirical evidence for the hypotheses.

My dissertation also examines whether a similar theoretical logic can be applied to only democracies. More specifically, I examine how a democratic leader's sensitivity to potential electoral punishment changes over the course of tenure. I argue that democratic leaders are highly sensitive to domestic electoral punishment when they have strong electoral incentives and when the electoral outcome is highly uncertain. I demonstrate in a game-theoretic model that a
leader’s sensitivity systematically affects his or her conflict behavior through audience costs and the costs of war. Equilibrium concepts show that highly sensitive leaders are less likely to initiate a military conflict than less sensitive leaders. Using a fine-grained monthly dyadic data set on the U.S. presidents between 1953 and 2001, I find that presidents tend to be less likely to initiate a military conflict when their personal electoral fate is at stake and the electoral outcome is highly uncertain, and that presidents in the second term are more likely to initiate a conflict than those in the first term.

Further, I turn my attention to authoritarian regimes. In particular, this research examines how authoritarian time horizon, i.e., how long an authoritarian leader expects to stay in office, affects an authoritarian leader’s conflict behavior. I develop a simple formal model of autocratic leaders’ predatory behavior in the shadow of domestic constraints in terms of the risk of leadership failure and post-tenure punishment. The model suggests that the likelihood of unsafe or irregular leadership failure be negatively related to the level of domestic predation, which challenges and supplements the conventional Olsonian perspective. Assuming that a military conflict initiation is a type of autocrats’ predatory behavior that enriches their private goods, I run empirical tests on the relationship between the likelihood of different types of leadership failure and the number of militarized dispute initiations. Two-stage models with nonparametric bootstrapping show significant empirical support for my hypotheses, implying that when autocrats are concerned about unexpected and violent domestic challenges, they are highly constrained to use force externally.

The overall theme of my dissertation is the relationship between a leader’s tenure and the propensity of international conflict initiation. The major implications of the theoretical arguments and empirical findings are: a) leader is a unit of analysis whose foreign-policy
interests and decision-making power systematically change over the course of tenure; b) a threat to leadership survival is a major source of domestic constraints rather than a diversionary motive; and c) democratic leaders are not always more constrained by domestic audiences in their foreign policy than dictators.
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Chapter 1

Introduction

Over the past couple of decades the international relations literature has experienced a major paradigm shift in its focal unit of analysis. The conventional approach treating state as a unitary actor, primarily led by scholars of realism, neo-realism, and power transition theory, considers systemic distributions of power as the key determinant of international conflict (for example Morgenthau 1978; Waltz 1979; Organski and Kugler 1980). However, this systemic unitary-actor approach left no room for scholars to look inside states even though domestic politics are at the heart of leaders’ foreign policy decision-making. In spite of scientific knowledge accumulated under the unitary-actor assumption and the realist approaches, it seems impossible, without unpacking domestic institutions and leaders’ domestic incentives, to fully understand complex mechanisms behind political leaders’ foreign policy decision-making and contentious interactions among states.¹

Much of the research that investigates the role of domestic politics in international relations largely geared toward regime comparison. The democratic peace literature has been at the center of the scholarly debate on the variations in the propensity of international conflict between democracies and nondemocracies by focusing on either shared norms or institutional constraints (Maoz and Abdolali 1989; Morgan and Campbell 1991; Maoz and Russett 1993;)

¹ For example, Putnam’s two-level analysis was one of the early attempts to link domestic politics to international politics, and his pioneering research clearly shows that international negotiations and outcomes cannot be fully understood without considering the influence of domestic interactions between leaders and domestic constituencies (Putnam 1988). The merits and contributions of research on the significant influence of domestic politics in international relations are well summarized in “Domestic Politics and International Relations” by Bueno de Mesquita (2002) and “Domestic Explanations of International Relations” by Bueno de Mesquita and Smith (2012).
Dixon 1994; Russett 1995; Ray 1995; Oneal and Russett 1997; Maoz 1998; Bueno de Mesquita et al. 1999). Along with the institutional or structural approach to democratic peace, many of the rational choice models comparing different regime types in the contexts of leaders’ conflict behavior appear to agree with the conventional wisdom: that is democratic leaders are more accountable to domestic audiences than nondemocratic leaders, and they are more constrained to pursue costly and adventurous foreign policy than nondemocratic leaders (for example Lake 1992; Fearon 1994, 1995; Powell 1996, 1999; Bennett and Stam 1998; Reiter and Stam 1998, 2002; Clark and Reed 2003; Bueno de Mesquita et al. 1999, 2003, 2004; Schultz 2001; Filson and Werner 2004). For example, this conventional wisdom has been used as the key theoretical mechanism through which democratic leaders are more cautious of selecting their targets of international conflict than nondemocratic leaders, and they are more likely to win wars (Lake 1992; Reiter and Stam 1998, 2002; Bueno de Mesquita et al. 2003).

To date, however, few studies have examined whether the level of foreign policy accountability and the magnitude of domestic constraints on leaders’ conflict behavior systematically change over the course of leadership tenure in both democracies and nondemocracies. There are several studies that explore the impact of leadership tenure on leadership survival or on leader’s conflict behavior, but none has provided a theory that

2 The causal mechanisms of democratic peace are still debated among scholars. For example, Farber and Gowa (1995) and Gowa (1999) argue that the empirical pattern of democratic peace is due to aligning political interests among democracies during the Cold War. Gartzke (2007) demonstrates that dyadic democratic peace is caused by encompassing economic interests due to capitalism. A recent study shows that democracies rarely fight each other because the public in democracies tend to perceive democratic counterparts as less threatening and regard attacks against them as morally wrong (Tomz and Weeks N.d.).

3 Large-N quantitative analyses as a dominant method of testing these theories appear to show significant empirical evidence for dyadic democratic peace and other foreign-policy implications of democratic accountability. See, for example, Bennett and Stam (2004) for one of the most comprehensive quantitative examinations on numerous theories based on the conventional realist approach as well as this comparative research program.
integrates domestic constraints, leadership survival, leader tenure, regime type, and international conflict into a single general theoretical framework. For example, Bueno de Mesquita et al. (2003) show that the risk of leadership failure for democratic leaders increases as leadership tenure increases, while the hazard of autocratic leadership failure declines in tenure. However, the specific conditions under which the risk of leadership failure determines the level of domestic constraints are not specified, nor is tested the relationship between the temporal variation in the hazard rate of leadership failure and the likelihood of conflict initiation. For another example, Wolford (2007) claims that leaders have an incentive to demonstrate their resolve early in their tenure by taking an aggressive stance against foreign adversaries. Yet this study neither addresses how tenure affects leaders’ incentive structures with regard to domestic constraints, nor discusses how the level of domestic constraints differs between democracies and nondemocracies with respect to leadership tenure.

More specifically, few studies have questioned whether nondemocratic leaders are still less constrained in their foreign policy than democratic leaders even in times when political survival and domestic punishment is an extremely serious concern for nondemocratic leaders rather than democratic leaders. The conventional assumption of democratic accountability appears to leave little room for scholars to explore the temporal reliability of prominent theories based on this assumption. For example, Bueno de Mesquita et al. (2003) and Reiter and Stam (2002) contend that democratic leaders are more accountable for foreign policy failure, so that they are more cautious of selecting their targets of international conflict than nondemocratic leaders. This democratic selection argument has given little consideration to the possibility that democratic institutions might facilitate democratic leaders’ moral hazard in foreign policy in some periods of tenure due to strong institutional protection on leadership survival. Fearon’s
(2004) audience costs argument also appears to undermine the temporal variation in the magnitude of audience costs that democratic leaders can generate to send a credible signal. Breaking a public promise of military threat may neither consistently damage democratic leaders’ political survival over the course of their tenure nor always hurt democratic leaders’ leadership more than autocrats.’

Lack of research on temporal variations in the level of accountability and constraints in different regime types is somewhat surprising for several reasons. First, the democratic accountability argument largely hinges upon a leader’s prospect of political survival, and we have a fairly good knowledge about when, over the course of tenure, democratic or nondemocratic leaders are exceptionally more vulnerable to leadership failure than the other. Second, several studies have shown that nondemocratic leaders are not necessarily less answerable in terms of leadership survival for foreign policy failure than democratic leaders (Chiozza and Goemans 2004; Debs and Goemans 2010).

Moreover, the body of existing work on democratic accountability in foreign policy lacks the microfoundations for the reason why domestic audiences in democracies might be more willing and able to constrain their leader’s conflict behavior than nondemocratic audiences throughout the tenure. It seems safe to say that the strong democratic institutional guarantee on potential leadership turnover through elections might be able to explain democratic leaders’ risk-averse or cautious conflict behavior. On the flip side, however, this institutional guarantee works quite contrarily in some periods of tenure such as the post-election period of new leadership or a lame duck period at the end of term limits. For example, recent studies suggest that democratic leaders who are unable to run for office anymore have different foreign policy incentives than other democratic leaders (e.g., Conconi et al. 2008; Haynes 2012). Moreover, dictators
experiencing violent domestic challenges might desperately want this institutional guarantee which could ironically weaken their long-term dictatorial power.

Considering the tremendous theoretical effects of the democratic accountability argument on the comparative research programs in international relations, revealing any systematic temporal variations in the level of foreign policy accountability and domestic constraints has potential to supplement past studies on the impact of leadership survival and domestic constraints on leaders’ conflict behavior. More importantly, if the temporal variations systematically differ between democracies and nondemocracies, this idea might be able to provide more nuanced explanations about the cross-regime variations in the dynamics of international conflict including target selection and conflict outcome.

To the best of my knowledge, except Gaubatz (1991), few studies have revealed temporal variations in leaders’ conflict behavior over the course of their tenure. While Gaubatz (1991) shows a systematic relationship between democratic electoral cycles and the propensity of war entry, this study does not answer why this is the case but only suggests that the type of public mood at the time of decision-making is the primary determinant of any systematic impact of electoral cycles. Moreover, it is hard to know from this study whether the temporal variation differs between democracies and nondemocracies.

To fill this gap in the literature, Chapter 2 of my dissertation investigates the microfoundations of domestic constraints on leaders’ foreign policy decision-making, finds the determinants of the magnitude of foreign policy constraints using a formal model, discusses whether these determinants of domestic constraints systematically change over the course of

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4 A more detailed literature review is presented in Chapter 2.
leadership tenure, and examines whether the temporal variations differ between democracies and dictatorships.

More specifically, I argue that domestic audiences in democracies are less willing and able to constrain their leader’s costly conflict initiation earlier in the honeymoon period than later in the election period; however the absence of strong institutional protection on leadership survival makes dictators more vulnerable to violent domestic challenges and more constrained to initiate an interstate military conflict earlier in the period of power struggle than later in the consolidation period. Empirical support for these hypotheses survives multiple robustness checks in spite of several theoretical weaknesses of the oversimplified formal model with multiple assumptions.

One of the most significant implications of this finding is that domestic vulnerability does constrain leaders’ conflict behavior rather than incentivize them to become more aggressive. Domestic vulnerability can be viewed in two contrasting ways. It could provide leaders with diversionary incentives and make them more likely to use force, or it could constrain leaders’ aggressive conflict behavior due to potential political and economic costs. The diversionary conflict literature has focused on revealing any empirical correlations between domestic political or economic difficulties on the one hand and the propensity of using force abroad or on measuring the size of rally effects on the other rather than addressing the competing expectation by the constraints perspective.  


6 In addition, potential temporal variations in the magnitude of diversionary incentives in democracies and dictatorships would be an interesting topic of empirical examination for future studies.
constraints perspective. My empirical finding adds another piece of evidence supporting the constraints hypothesis because the diversionary thesis suggests that the likelihood of conflict initiation should be on average greater in the election period than early in the tenure due to greater diversionary incentives.

Chapter 3 extends the main theoretical logic of Chapter 2 into other types of temporal variations that affect democratic leaders’ conflict behavior: variations in the magnitude of audience costs and in the political costs of war. Conventional game-theoretic models of international crisis bargaining tend to assume that the amount of audience costs a leader can generate is independent of leadership tenure, and fail to demonstrate that the amount of audience costs and signaling advantages could vary over the course of a democratic leader’s tenure. Few studies have investigated how these temporal variations affect leaders’ conflict behavior except Haynes (2012) that examines this assumption particularly with regard to the signaling advantages of lame duck presidents who are expected have much less electoral constraints than presidents in other times.

Another implicit assumption in extant crisis games is that a state’s cost of war can be juxtaposed to a leader’s. Notice that in conventional crisis bargaining models, a leader’s payoffs from war are often compared with political costs generated from backing down in an international crisis (see for example Fearon 1995; Schultz 1999). Yet a state’s human and economic costs of war are not perfectly transferrable to a leader’s political costs. Even the same level of war costs can be perceived differently depending on a leader’s sensitivity to potential domestic electoral punishment.

To fill this gap, Chapter 3 of my dissertation develops a crisis game where I endogenize audience costs and war costs to a leader’s sensitivity to electoral punishment that varies by two
particular factors: the strength of personal electoral incentives and the magnitude of electoral uncertainty. Equilibrium concepts show that highly sensitive leaders are less likely to initiate a military conflict than less sensitive leaders. Using a fine-grained monthly dyadic data set on the U.S. presidents between 1953 and 2001, I find that presidents tend to be less likely to initiate a military conflict when their personal electoral fate is at stake and electoral outcome is quite uncertain, and presidents in the second term are more likely to initiate a conflict than those in the first term.

This finding adds a piece of more nuanced evidence supporting the constraints hypothesis by showing that not only the amount of domestic political punishment throughout a leader’s tenure but also a leader’s sensitivity to potential punishment constrains the leader’s conflict behavior. Further, this study opens new discussion over the temporal variation in democratic leaders’ political costs in foreign policy.

To the best of my knowledge, my dissertation is the first study that finds that the propensity of interstate conflict initiation systematically changes in leadership tenure, and the changing pattern is different between democracies and nondemocracies. However, I admit that leader tenure is used as an indicator capturing two primary theoretical concepts: the level of domestic constraints and the risk of leadership failure. Even though I believe that my findings on the impact of leadership tenure are novel, it is hard to deny that leadership tenure is not a perfect predictor of the risk of leadership failure. This problem is more concerning in autocratic regimes than democratic regimes where leadership turnover is more institutionalized and more predictable by tenure than autocratic regimes. Thus, Chapter 4 provides a more direct test about the relationship between the likelihood of leadership survival (or time horizon) and the likelihood of military conflict initiation in authoritarian regimes.
In particular, Chapter 4 fills three gaps in the literature on authoritarian time horizon. First, many studies have examined the impact of authoritarian time horizon on various domestic policies, but there have been few such attempts in foreign policy issues (see for example Clague et al. 1996; Wright 2008; Li 2009; Chang and Golden 2010; Dionne 2011). Thus, the international relations literature still lacks convincing evidence that domestic vulnerability in autocracies is a type of diversionary motive for autocrats. Even though Lai and Slater (2006) and Pickering and Kisangani (2010) employ different theories to explain systematically different conflict behavior between authoritarian regime types, the underlying assumption is that leaders use diversionary force in responding to domestic unrest. In other words, domestic vulnerability is assumed to be the very source of authoritarian leaders’ use of diversionary force. Yet the assumption itself has yet to be tested except in Frantz (2012). Further, except the diversionary argument, scholars have not introduced any other mechanisms through which autocrats’ time horizons affect their conflict behavior. My dissertation borrows and modifies Olson’s model, and connects it to autocrats’ foreign policy decision-making (Olson 1993).

Second, past studies on authoritarian time horizon have paid close attention to empirical tests on the Olsonian perspective that suggests that dictators with shorter time horizons are more likely to pursue predatory policies than those with longer time horizons (Olson 1991, 1993; McGuire and Olson 1992, 1996). Rather, few studies have identified the weaknesses of Olson’s model except Robinson (2001) and Klick (2005). I demonstrate that autocrats’ domestic predation and rent-seeking is limited by their concern over the negative impact of predation on their time horizon as well as their post-tenure fate. The formal model suggests that the likelihood of unsafe and irregular authoritarian leadership failure has negative effects on the level of predation.
Third, my dissertation advances the existing measures of authoritarian time horizon such as the number of past leadership turnovers, regime age, and the number of past coups. I also address important methodological issues on the conventional measures as well as a two-stage method using non-parametric bootstrapping.

Chapter 5 concludes my dissertation. In Chapter 5, I summarize my main empirical findings, and discuss the broader implications of the results in these three essays. I also present a short summary of the contributions of my dissertation project to the research program on the relationship between leadership survival and international conflict across different regime types. Finally, Chapter 5 discusses the limitations of the current project and several plans for extending it in the future.
Chapter 2
Leadership Tenure, Domestic Constraints, and
International Conflict

2.1 Introduction

Treating state as a unitary actor is no longer a dominant approach in international relations, and the burgeoning interests in domestic politics have successfully challenged the unitary actor assumption by showing that domestic politics do matter in explaining international conflict. At the heart of domestic sources of international conflict is leadership survival. It is often assumed that a leader makes a foreign policy decision in a way that maximizes the likelihood of political survival. Along with this key assumption, another assumption that underlies most of the extant theories of international conflict is that leaders care more or less about the opinion and potential influences of the domestic audience.

Building on these two assumptions, international relations scholars attempt to explain whether democratic leaders are more accountable for conflict outcome than nondemocratic

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7 This consensus is well summarized by Bueno de Mesquita (2002): “Without bringing leaders and their domestic incentives back to the forefront of our research, I believe that we cannot really hope to understand the motivations and constraints that shape international politics and economics, the very factors we hope to explain” (4).
8 Most of the theories of international conflict focusing on domestic politics rely on this assumption at least implicitly, while rational choice theories are often explicit about it.
9 The domestic audience could take different forms depending on regime type and the extent of influence on leadership survival.
leaders,\textsuperscript{10} if so whether democracies are more cautious in selecting their targets,\textsuperscript{11} whether and why democratic dyads are more peaceful than other dyads,\textsuperscript{12} whether domestic political vulnerability provides leaders with an incentive to divert domestic attention by using force externally,\textsuperscript{13} how political ideology affects the propensity of international conflict,\textsuperscript{14} and how domestic oppositions affect leader’s conflict behavior.\textsuperscript{15}

Even though these studies find leadership survival as the key determinant of international conflict, they tend to treat leader as a constant term over time or over the course of tenure. For example, democratic leaders are often compared with nondemocratic leaders as a distinct group with respect to the level of accountability for foreign policy outcome and electoral constraints. As a result, leader tends to be treated as a time-invariant unit within a regime type or a state. However, a democratic leader’s foreign policy interests and the level of political accountability keep changing over the course of tenure, and the domestic audience is not constantly able and willing to hold the democratic incumbent accountable for conflict outcome. A dictator is neither constantly immune to domestic challenges nor unconstrained to pursue the foreign policy he favors over his tenure. A democratic leader’s sensitivity to domestic public opinion is not constant either, nor is constant a nondemocratic leader’s capability to suppress

\textsuperscript{10} See for example, Bueno de Mesquita and Lalman 1992; Lake 1992; Chiozza and Goemans 2003, 2004; Debs and Goemans 2010.
\textsuperscript{11} See, for example, Bueno de Mesquita and Lalman 1992; Bueno de Mesquita et al. 2004; Reiter and Stam 1998, 2002; Reed and Clark 2000; Clark and Reed 2003.
\textsuperscript{12} An explanation for democratic peace explicitly based on these two assumptions is found in Bueno de Mesquita et al. (2004). For more relevant studies on democratic peace, see Levy 1989; Rummel 1983; Doyle 1986; Maoz and Abdolali 1989; Morgan and Campbell 1991; Bueno de Mesquita and Lalman 1992. Normative explanations for democratic peace do not necessarily rely on these assumptions though. See, for example, Doyle 1983; Maoz & Russett 1993; Dixon 1994.
\textsuperscript{13} See, for example, Ostrom and Job 1986; James and Oneal 1991; Lian and Oneal 1993; Oneal and Bryan 1995; Leeds and Davis 1997; James and Rioux 1998; Miller 1999; Mitchell and Prins 2004; Pickering and Kisangani 2005; Fordham 1998, 2005; Brule 2006; Tarar 2006; Colaresi 2007; Groeling and Baum 2008.
\textsuperscript{14} See, for example, Russett 1990; Palmer, London, and Regan 2007; Arena and Palmer 2009.
\textsuperscript{15} See, for example, Schultz 1998; Arena 2008.
domestic dissent by force. In addition, both democratic and nondemocratic leaders’ political and economic interests keep changing over the course of tenure, and so do those of domestic audiences.

These time-varying aspects of political leaders’ foreign policy interests and domestic environments could be circumstantial, implying that their time in office or tenure itself may not have any meaningful systematic effects on a leader’s conflict behavior, so that many other time-varying covariates of domestic political and economic conditions can capture the variation in leaders’ foreign policy interests to a large extent. In this paper, however, I demonstrate that domestic political constraints on a leader’s foreign policy decision making systematically change over the course of his or her tenure, and that the changing pattern is contrasting between democracies and dictatorships.

Several studies linking leader tenure and the propensity of international conflict exist, but most of them lack a theory and empirical findings that are generalizable enough to apply to both democracies and nondemocracies. Gaubatz (1991) shows that “there is an election cycle effect on the war entry patterns of democratic states. In the past 200 years, democratic states have entered more wars in the early stages of their electoral cycles and fewer wars in the later stages” (238). This finding suggests that democratic leaders tend to "sacrifice international goals for their more immediate electoral needs" (Gaubatz 1991, 217). Gelpi and Grieco (2001) show that leaders are more likely to be targets of international conflict early in their tenure because both democratic and autocratic leaders are more likely to make concessions early in their tenure than later. Potter (2007) argues that the longer a leader stays in office, the more experienced is the leader in foreign policy decision making, so that a more experienced leader is better at avoiding unexpected crisis involvement than a less experienced one. Potter (2007) found that the longer a
leader stays in office the lower is the likelihood of crisis or militarized dispute involvement. Wolford (2007) demonstrates in a bargaining model that conflicts are more likely early than later because of new leaders’ incentive to show resolve and foreign adversaries’ incentive to test new leaders’ resolve. Bak and Palmer (2010) provide evidence that leader’s tenure and age has an interactive effect, and old leaders early in their tenure are most vulnerable to foreign aggression. Chiozza and Goemans (2003) show that the length of time in office is positively related to the probability of crisis initiation (459).

In spite of theoretical and empirical differences among these studies, a common shortcoming is that much of this research lacks a theoretical frame in terms of which we can explain what domestic determinants of international conflict systematically change over the course of tenure, and whether and why the relationship between leader’s tenure and the likelihood of international conflict differs between democracies and nondemocracies.

This paper demonstrates that the level of domestic constraints on a leader’s conflict behavior systematically changes over the course of his or her tenure, and that the changing pattern differs between democracies and dictatorships. In the following section, I identify the primary determinants of domestic constraints, and incorporate them into a game-theoretic model. The equilibrium concepts show under what conditions leaders are highly constrained to initiate military conflict. Then, I discuss how these specific conditions systematically change over the tenure in democracies and dictatorships. Finally, I build and test a key hypothesis about the

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16 Regarding the relationship between leader age and the propensity of conflict initiation, see also Horowitz et al. (2005)
17 The dependent variables are different among these studies: e.g., war, crisis involvement, militarized dispute initiation, and being a target of militarized dispute. In addition, some studies only focus on democracies, while others focus on both democracies and nondemocracies.
contrasting effects of tenure on the propensity of conflict initiation between democracies and dictatorships.

2.2 Domestic Constraints and International Conflict

The term, *domestic constraints*, is not necessarily restricted to the Kantian concept of constraints in this paper. The Kantian thesis suggests that political leaders in the *Republic* are accountable to the public who are unwilling to pay the costs of war and to experience subsequent economic hardships, so that leaders are extremely cautious of initiating a war.\(^\text{18}\) The Kantian approach to domestic constraints assumes that democratic leaders\(^\text{19}\) are always willing to serve the public will, and the public is always willing and able to hold the democratic incumbent accountable for foreign policy failure.\(^\text{20}\) I relax this assumption and define domestic constraints as the extent to which the domestic audience is *willing* and *able* to prevent the incumbent from initiating costly military conflict. This definition applies to both democracies and dictatorships, and I do not assume that democratic leaders are always highly accountable to the public who are unwilling to pay the costs of war.

I argue that the level of domestic constraints on a leader’s decision to initiate military conflict is not constantly high (low) in democracies (dictatorships) but keeps changing over the tenure. For example, over the course of tenure, the level of domestic constraints would be extremely high when domestic audiences prefers the peaceful status quo to war and at the same time when they have power strong enough to replace the incumbent or to make the incumbent

\(^{18}\) For further discussion on the Kantian perspective, see, for example, Kant 1983[1795]; Morgan and Campbell 1991; Bueno de Mesquita and Lalman 1992.

\(^{19}\) To situate the Kantian perspective into this paper, I equate the *Republic* to *Democracy* both of which are quite contrasting to dictatorship although they are different concepts.

\(^{20}\) A counterevidence for this assumption is found in Chiozza and Goemans (2004) and Debs and Goemans (2010).
believe that a replacement threat is credible. Then, what are the sources of domestic constraints? Why does the domestic audience ever want to constrain the incumbent’s conflict behavior?

2.2.1 Costs of Conflict

The first and most obvious source of domestic constraints comes from the fact that most of the cost of military conflict or war is paid by the domestic audience. There are multiple dimensions of such cost. The government uses tax money and/or loans to finance wars or military conflicts. Heavy taxation and an inflated money supply reduce the real value of a domestic audience’s economic wealth. This applies to both democracies and dictatorships. Not even rich ruling elites in dictatorships are always exempt from this financial sacrifice. For example, when the national wealth is concentrated in their hands and the public taxation is not enough to cover the costs of war, any further deprivation of domestic economic resources or irresponsible loans potentially damage their current and future economic prospects. Particularly when the dictatorial incumbent considers some of the ruling elites as potential defectors or challengers, the government is likely to burden them financially through military conflict.

Financial and military preparations for stochastic future warfare are also highly costly to the domestic audience. Even during peace time the revenues raised for this preparatory purpose are paid by the domestic audience. This mechanism often works as long as the government succeeds in convincing the domestic audience through repeated media reports and propaganda that a serious external military threat or a full-blown war would be likely in the near future.

In addition, the domestic audience should pay opportunity costs. The government’s heavy allocation of economic resources to military spending makes other private economic sectors less productive than they would be otherwise, and the domestic audience’s financial sacrifice also
damages their own economic productivity. The domestic audience also pays the human costs of war. The incumbent and political leaders do not have to risk their lives even though a large number of fatalities could be a political burden to the incumbent. Moreover, the domestic audience should also pay a type of intangible cost: e.g., limitations upon their liberties in the name of national security. Military confrontations under potential foreign threats give the incumbent an excuse to force the domestic audience to be more likely to make policy concessions than during peacetime.

These costs constitute a fundamental source of domestic audiences’ willingness to constrain the incumbent’s decision on conflict initiation. However, what if the domestic audience believes that the incumbent’s decision to initiate a costly military conflict is worth bearing the costs for the sake of national security? To complete the concept of domestic constraints, we therefore need to add another missing piece, which is the domestic audience’s concern that the incumbent might have an incentive to take advantage of military conflict at the expense of the domestic audience’s resources in order to facilitate his or her own power consolidation and domestic rent-seeking. In other words, the domestic audience is uncertain about whether the incumbent is trying to initiate a conflict for rent-seeking or is pursuing foreign policy in the national interest.

2.2.2 Predatory Conflict

In other words, without war or military conflict, the domestic audience might have used their economic resources more productively with the government support for public investment. Gelpi, Feaver, and Reifler (2009) show a piece of evidence particularly regarding the United States that casualties are not significantly damaging to presidents’ political survival and the level of public support.
I assume that political leaders are rational actors who are motivated primarily by a power-seeking desire. Margaret Levi attempts to formulate a theory of predatory rule by arguing that “Whatever the ruler’s ends, wealth and power are necessary to achieve them. Thus, all rulers are predatory in the same that they, as much as they can, design property rights and policies meant to maximize their own personal power and wealth” (1981, 438). She further claims that a ruler’s policies are designed in a way that maximizes his revenues and political power, and policy decisions are the bargaining outcome in relation to other influential actors. The concept of predatory conflict in this paper can be understood as one of many predatory policy dimensions: i.e., predatory foreign policy. This assumption is also similar to Olson’s assumption that “the democratic political leaders are just as self-interested as the stationary bandit and will use any expedient to obtain majority support” (Olson 1993, 570).

Even though a military conflict could produce valuable goods for the winner, the outcome is ex ante uncertain and is costly particularly to the domestic audience. Conflict outcome is often described as a type of public good with an intangible form of national security which might be nonexcludable and nonrivalrous. However, “it is debatable whether the war outcome is a public good” (Debs and Goemans 2010, 431), and the costs and benefits of war are often disproportionately distributed among different domestic actors. I argue that all leaders are more or less willing and able to initiate a predatory conflict driven by self-interests. The extent to

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23 In a similar vein, domestic constraints on a ruler’s predatory foreign policy can also be understood as “the constraints on the ruler’s bargaining power in relation to specific groups of subjects, agents, or external actors”: i.e., “the extent to which others control resources on which he depends, the extent to which he controls resources on which others depend, and the extent to which he can enforce the terms of trade once enacted” (Levi 1981, 447).

24 According to the Olson’s logic, individual rulers or a group of rulers could be extremely predatory. However, few states can be absolutely predatory like roving bandits because states are eventually formed under the rule of and by rational stationary bandits.

25 See, for example, Bueno de Mesquita et al. 1999, 2003. Notice that economists widely believe that national security or national defense is a public good, but that conflict or war outcome is a totally different concept.
which a leader is able to initiate an exploitative conflict would depend on the extent to which the
domestic audience is willing and able to constrain such an opportune foreign policy decision.

Lake (1992) sees the state as a profit-seeking firm that tries to maximize its rents in
exchange for providing protection from foreign threats, and says that the state has an incentive to
sell its service at a higher price to the domestic audience than its actual worth. Lake (1992)
further argues that democratic states with a low cost of political participation have higher
restraints to their rent-seeking ability than autocratic states. In general, I agree with Lake’s view
on the nature of the state, but democratic leaders’ rent-seeking ability or efforts appear to be
underestimated in his discussion. Desch (2002) also argues that “There is no reason to think that
rent seeking should be less frequent in democracies. Indeed there are compelling reasons why it
should be more common” (26).

Rent seeking is defined as “the resource-wasting activities of individuals seeking
transfers of wealth through the aegis of the state” (Buchanan, Tollison, and Tullock 1980, 55). In
this definition, I am particularly interested in wealth transfer from the public to a small
number of individuals at the top of the pyramid. In the following discussion, I attempt to show
that it is quite possible for military conflicts to be a wealth-transfer device in democracies.

Schultz and Weingast (1998) claim that liberal states are good at accessing resources and
borrowing money beyond their economic capacity to finance war. Sovereign debt due to
irresponsible borrowing in democracies often involves interest payment to major private banks
whose private interests are often closely tied to the financial gain of the incumbent and elites. In

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26 For relevant studies and examples, see Desch (2002, 26-28).
27 For other definitions, see Tullock 1967, 1993; Krueger 1974; Tollison 1982.
28 These individuals would include the incumbent and a small group of political and business elites who unofficially
share the ultimate foreign policy decision making authority with the incumbent.
addition to debt, mobilizing military resources should always involve direct payment for natural resources and weapons usually provided by military and security industries run by elites. It appears to be likely that these elites sell these warfare resources to the government at the cost of public welfare, and the benefits are often shared with leaders.29

For the democratic incumbent and elites to construct a rent-seeking mechanism, they need to control the public belief system in a way that minimizes the likelihood of domestic challenge. Maintaining foreign military threats against national security in people’s mind and their everyday lives through propaganda is also useful to guard domestic rent-seeking activities against potential public challenges.30

Predatory conflict has a subtly different meaning in dictatorships, even though these rent-seeking mechanisms through military conflicts are also viable for dictators. In the absence of strong institutional protection on leadership survival, both a dictator and ruling elites are potentially deadly threats to each other’s political survival. Due to this tension, dictators have an incentive to use conflict for the purpose of weakening the political, financial and military power of potential dissenters. Sorting out potential challengers and sending them to the battle ground might help dictators to consolidate power.31 In addition, military conflicts provide potential military challengers with a serious job to do other than plotting a coup. A dictator could also lay

29 There could be another possible scenario where democratic leaders use military conflict as a rent-seeking device. In times when specific regional economic interests might be at stake for elites, elites are likely to ask the incumbent to protect their private economic interests at the cost of the public sacrifice.

30 “In essence, wars and the liberal principles of democracy are mutually incompatible, and consent might make this fundamental antinomy even more prominent” (Barzilai 1999, 318).

31 For example, in order to eliminate military rivals, Mao deliberately sent thousands of troops of his main military rivals to hopeless fights against the Nationalists, and let them die during the Chinese civil war (Chang and Halliday 2005). I thank Joseph Wright for this point.
financial burden on powerful potential dissenters. In addition, a negative conflict outcome could be used for blaming and punishing potential military challengers.

In sum, the costs of conflict and the concern about predatory conflict are two major sources of domestic audiences’ willingness to constrain a leader’s conflict behavior. However, willingness alone does not determine the magnitude of domestic constraints. Along with willingness, the domestic audience should be able to make a credible threat to the incumbent by attempting to replace him. The domestic audience’s signal would be nothing but a cheap talk to the incumbent when a replacement threat is extremely costly and unlikely to succeed. In the following section, I develop a game-theoretic model to investigate how the domestic audience’s willingness and ability to replace the incumbent affects the likelihood of conflict initiation.

In the game, the incumbent has an incentive to initiate a military conflict in his own favor at the expense of domestic resources, and the domestic audience, under certain conditions, is willing and able to deter the incumbent’s predatory conflict initiation by threatening to replace the incumbent. Under uncertainty about the level of predation, the game shows a set of equilibrium behavior for both actors. Then, I will associate the proposition drawn from the comparative statics with leader’s tenure and regime type, and draw and test an empirical implication.

2.3 The Model of Domestic Constraints

The game has two actors (i), the incumbent denoted by I and the domestic audience denoted by D: i ∈ {I, D}. The incumbent refers to the individual leader of a country but could be a small

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32 For expositional convenience, the incumbent is treated as male and the domestic audience female.
group of individuals who dominate the ultimate foreign policy decision-making authority. The domestic audience consists of a group of elites and the public who have the potential power to challenge the incumbent’s unitary decision-making authority. In full-blown democracies, for instance, the actor I includes both the head of state and a small group of business and political elites whose policy preferences are closely aligned with the individual leader’s and whose interests are the top priority to be protected by the leader’s policy decisions. The public and a portion of potential political oppositions largely constitute the actor D. In extreme dictatorships, the actor I refers to the individual dictator, and the counterpart D represents a group of ruling elites and the public. Unlike democracies, the public influence in these dictatorial regimes is assumed to be minimal though. This classification appears to be an oversimplification of reality, but otherwise the game structure would become too complex to be generalized across different regime types.

The state of the world in this game is assumed to be contentious due to power competition between the incumbent and domestic audiences. The incumbent is an agent who is believed to represent domestic audiences’ economic and political interests in his foreign policy decision-making. However, the incumbent has an incentive to act in the interest of his own material benefits and political power, and the domestic audience as a principal is willing to keep monitoring the incumbent’s predatory actions particularly with respect to foreign policy in this game. I should note that I do not argue that all leaders are equally highly predatory but allow some types of leaders are more benevolent than others. The predatory incumbent could utilize

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33 The scope of the domestic audience appears to be close to that of winning coalition that is defined as a portion of the selectorate necessary to keep the leadership in power (Bueno de Mesquita et al. 2004). However, these two are not necessarily the same because the domestic audience includes not only the winning coalition members but all potential domestic political challengers.
various domestic rent-seeking devices such as expropriation or predatory taxation, but this game focuses on conflict initiation as a primary domestic rent-seeking device through foreign policy.

Assuming that the domestic audience pays most of the costs incurred by a military conflict, the incumbent has an incentive to mobilize domestic resources for military maneuvers and to increase his domestic power by transferring the costs to his own political and material benefits. The extent to which the incumbent is willing to extract rents through military conflict at the expense of the domestic audience is private information which is unknown to the domestic audience. The domestic audience has only prior beliefs about the probability distribution of the type of leadership with respect to the level of predation.

The previous discussion suggests that as long as a predatory leader is willing and able to extract rents through military conflict, he might prefer the perpetual state of military tension or war as a facilitating condition for domestic rent-seeking. However, it appears to be a heroic assumption that all incumbent types are so predatory that all military conflicts are initiated for the purpose of rent-seeking. Nevertheless, not negligible is the domestic audience’s concern that the incumbent is willing and able to use a military conflict for his own benefits at the expense of her resources. Technically speaking, the predatory nature of leadership varies ex ante by nature, and the domestic audience is uncertain about how predatory the incumbent is or how much rents the incumbent will extract from her over the course of military conflict. This uncertainty represents the domestic audience’s concern about the possibility of predatory conflict initiation.

The domestic audience has an incentive to deter the incumbent’s predatory foreign policy by a threat to replace the incumbent. However, the domestic audience observes only a noisy signal about whether the incumbent is highly predatory or less predatory. Thus, the domestic audience possesses only partial knowledge about the likelihood of predatory conflict initiation.
More specifically, the domestic audience updates her beliefs about the leadership type after observing leader’s predatory rent-seeking activities through conflict. Given these updated beliefs, the domestic audience seeks to send a threat credible enough to deter predatory conflict initiation by the incumbent. Finally, the equilibrium behavior illustrates a course of rational choices under the contentious strategic interactions between the incumbent and the domestic audience, and reveals the conditions under which the incumbent is likely to initiate a conflict and the domestic audience is likely to decide to replace the incumbent.

2.3.1 The Sequences of the Game

The game starts with a signal by nature of leadership type. More specifically, nature determines the type of leadership or the level of predation which is assumed to have the following uniform distribution: \( v \in T \sim U\{\kappa, \bar{\kappa}\}, \ v > 0 \) where \( v \) refers to a specific type of leadership, \( T \) is the definite set of possible leadership types. Let \( \kappa \) be the lower bound of the level of predation, and \( \bar{\kappa} \) the upper bound: i.e., the upper bound of \( v \) indicates the maximum magnitude of predation or rents the incumbent is willing and able to acquire through military conflict at the expense of the domestic audience’s political and economic resources.

Facing exogenous and endogenous foreign policy issues, the incumbent’s leadership position allows him to decide to initiate a military conflict. An example of exogenous foreign policy issues would be a territorial dispute with a neighboring country. By “endogenous foreign policy issues”, I allow the possibility that the incumbent intentionally creates a military tension with rivals, or exaggerates or exacerbates extant non-contentious foreign policy issues as an excuse for initiating a military conflict. The incumbent decides whether to initiate a military
conflict or stays in the peaceful status quo. I restrict my attention to the cases where the incumbent willfully decides to initiate a military conflict against a target state by distinguishing them from cases of being a target or engaging in an ongoing military conflict as a third party mediator.

These two types of actions by the incumbent are denoted by $m \in M = \{C, \neg C\}$: e.g., $m_C$ refers to the incumbent’s action of conflict initiation. The uncertainty around this decision is captured by the probability of conflict initiation $Pr(m_C|T) = p$ and $Pr(m_{\neg C}|T) = 1 - p$ otherwise.

Upon observing the action, the domestic audience decides whether to replace the incumbent or keep him in office based on the message and her posterior beliefs. I denote these actions by $a \in A = \{R, \neg R\}$: e.g., $a_{\neg R}$ denotes the domestic audience’s decision not to replace the incumbent. The domestic audience can choose either pure or mixed strategies over these two actions. If she chooses mixed strategies, the probability of $a_R$ after observing $m_C (m_{\neg C})$ is denoted by $\gamma_C (\gamma_{\neg C})$. If she attempts to replace the incumbent, nature determines the probability of a successful replacement attempt or a failure denoted by $s$ or $1 - s$ respectively. Figure 2.1 illustrates the game structure.

[ Figure 2.1 about here ]

### 2.3.2 Payoffs

Payoffs are determined by utility functions $U_I(A, M, T)$ for the incumbent and $U_D(A, M, T)$ for the domestic audience. Both utility functions are assumed to be twice continuously differentiable von Neumann Morgenstern utility functions: i.e., $U'(A, M, T) = 0$ for some $A^*$ and $M^*$, and
The incumbent and the domestic audience share the total power necessary to maintain the government, and the amount of power is normalized to one. The incumbent’s share of power is denoted by \( x \in (0,1) \), and the domestic audience’s share by \( 1 - x \). Leadership survival depends on the amount of the incumbent’s power, and the incumbent competes with the domestic audience to shift the balance of power to his favor. Thus, the incumbent is likely to survive a domestic replacement attempt with probability \( x \), and the probability of leadership failure given \( a_R \) is \( 1 - x \).^{34}

The status quo payoff of the incumbent is the same as his share of power \( x \), but it increases when the incumbent initiates a predatory military conflict and extracts rents from the domestic audience’s share of power. If the incumbent is extremely benevolent or civic-minded, he does not increase much his power by initiating a military conflict: i.e., a military conflict is unlikely to be a rent-seeking device. As discussed above, not all leaders might attempt to increase his power by initiating a military conflict, so cases might exist where \( \kappa \) is close to zero and \( \overline{\kappa} - \kappa \) is quite small. One might be able to rewrite the game protocol by dichotomizing the possible leadership type (\( T \)) into zero and a certain positive value.\(^{35}\)

The extent of predation is measured by the index \( \nu \sim U(\kappa, \overline{\kappa}) \), implying that a highly predatory type would increase his power by extracting rents to a large extent. The incumbent’s status quo payoff increases by \( \nu x \) given conflict initiation as long as the domestic audience decides not to replace the incumbent or her replacement attempt fails: e.g., \( U_I(a_{-R}, m, T) = U_I(N_{\text{Fail}}, a, m, T) = x + \nu \), and \( U_I(a_{-R}, m, T) = U_I(N_{\text{Fail}}, a, m, T) = x \). I assume that

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\(^{34}\) For a similar protocol, see Svolik (2009) where the probability of a coup failing is the same as the dictator’s share of power relative to the ruling coalition’s.

\(^{35}\) Notice that this is just a special case of the game presented here where \( \kappa = 0 \) for a completely benevolent type, and \( \overline{\kappa} - \kappa \) is the level of predation for a predatory type.
$x + vx \in (0,1)$, implying that the incumbent cannot possibly obtain an absolute power status by extracting rents through military conflict: i.e., $v < \frac{1-x}{x}$.\footnote{If an incumbent has a dominant share of power over the domestic audience, $v$ should be quite small implying that there is not much resources or power left the dictator would be able to gain further. In other words, further rent extraction from the limited resources available would not increase much the dictator’s utilities. But at the same time, the incumbent would be still less constrained to initiate a conflict because the probability of successful replacement is also quite small. If an incumbent does not have enough power to secure his leadership against potential domestic challenges, the incumbent has an incentive to extract rents from the domestic audience under the high risk of successful replacement attempt. This latter example illustrates the risk-return trade-offs, and he would be willing to gamble under some conditions because the domestic audience cannot observe perfectly the level of predation. The extent to which the vulnerable dictator is willing to gamble on a highly predatory conflict would be determined by how credible a potential replacement threat would be \textit{ex ante}. A part of the solution concepts of this game will demonstrate specific conditions under which an incumbent is more or less likely to gamble. This assumption can be rewritten as $v < \frac{s}{1-s}$.} When the incumbent is replaced, he loses all his share of power. Taking into account the probability of successful replacement, $U_I(a_R, m_G, T) = (1 - s)(x + vx)$, and $U_I(a_R, m_{-G}, T) = (1 - s)x$.

The status quo payoff of the domestic audience is normalized to one. When the incumbent initiates a military conflict, the domestic audience pays the rents ($v$). In the absence of replacement attempt, $U_D(a_{-R}, m_G, T) = 1 - v$ and $U_D(a_{-R}, m_{-G}, T) = 1$.

When the domestic audience chooses to replace the incumbent, she always pays additional costs denoted by $w > 0$. To replace the incumbent, the domestic audience should mobilize available resources among potential domestic challengers and solve the collective action problem among them by providing financial incentives: e.g., financing demonstrations, campaigns, or coups. This cost would be smaller when the domestic audience follows institutional settings that allow or mandate potential leadership turnover by election than when the domestic audience attempts to break the existing rules of leadership turnover and force the incumbent to resign. In the absence of these institutional constraints, when the incumbent’s
power base is premature or when multiple military factions exist that are willing to stage a coup, this replacement cost should be smaller than when the incumbent’s power is centralized and solid. If the incumbent is replaced, the domestic audience obtains the total power until the next incumbent is selected, so the current payoff after successful replacement is assumed to be equal to the status quo payoff one.\textsuperscript{37} If the replacement attempt fails, the domestic audience loses all her current payoffs but the replacement costs still remain. Thus, $U_D(a_R, M, T) = s(1 - w) + (1 - s)(-w) = s - w$.

\textbf{2.3.3 Perfect Bayesian Equilibria}

I first discuss the existence of pure strategy equilibria. There exists no pure strategy pooling equilibrium where all types of incumbents choose to initiate conflict or to stay in the peaceful status quo. Intuitively, the incumbent always has an incentive to mimic less predatory types when the future replacement threat is credible \textit{ex ante}, while he has an incentive to mimic more predatory types when the replacement threat is not credible \textit{ex ante}. For example, when the likelihood of successful replacement is high and the costs of replacement are low, the domestic audience would want to punish the predatory incumbent, and the incumbent has an incentive to give up potential rent-seeking opportunities from military conflict but rather want to stay in the peaceful status quo that gives him greater payoffs. For another instance, when $U_D(a_R, M, T)$ is sufficiently small, the domestic audience is better off by keeping the incumbent in office regardless of the presence of conflict, but in this situation some types of incumbents have an

\textsuperscript{37} For a different payoff structure after replacement, see Tarar (2006) where the voter’s expected payoff after deciding to replace the incumbent is equal to the probability that the next incumbent is likely to be a competent type under whom the voter’s status quo payoff is one.
incentive to mimic highly predatory types and to increase their power at any rate by military conflict.

In the following, I discuss semi-separating perfect Bayesian equilibria depending on four parameter spaces.

**Proposition 1.** Let $p^*$ be an equilibrium probability of conflict initiation, $\gamma_C^*$ be an equilibrium probability of attempting to replace the incumbent after observing conflict. In a perfect Bayesian equilibrium, $p^* = 1$ and $\gamma_C^* = 0$ if $s - w < 1 - \kappa$.\(^{38}\)

This equilibrium shows the incumbent’s optimal scenario where he initiates a military conflict, obtains rents depending on the level of predation, and the domestic audience is still willing to bear the predatory rents because the expected costs of replacement is too large. Knowing that the domestic audience’s replacement threat is not credible ex ante, the incumbent has nothing to lose by initiating a military conflict.

**Proposition 2.** If $s - w \geq 1 - \kappa$, then there exists no perfect Bayesian equilibrium where $p^* = 1$ and $\gamma_C^* = 1$.

In this particular case where the replacement threat is highly credible ex ante, there exists an off-the-equilibrium path that gives higher payoffs than risking their leadership on international conflict: i.e., this set of strategies does not meet the incentive compatibility condition.\(^{39}\)

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\(^{38}\) Detailed proofs for the following propositions can be found in the Appendix.

\(^{39}\) Some types of incumbents have an incentive to deviate from $m_C$ to $m_{-C}$ because $U_f(a_{R}, m_C) < U_f(a_{-R}, m_{-C})$ by the assumption that $x + v \alpha \in (0,1)$. Notice that in the absence of conflict and potential rents, the domestic audience is always temporarily satisfied with the current leadership because the outcome of replacement attempt is uncertain and it is costly.
Proposition 3. In mixed strategy equilibria where \(1 - \kappa \leq s - w < 1 - \kappa\),

\[
\gamma^*_C = \frac{s - w - 1 + \kappa}{\kappa - \kappa},
\]

(1)

\[
p^* = \frac{\kappa(\kappa - \kappa) - s(\kappa + 1)(\kappa - 1 + s - w)}{(\kappa - \kappa)[(\kappa - \kappa) - s(\kappa - 1 + s - w)]} \text{ if } \kappa < \kappa^*, \text{ and } p^* = 0 \text{ if } \kappa \geq \kappa^*,
\]

(2)

where \(\kappa^* = \kappa - \frac{s(1 + \kappa)(\kappa - 1 + s - w)}{\kappa}\),

(3)

Proposition 3 illustrates a purely mixed strategy equilibrium and an off-the-equilibrium-path outcome, depending on the size of \(\kappa\). When the expected utility of replacement threat is neither sufficiently high nor sufficiently low, the domestic audience plays a mixed strategy following the incumbent’s decision on conflict initiation, and \(\gamma^*_C > 0\). Equation (1) shows that the domestic audience’s posterior belief that the incumbent’s predation is sufficiently high, i.e., Prob.(\(\nu > 1 - s + w\)), is increasing in \(s\) and \(\kappa\), but decreasing in \(w\) and \(\kappa\). However, when the lower bound of predation (\(\kappa\)) exceeds the threshold (\(\kappa^*\)), the incumbent is strictly better off by avoiding military conflict because a sufficiently high value of \(\kappa\) provides the domestic audience with a greater incentive to replace the incumbent, and the greater likelihood of replacement attempt makes the incumbent eventually become worse off by initiating military conflict.

To generate a testable hypothesis, I now turn to the comparative statics analysis from these propositions focusing on two parameters, \(s\) and \(w\), that are observable and measurable more easily than the level of predation. Proposition 1 and 3 can be rewritten by these two parameters.
Proposition 4 The equilibrium probability of conflict initiation ($p^*$) is weakly increasing in $w$, but weakly decreasing in $s$. (See Appendix A for proof.)

Figure 2 illustrates the comparative statics results in Proposition 4. $p^* = 0$ if $w$ is sufficiently small (i.e., $w < w^*$), $p^* > 0$ if $w^* \leq w < s + \bar{r} - 1$, and $p^* = 1$ if $w$ is sufficiently large (i.e., $w \geq s + \bar{r} - 1$). Because $p^*$ is increasing in $w$ if $w^* \leq w < s + \bar{r} - 1$, the likelihood of conflict initiation is weakly increasing in the size of replacement costs in the equilibria. $p^* = 1$ if $s$ is sufficiently small (i.e., $s < w + \kappa - 1$), $p^* > 0$ if $w + \kappa - 1 \leq s < s^*$, and $p^* = 0$ if $s$ is sufficiently large (i.e., $s \geq s^*$). Because $p^*$ is increasing in $s$ if $w + \kappa - 1 \leq s < s^*$, the likelihood of conflict initiation is weakly decreasing in the likelihood of successful replacement.

These two parameters, $w$ and $s$, capture the level of domestic constraints because the domestic audience is more willing and able to replace the incumbent when $w$ is low and $s$ is high.\textsuperscript{40} Substantively speaking, this proposition suggests that the greater domestic constraints a leader faces the less likely he is to initiate a military conflict. Chiozza, Gleditsch, and Goemans (2004) reveal empirical evidence for this proposition: “as the endogenous risk of losing office increases, the probability of international conflict actually decreases” (3).\textsuperscript{41} To generate a testable empirical implication, the next section discusses how the magnitude of replacement cost and the likelihood of successful replacement change over the course of tenure in democracies and dictatorships.

\textsuperscript{40} Regarding $k$ and $e$, I found that they have nonmonotonic and nonlinear relationships with the likelihood of conflict initiation, and that these relationships are not independent of each other’s value. Thus, it appears to be difficult to draw a testable empirical hypothesis with respect to these parameters. For detailed discussion on the comparative statics results regarding these parameters, see the appendix.

\textsuperscript{41} See also Chiozza and Goemans 2003, 2004; Gaubatz 1991.
2.3.4 Empirical Implication

Democratic leaders are likely to survive early in the tenure by established institutional and legal protection mechanisms, while dictators are exceptionally vulnerable to violent domestic challenges early in their tenure when the power struggle among ruling elites is intense in the absence of institutional protection. But once a dictator survives severe power competition and consolidates his power over time, the domestic audience’s attempt to replace the dictator is costly and likely to fail, while the institutional protection in democracies ironically makes the domestic audience’s attempt to replace the incumbent less costly and more likely to succeed later in the election period.

[Table 2.1 about here]

[Figure 2.3 about here]

Early in democratic leader’s tenure, leaders enjoy the so-called honeymoon period that “affords the president a particularly good opportunity to use public support to get some of his programs through Congress” (Janda, Berry, and Goldman 2008, 375). For example, as shown in Table 2.3, the United States presidents had a systematically higher approval rating, and a much lower disapproval rating in the early period than later. The average approval rating is about 7% higher during the first four months than later for the U.S. presidents between 1953 and 2001 (55 vs. 63), and the average disapproval rating is twice lower (32 vs. 16). The same pattern holds when considering the first six months or one year. The distinction between the honeymoon period and the election period is less clear in parliamentary democracies than in presidential democracies. However, Figure 2.3 also shows that the approval rating for the coalition government in the United Kingdom between 1951 and 2001 declines in the prime minister’s tenure.
In this early period, the public is not necessarily more likely to support all sorts of policies, but in fact is less likely to challenge or revolt against democratic leaders’ policy decisions. Democratic institutions work in leaders’ favor in this early period because, to a large extent, institutions guarantee their survival during the first several years, and democratic leaders are much less likely to leave the office in this period compared to dictators.42

As a result, any attempt to replace the democratic incumbent early in the tenure is likely to fail due to strong institutional protection and domestic consent to new leadership. In addition, it is extremely costly for the domestic audience to negate the very institutional protection upon which they agreed and by which their political rights are also protected only for the purpose of replacing the incumbent. The amount of human and financial resources necessary to replace the newly elected democratic incumbent would be so large that the domestic audience would be better off waiting for the next election.

Authoritarian leaders’ tenure is less institutionalized than democratic leaders’, so unlike democratic leaders, the absence of effective means of institutional protection or the weakness of existing constitutional rules makes authoritarian leaders feel highly concerned about their survival in office. That is because a dictator might have an incentive to establish strong launching organizations particularly early in his tenure through constitutions that could be strategically used to consolidate his power (Albertusand and Menaldo 2012). Even existing constitutions in dictatorships, however, are not as effective in protecting dictators’ survival as in democracies, but are often undermined by both leaders themselves and potential domestic

42 This is a great opportunity for military conflicts in democracies because military operations are less constrained by the public, and generating and spreading the sentiment of foreign threats to national security helps the incumbent systemize his agenda and strengthen control over other socio-economic environments. In this situation, social and political control by military means makes it easy to distract the public attention to leader’s and elites’ rent-seeking activities.
dissenters. For example, Ginsburg, Elkins, and Melton (2007) show that “Using regime-type, as measured by Cheibub and Ghandi (2004), constitutions written under democratic regimes have a significantly longer lifespan than those written under authoritarian regimes ($t=7.71$ and $p<0.00$). Specifically, constitutions written under democratic regimes last, on average, 17 years longer than those written under authoritarian regimes” (7).

More importantly, authoritarian leaders are much more uncertain about their fate especially early in their tenure. Haber (2006) suggests a specific reason for this claim; “The early years of dictatorships therefore tend to be characterized by a power struggle - a game as it were, with the stakes being tenure in office - between the dictator and the leadership of the organized group that launched him” (696). Geddes (2006) also characterizes the early period of authoritarian regimes as the stage of struggling over power, and forming and consolidating the winning coalition. Figure 2.4 shows some evidence that dictatorships in the early period tend to experience domestic turmoils, particularly among elites, much more often than later. The number of government crises, purges, and assassinations is much larger during the first year of dictatorship than later.\(^{43}\) Also notice that the difference between the first year and later years is greater in dictatorships than in democracies.

[Figure 2.4 about here]

Gelpi and Grieco (2001) also highlight new authoritarian leaders’ vulnerability and their insecure winning coalition, but they further argue that, specifically with respect to using force, “The use of military force in an international crisis will be costly for relatively new authoritarian leaders because such military actions require a diversion of military resources away from their

\(^{43}\) Even though purges and assassinations mostly consist of repressive actions of the government or the dictatorial incumbent, these are also indicators of potential or ongoing domestic challenges among elites in dictatorships. The data on domestic unrest are from Banks (2007).
most urgent task: defending the leader’s hold on office” (801). A dictator’s vulnerability to violent domestic challenge is also shown in Svolik’s (2009) authoritarian power sharing model: “we should expect that the longer that a dictator is in office, the less likely it is that he will be removed by a coup instead of exiting by alternative means, such as a natural death, foreign intervention, transition to democracy, etc” (492). Thus, the replacement cost is relatively lower early in dictator’s tenure than the period after power consolidation, and any replacement attempt is more likely to succeed early than later.

Specifically regarding the impact of the likelihood of successful replacement on dictator’s conflict behavior, I found elsewhere that dictators are less likely to use force externally when the likelihood of leadership failure is increasing or when their time horizon is getting shorter. I also found that this negative (constraining) impact of the authoritarian time horizon becomes larger and more significant when the type of leadership failure they expect is irregular or violent. These findings significantly support my claim that dictators are less likely to initiate a military conflict early in their tenure when unexpected and violent domestic challenges are more likely to occur and succeed than later.

To summarize, a replacement attempt would be more costly and less likely to succeed early than later in democratic leader’s tenure, but later than early in dictatorial leader’s tenure. Substantively speaking, the level of domestic constraints on leader’s aggressive foreign policy is expected to be increasing over the tenure in democracies, but decreasing in dictatorships. From this discussion, I draw the following hypothesis:

44 The detailed analyses and interpretations of the empirical results are available upon request.
**Hypothesis:** Democratic leaders are more likely to initiate a military conflict early than later over the course of their tenure, but dictatorial leaders are less likely to initiate a military conflict early than later.

### 2.4 Research Design

I created a data set where directed-country-dyad-years\(^45\) are transformed into directed-leader-dyad-periods between 1946 and 2001.\(^46\) The temporal dimension is extended later back to 1919 for models where further regime and leader data are available. Each observation represents a leader-dyad-year, but I allow multiple leader dyads in a given year whenever leadership turnover occurs either for the potential challenger or the target. I eliminate unrealistic leader-dyads where a leader entered the office when the potential counterpart had already left the office.

The dependent variable is the potential challenger’s militarized dispute (hereafter MID) initiation against the potential target. Regarding MID initiation, I only count dyads where both leaders are involved in a MID on the first day. I code a threat without showing or using force as zero because leaders can make a threat without incurring those costs I specified in the previous discussion with respect to domestic constraints.

The main independent variable is a leader’s tenure. I measure this variable by counting the number of days from the first day in office to three different end points: the last day of the year, the last day of tenure, and the starting day of MID initiation. I use a logarithmic value of this variable in order to capture the time-decaying impact of tenure. Another main independent

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\(^45\) For these initial dyad cases, Militarized Interstate Disputes (MIDs) data set (Ghosn and Palmer 2003), and EUGene program (Bennet and Stam 2000) were used.

\(^46\) To identify one or more leaders who stayed in office in every year and their individual information, I used the Archigos data set (Version 2.9) for political leaders (Goemans et al. 2009).
variable is a dummy indicating whether the challenger’s country is democracy or dictatorship according to Cheibub, Gandhi, and Vreeland (2009). These two variables are interacted with each other because I expect that the impact of tenure should vary depending on the regime type.

I control for other confounding factors of leadership characteristics and dyadic relationship. First, I control for the tenure of the potential target leader, and both leaders’ ages. I include a joint democracy variable which is coded as one when both leaders are from democracies. I also control for other dyadic factors such as power balance between two states in a dyad, alliance portfolio, and contiguity. Finally, I control for peace years measured by the number of years from the year when a dyad experienced a MID since 1816 to the current year, and the squared and cubed terms of peace years to control for temporal correlation in the binary dependent variable (Carter and Signorino 2010). Estimation is performed by probit regression with robust standard errors clustered by leader-dyad.

2.5 Results

First, I run three models to ensure the robustness of empirical results as shown in Table 2.2. First, I include all available observations regardless of regime type and the length of tenure (Model 1).
However, it is arguable whether democratic leaders’ tenure can be juxtaposed with dictators’ because some dictators stay in office extremely long and some democratic leaders are elected multiple times. Even though I seek to find a general pattern of the relationship between tenure and conflict, I also run alternative models using only observations where the challenger’s tenure is less than four years (Model 2) and less than two years (Model 3). Further, instead of using a continuous measure of tenure, I use, in the model of Table 2.3, a dichotomous variable indicating whether leader’s tenure is less than one year.

[Table 2.2 and 2.3 about here]

Models in Table 2.2 show empirical support for the hypothesis: the impact of tenure appears to be negative for democratic challengers but positive for dictatorial challengers. The joint hypothesis tests of Tenure and Tenure*Democracy also show statistical significance, and the area under ROC curve in every model shows a fairly good model fit. For a more precise and easier interpretation of the results, I ran multiple simulations using the estimation results in Table 2.2 (Brambor et al. 2006). More specifically, I compare the marginal effects of tenure (i.e., the impact of one standard deviation increase from the mean) between democracies and dictatorships while holding other variables constant at their mean or median values. The parameter values in the simulations are determined by particular samples used for estimation among different models. My primary interest in these simulations is whether the 95% confidence intervals overlap between democracies and dictatorships, and whether the intervals cross the zero line. The first three columns in Figure 2.5 show that the 95% confidence intervals do not overlap, and largely

53 More specifically, I compare the marginal effects of tenure (i.e., the impact of one standard deviation increase from the mean) between democracies and dictatorships while holding other variables constant at their mean or median values. These mean or median values are obtained only the observations used in individual regressions. The parameter values in the simulations are determined by particular samples used for estimation among different models.
remain negative for democracies and positive for dictatorships. This finding indicates that democratic leaders, on average, become less likely to initiate a high-level militarized dispute over time, but dictators, on average, become more likely over the course of their tenure.

[Figure 2.5 about here]

[Figure 2.6 about here]

Particularly regarding democratic leaders’ conflict behavior, these results appear to be consistent with empirical findings of Gaubatz (1991) presented in Figure 2.6 that shows that democratic leaders are more likely to engage in wars early in the election cycle than later. The mechanism presented in this paper leading to this pattern is also supported by findings of Chiozza and Goemans (2004) and Debs and Goemans (2010) that suggest that democratic leaders do not gain electoral benefit from winning a war. In addition, my theoretical argument about democratic leaders’ greater sensitivity to the potential costs of military conflict later in the election period is consistent with the findings of Williams et al. (2010) that suggests that democratic leaders do not have electoral benefit from use of force, and they are likely to be electorally punished from initiating a costly conflict particularly in a poor economic condition.

One common implication of these findings is that the propensity of democratic leaders’ use of force is not positively associated with electoral benefit. This implication appears to be largely inconsistent with the diversionary perspective that suggests that democratic leaders are more likely to use force abroad in the period when they expect and need electoral benefit and when an election is expected or scheduled in the near future.

The hypothesis also suggests that the impact of the first year dummy should be negative for dictators but positive for democratic leaders. Table 2.3 shows a pattern consistent with the
expectation. In sum, I found that the likelihood of a democratic leader’s conflict initiation is decreasing over the tenure, while dictators are getting more aggressive over their tenure.

2.6 An Illustrative Example

The data used in this article cover only the post-WWII period. In this section, I introduce out-of-sample cases that show that the behavior of political leaders of major powers in the pre-WWII period closely correspond to my theoretical expectations.

Since appointed as the chancellor of the Nazi party in 1933, Hitler sought to consolidate his power not through democratic electoral processes but fascist rules and nationalist propaganda. However, it took more than five years for Hitler to obtain full control over the executive and legislative power, and eliminate potential military and political challengers and minimize domestic constraints on his aggressive foreign policy. Benito Mussolini also led Italy into the war when his dictatorial status is quite stable after years of consolidation efforts since 1922, even though he did not start his leadership under despotic rule. Joseph Stalin did not start his war machine either early in his tenure. After years of domestic consolidation of totalitarian rules, particularly intense purges years before World War II, the Soviet Union invaded several East European countries and fought Germany after German invasion in 1941. Franklin D. Roosevelt’s aggressive rhetoric on the German aggression remained strong without any specific military actions until the 1940 election. Starting his third term in 1941, he began to dramatically increase military build-up for war preparation and eventually joined the war after the Japanese attack on Pearl Harbor in late 1941.
2.7 Robustness Checks

In this section, I present a series of robustness checks to make sure that the empirical support for my hypothesis is not driven by particular sample selections or model specifications.

2.7.1 Previous Leadership Experience

The model in Table 2.4 uses only cases where leaders do not have any previous experience in office due to a concern that leaders with previous experience in office might be more constrained to initiate a conflict than first-time leaders. Leaders with previous experience in office might already have been exposed to a great extent to the domestic audiences, so that their predatory behavior would be more likely to be caught and deterred. An auxiliary regression shows that first-time leaders are significantly more likely to initiate a military conflict than those who had leadership experience before. The first-time leaders constitute about 90% of the cases in the data set. The variable on the previous time in office is from the Archigos data set (Goemans et al. 2009).

[Table 2.4 about here]

2.7.2 Presidential vs. Parliamentary Democracies

In the early period of tenure, leadership survival in parliamentary democracies may not be as secure as that in presidential democracies because a leader’s tenure is not guaranteed in parliamentary democracies unlike presidents who would stay in office for a fixed number of years as long as the term limits allow. Irregular leadership turnover by assassination or impeachment is not common in presidential democracies compared to turnover by election and
term limits, so that the domestic audience in presidential democracies does not have strong institutional tools necessary to replace the incumbent, particularly not in the early period of tenure. However, it is easier in parliamentary democracies for the legislature to remove the prime minister from office, so that leaders in parliamentary democracies would be more vulnerable to effective domestic challenges or threats of replacement. Thus, I expect that the empirical pattern drawn from the formal model should obtain greater empirical support in presidential democracies than in parliamentary democracies.

[Table 2.5 about here]

The empirical results in Table 2.5 show that the negative impact of tenure on the likelihood of conflict initiation is getting stronger when parliamentary democracies are removed from the sample than when all democracies are included. Tenure has a negative relationship with the likelihood of conflict initiation in democracies in general. The negative relationship still holds when I excluded parliamentary democracies, and the same is true when I restricted my sample further to only non-parliamentary democracies where a leader’s tenure is less than four years.

The post-estimation simulation results in Figure 2.7 show that the negative slope is getting steeper when I excluded parliamentary democracies and becomes much steeper when I further excluded cases where the incumbent stayed in office for more than four years. The simulation results also reveal that the marginal effects of tenure associated with one standard deviation increase in tenure from the mean are negative in all three samples, but greatest in the

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54 When I ran the same model including only cases where the democratic incumbent’s tenure is limited by constitutional term limits, I could also find a strong negative impact of tenure on the likelihood of conflict initiation. The significant impact of tenure was not found in dictatorships with term limits. The data are from the Database of Political Institutions data set (Beck et al. 2001). For detailed results, see Table 2.6.
sample of non-parliamentary democracies with tenure of less than four years. This finding implies that the empirical pattern suggested by the theory has stronger empirical support in non-parliamentary democracies.

[Figure 2.7 about here]

2.7.3 Different Regime Coding

For another robustness check, I use a different coding of democracy based on Polity scores, and extend the temporal dimension back to 1919. The results in Table 2.7 indicate that democratic leaders are much less constrained to initiate a military conflict early in the tenure than nondemocratic leaders. Figure 2.8 shows the marginal impact of tenure, indicating that the impact of tenure is positive for nondemocracies and negative for democracies, and the 95% confidence intervals are distinguished between democracies and nondemocracies across the zero line.

[Table 2.7 about here]

[Figure 2.8 about here]

2.7.4 Nonlinear Specification for Dictatorships

Further robustness checks might be necessary particularly with respect to dictatorships because some dictators stay in office extremely long for tens of years. Then, one might argue that the positive relationship between tenure and the likelihood of conflict initiation may not remain linear all the way up to the far end of these long-lasting dictators’ tenure. As dictators are getting old, they might be quite vulnerable to violent domestic challenges as much as in the early period
of power struggle. Then, these dictators again might be highly constrained to use force externally, so that the relationship between tenure and the likelihood of conflict initiation could be inverted U-shaped. In other words, the likelihood of conflict initiation might be decreasing after a certain point of time over the tenure.

The empirical results in Table 2.8 and Figure 2.9 show weak empirical support for this conjecture. When I restrict the sample to only dictatorships and allow a nonlinear model specification, the relationship between tenure and the likelihood of conflict initiation appears to be inverted U-shaped. However, even though the likelihood of conflict initiation appears to decrease later in dictators’ tenure, the apex appears to be off my expectation.\(^{55}\)

[Table 2.8 about here]

[Figure 2.9 about here]

### 2.7.5 Rare Events Logit

One of the biggest concerns about the robustness of the main empirical results comes from the fact that a large number of dyadic observations might drive down the standard errors and \(p\)-values. Even though the empirical results using a smaller number of observations in limited samples still support the hypothesis, I performed further analyses to confirm that the empirical support is not driven by the large number of observations. I use the procedure suggested by King and Zeng (2001). Observations with a zero value in the dependent variable are randomly sampled by 10\%, 5\%, and 1\%, and I correct the small-sample bias using the rare-events logit

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\(^{55}\) The apex point is shown around 4.7 years of tenure. I expected that dictators would become quite vulnerable to domestic challenges again much later than 4.7 years in office.
suggested by King and Zeng (2001). This process dramatically decreases the number of observations, but the results in Table 2.9 still show strong empirical support for the hypothesis.

[Table 2.9 about here]

2.7.6 Non-predatory Conflict

I assume that all types of military conflict initiation are motivated by political leaders’ predatory incentives to some extent. To ensure that this assumption is reliable, I allow the range of predation parameter in the formal model to vary without any restrictions. The solution concepts and comparative statics are logically valid regardless of the level of predation. The only impact of the range of predation parameter is the area of purely mixed strategy equilibrium: as the magnitude of uncertainty increases, the range of mixed strategy equilibrium also increases.

Yet the concept of predatory conflict is new to the literature, and some might think that the assumption is unrealistic. Thus, I run the main model with two particular control variables that account for domestic audiences’ perception on the expected level of predation: the presence of strategic rivalries and the number of territorial claims in a given year. Military contention against strategic rivalries or against countries with territorial claims might make domestic audiences more hawkish and more willing to bear the costs than others foreign policy issues. Thus, domestic audiences’ concern over predatory conflict might be smaller in these situations than otherwise.

I also run a more conservative test using the sample limited to dyads experiencing territorial claims with each other. Many studies hold that territorial issues are closely associated with the higher probability of war or militarized conflicts than other issues (Diehl 1991; Hensel
1996; Huth 2000; Vasquez 2001). Hensel et al. (2008) claim that “states should be more likely to employ militarized conflict over more salient issues, in terms of both issue types that are generally more salient (particularly territory) and cases with higher within-issue salience” (139). More importantly, one of the primary reasons why territorial issues are more salient than others is that domestic audiences often attach their nationalistic sentiment to territories in dispute. Thus, domestic audiences would be more willing to bear the costs of territorial conflicts and less concerned about their leader’s predatory incentives behind territorial conflicts. Thus, using the sample of territorial disputes is a more conservative test that can evaluate the reliability of my theory.

[Table 2.10 about here]

The results in Table 2.10 show that empirical evidence for my hypothesis largely remain the same across these three robustness checks. In all three models, I could find statistically significant empirical patterns all of which suggest that the likelihood of conflict initiation declines in democratic leaders’ tenure but increases in dictators’ tenure. These results indicate that my assumption on predatory nature of military conflict does not drive the initial empirical results.

2.8 Discussion

The conventional notion on domestic constraints is that the public is averse to costly military conflict and that democratic leaders are answerable to the public unwillingness to bear the cost. This theoretical frame appears to be unable to answer two research questions this paper tries to

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56 “[T]he results of empirical tests indicate a significant and strong relationship between the presence of a territorial dispute between states and the likelihood of militarized conflict and war” (Huth, 2000, 85).
answer: a) whether and why the level of domestic constraints on a leader’s conflict behavior systematically changes over the course of tenure, and b) how different the temporal variation in domestic constraints is between democracies and dictatorships.

The domestic audience has an incentive to deter leader’s potentially predatory conflict behavior and to avoid the high cost of military conflict. Domestic audiences can make a threat of replacing the incumbent to constrain a leader’s conflict behavior, but the threat is not always credible and domestic audiences are not always able to carry it out. I find that when a replacement attempt is highly costly and less likely to succeed, leaders are less constrained to initiate a military conflict. This theoretical mechanism is quite parsimonious but has a merit of being generalized regardless of regime type. This paper also contributes to the literature by specifying the sources of domestic constraints and their effects on international conflict.

Further, this paper demonstrates that the level of domestic constraints changes in different patterns between democracies and dictatorships. These contrasting patterns explain why a leader’s tenure has quite different effects on the likelihood of international conflict between democracies and dictatorships. In addition, the theoretical implication I found on the relationship between domestic constraints and the likelihood of conflict initiation appears to be contradictory to the expectations of the diversionary argument that suggests that leaders are more likely to initiate a conflict when they are vulnerable at home.

Domestic constraints might be one of many other determinants of international conflict that systematically change over the tenure. I believe that other factors exist with systematic temporal variation over the course of tenure and potentially with different changing patterns between democracies and dictatorships. One example would be the magnitude of audience costs. Past studies largely focused on the different magnitude of signaling advantage between
democracies and nondemocracies. However, the magnitude of audience costs a leader can generate would also vary throughout the leader’s tenure: e.g., audience costs might be high in the election period in democracies and in the early years of dictatorships.

In addition, the theoretical explanation on the systematic variation in leader’s domestic constraints can also be applied to other research areas. For example, my theory suggests that democratic leaders under high electoral constraints in the election period are more likely to pursue benevolent economic policies such as increase in government subsidies and public investment that would benefit a large pool of domestic audiences, while dictators are more likely to do so early than later. In a similar vein, I expect that economic sanctions should be more effective in terms of destabilizing the target leadership when a leader faces a high level of domestic constraints or a leader is highly vulnerable to domestic political challenges, for example in the election period in democracies and in the early period of power struggle in dictatorships.

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57 Fearon (1994) argues that democratic leaders can generate higher audience costs than autocratic leaders so that democratic leaders’ signal would be more credible than autocratic leaders’. Weeks (2008) shows that some types of autocratic leaders can also generate audience costs as much as democratic leaders under certain conditions.
Table 2.1 Average Approval and Disapproval for the U.S. presidents, 1953-2001

<table>
<thead>
<tr>
<th></th>
<th>Approval</th>
<th>Disapproval</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Four Months</td>
<td>63 %</td>
<td>16 %</td>
</tr>
<tr>
<td>After Four Months</td>
<td>55 %</td>
<td>32 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Difference of Means Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threshold</td>
</tr>
<tr>
<td>First Four Months vs. Later</td>
</tr>
<tr>
<td>First Six Months vs. Later</td>
</tr>
<tr>
<td>First Year vs. Later</td>
</tr>
</tbody>
</table>

Notes: Data for approval rating are drawn from the American Presidency Project.
Table 2.2 The Impact of Tenure on the Likelihood of MID Initiation, 1946-2001

<table>
<thead>
<tr>
<th></th>
<th>(1) Full Sample</th>
<th>(2) Tenure &lt; Four Years</th>
<th>(3) Tenure &lt; Two Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenure(^a) (Challenger)</td>
<td>0.021**</td>
<td>0.024</td>
<td>0.025</td>
</tr>
<tr>
<td></td>
<td>(0.011)</td>
<td>(0.020)</td>
<td>(0.029)</td>
</tr>
<tr>
<td>Democracy (Challenger)</td>
<td>0.311**</td>
<td>0.563***</td>
<td>0.594***</td>
</tr>
<tr>
<td></td>
<td>(0.123)</td>
<td>(0.161)</td>
<td>(0.197)</td>
</tr>
<tr>
<td>Tenure(^a) * Democracy</td>
<td><strong>-0.064</strong>*</td>
<td><strong>-0.107</strong>*</td>
<td><strong>-0.114</strong>*</td>
</tr>
<tr>
<td></td>
<td>(0.018)</td>
<td>(0.027)</td>
<td>(0.036)</td>
</tr>
<tr>
<td>Tenure(^a) (Target)</td>
<td>0.005</td>
<td>0.015</td>
<td>0.025</td>
</tr>
<tr>
<td></td>
<td>(0.009)</td>
<td>(0.012)</td>
<td>(0.016)</td>
</tr>
<tr>
<td>Age (Challenger)</td>
<td>0.009***</td>
<td>0.008***</td>
<td>0.008***</td>
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<tr>
<td></td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>Age (Target)</td>
<td>0.004***</td>
<td>0.004**</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.002)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>Power Parity</td>
<td>0.173**</td>
<td>0.197*</td>
<td>0.070</td>
</tr>
<tr>
<td></td>
<td>(0.080)</td>
<td>(0.111)</td>
<td>(0.131)</td>
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<tr>
<td>Joint Democracy</td>
<td>-0.021</td>
<td>0.072</td>
<td>0.100*</td>
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<tr>
<td></td>
<td>(0.042)</td>
<td>(0.048)</td>
<td>(0.055)</td>
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<tr>
<td>Contiguity</td>
<td>1.303***</td>
<td>1.304***</td>
<td>1.244***</td>
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<tr>
<td></td>
<td>(0.026)</td>
<td>(0.035)</td>
<td>(0.041)</td>
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<td>Alliance</td>
<td>-0.482***</td>
<td>-0.375***</td>
<td>-0.297***</td>
</tr>
<tr>
<td></td>
<td>(0.038)</td>
<td>(0.057)</td>
<td>(0.068)</td>
</tr>
<tr>
<td>Peace Years</td>
<td>-0.056***</td>
<td>-0.056***</td>
<td>-0.054***</td>
</tr>
<tr>
<td></td>
<td>(0.005)</td>
<td>(0.005)</td>
<td>(0.005)</td>
</tr>
<tr>
<td>Peace Years(^2)</td>
<td>0.001***</td>
<td>0.001***</td>
<td>0.001***</td>
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<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0001)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td>Peace Years(^3)</td>
<td>-4.16*e(^{-6})**</td>
<td>-5.03*e(^{-6})**</td>
<td>-4.66*e(^{-6})**</td>
</tr>
<tr>
<td></td>
<td>(9.71*e(^{7}))</td>
<td>(1.03*e(^{6}))</td>
<td>(9.46*e(^{7}))</td>
</tr>
<tr>
<td>Constant</td>
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<td>-3.570***</td>
<td>-3.572***</td>
</tr>
<tr>
<td></td>
<td>(0.115)</td>
<td>(0.176)</td>
<td>(0.220)</td>
</tr>
<tr>
<td>Observations</td>
<td>1,173,492</td>
<td>649,619</td>
<td>329,885</td>
</tr>
</tbody>
</table>

\(\beta\) (Tenure) +

|                        | -0.043***       | -0.083***               | -0.089***              |
|                        | (0.002)         | (< 0.001)               | (0.001)                |

\(\beta\) (Tenure * Democracy)

|                        | 0.8950          | 0.8953                  | 0.8744                 |

Notes: Cell entries are coefficient estimates; numbers in parentheses are estimated robust standard errors. Standard errors are clustered by leader-dyads.

*** p < 0.01; ** p < 0.05; * p < 0.1 (two-tailed).

\(^a\): logged variable
Table 2.3 The Impact of the First Year Dummy on the Likelihood of MID Initiation, 1946-2001

<table>
<thead>
<tr>
<th>First Year Dummy (Full Sample)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democracy (Challenger)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>First Year (Challenger)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>First Year * Democracy</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Tenure^a (Target)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Age (Challenger)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Age (Target)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Power Parity</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Joint Democracy</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Contiguity</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Alliance</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Peace Years</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Peace Years^2</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Peace Years^3</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Constant</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Observations</td>
</tr>
<tr>
<td>β(Tenure) +</td>
</tr>
<tr>
<td>β(Tenure * Democracy)</td>
</tr>
<tr>
<td>Area under Roc Curve</td>
</tr>
</tbody>
</table>

Notes: Cell entries are coefficient estimates; numbers in parentheses are estimated robust standard errors. Standard errors are clustered by leader-dyads. *** p < 0.01; ** p < 0.05; * p < 0.1 (two-tailed). ^a: logged variable
Table 2.4 The Impact of Tenure on the Likelihood of MID Initiation for Leaders with No Previous Time in Office, 1946-2001.

<table>
<thead>
<tr>
<th>No Previous Time in Office</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenure \textsuperscript{a} (Challenger) &amp; 0.013 \hspace{1cm} (0.011)</td>
</tr>
<tr>
<td>Democracy (Challenger) &amp; 0.338*** \hspace{1cm} (0.129)</td>
</tr>
<tr>
<td><strong>Tenure \textsuperscript{a} * Democracy</strong> &amp; -0.069*** \hspace{1cm} (0.019)</td>
</tr>
<tr>
<td>Tenure \textsuperscript{a} (Target) &amp; 0.009 \hspace{1cm} (0.009)</td>
</tr>
<tr>
<td>Age (Challenger) &amp; 0.010*** \hspace{1cm} (0.001)</td>
</tr>
<tr>
<td>Age (Target) &amp; 0.004*** \hspace{1cm} (0.001)</td>
</tr>
<tr>
<td>Power Parity &amp; 0.210** \hspace{1cm} (0.084)</td>
</tr>
<tr>
<td>Joint Democracy &amp; -0.012 \hspace{1cm} (0.045)</td>
</tr>
<tr>
<td>Contiguity &amp; 1.291*** \hspace{1cm} (0.028)</td>
</tr>
<tr>
<td>Alliance &amp; -0.523*** \hspace{1cm} (0.040)</td>
</tr>
<tr>
<td>Peace Years &amp; -0.055*** \hspace{1cm} (0.005)</td>
</tr>
<tr>
<td>Peace Years\textasciimath{^2} &amp; 0.0009*** \hspace{1cm} (0.0001)</td>
</tr>
<tr>
<td>Peace Years\textasciimath{^3} &amp; -3.94<em>e\textasciimath{^{-06}}</em>** \hspace{1cm} (9.19*e\textasciimath{^{-07}})</td>
</tr>
<tr>
<td>Constant &amp; -3.441*** \hspace{1cm} (0.118)</td>
</tr>
<tr>
<td>Observations &amp; 1,057,631</td>
</tr>
<tr>
<td><strong>Area under Roc Curve</strong> &amp; 0.8938</td>
</tr>
</tbody>
</table>

Notes: Cell entries are coefficient estimates; numbers in parentheses are estimated robust standard errors. Standard errors are clustered by leader-dyads. 
*** \( p < 0.01; ** \( p < 0.05; * \( p < 0.1 \) (two-tailed).  
\textsuperscript{a}: logged variable
Table 2.5 The Impact of Tenure on the Likelihood of MID Initiation in Democracies

<table>
<thead>
<tr>
<th></th>
<th>(1) Full Sample</th>
<th>(2) Full Sample</th>
<th>(3) &lt; 4 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Democracies</td>
<td>Non-parliamentary Democracies</td>
<td></td>
</tr>
<tr>
<td>Tenure (^a) (Challenger)</td>
<td>-0.037**</td>
<td>-0.111***</td>
<td>-0.183***</td>
</tr>
<tr>
<td></td>
<td>(0.016)</td>
<td>(0.023)</td>
<td>(0.021)</td>
</tr>
<tr>
<td>Tenure (^a) (Target)</td>
<td>0.058**</td>
<td>0.040*</td>
<td>0.059**</td>
</tr>
<tr>
<td></td>
<td>(0.017)</td>
<td>(0.024)</td>
<td>(0.028)</td>
</tr>
<tr>
<td>Age (Challenger)</td>
<td>0.004**</td>
<td>0.009***</td>
<td>0.010***</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.003)</td>
<td>(0.004)</td>
</tr>
<tr>
<td>Age (Target)</td>
<td>0.001</td>
<td>-0.002</td>
<td>-0.001</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.003)</td>
<td>(0.004)</td>
</tr>
<tr>
<td>Power Parity</td>
<td>-0.016</td>
<td>0.050</td>
<td>0.245</td>
</tr>
<tr>
<td></td>
<td>(0.134)</td>
<td>(0.195)</td>
<td>(0.243)</td>
</tr>
<tr>
<td>Joint Democracy</td>
<td>0.011</td>
<td>0.124*</td>
<td>0.234***</td>
</tr>
<tr>
<td></td>
<td>(0.047)</td>
<td>(0.065)</td>
<td>(0.077)</td>
</tr>
<tr>
<td>Contiguity</td>
<td>1.239***</td>
<td>1.243***</td>
<td>1.277***</td>
</tr>
<tr>
<td></td>
<td>(0.044)</td>
<td>(0.069)</td>
<td>(0.083)</td>
</tr>
<tr>
<td>Alliance</td>
<td>-0.408***</td>
<td>-0.715***</td>
<td>-0.575***</td>
</tr>
<tr>
<td></td>
<td>(0.063)</td>
<td>(0.102)</td>
<td>(0.134)</td>
</tr>
<tr>
<td>Peace Years</td>
<td>-0.054***</td>
<td>-0.059***</td>
<td>-0.070***</td>
</tr>
<tr>
<td></td>
<td>(0.006)</td>
<td>(0.008)</td>
<td>(0.010)</td>
</tr>
<tr>
<td>Peace Years(^2)</td>
<td>0.001***</td>
<td>0.001***</td>
<td>0.001***</td>
</tr>
<tr>
<td></td>
<td>(0.0002)</td>
<td>(0.0002)</td>
<td>(0.0003)</td>
</tr>
<tr>
<td>Peace Years(^3)</td>
<td>-4.37*e(^{-06})**</td>
<td>-4.33*e(^{-06})**</td>
<td>-6.15*e(^{-06})**</td>
</tr>
<tr>
<td></td>
<td>(1.13*e(^{-06}))</td>
<td>(1.18*e(^{-06}))</td>
<td>(1.81*e(^{-06}))</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.998***</td>
<td>-2.362***</td>
<td>-2.383***</td>
</tr>
<tr>
<td></td>
<td>(0.189)</td>
<td>(0.267)</td>
<td>(0.330)</td>
</tr>
<tr>
<td>Observations</td>
<td>530,767</td>
<td>328,853</td>
<td>262,271</td>
</tr>
</tbody>
</table>

Notes: Cell entries are coefficient estimates; numbers in parentheses are estimated robust standard errors. Standard errors are clustered by leader-dyads. The sample of Model (1) is restricted to the cases where the challenger’s regime type is non-parliamentary with tenure less than four years as well as with effective term limits established.

** * p < 0.01; ** p < 0.05; * p < 0.1 (two-tailed).

\(^a\): logged variable.
Table 2.6 The Impact of Tenure on the Likelihood of MID Initiation in Term-limited Incumbents.

<table>
<thead>
<tr>
<th></th>
<th>(1) Term Limits (Democracies)</th>
<th>(2) Term Limits (Dictatorships)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenure $^a$ (Challenger)</td>
<td>-0.093***</td>
<td>0.028</td>
</tr>
<tr>
<td></td>
<td>(0.019)</td>
<td>(0.021)</td>
</tr>
<tr>
<td>Tenure $^a$ (Target)</td>
<td>0.029</td>
<td>-0.009</td>
</tr>
<tr>
<td></td>
<td>(0.020)</td>
<td>(0.023)</td>
</tr>
<tr>
<td>Age (Challenger)</td>
<td>0.005**</td>
<td>0.009***</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>Age (Target)</td>
<td>0.001</td>
<td>0.005</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>Power Parity</td>
<td>0.287*</td>
<td>0.292</td>
</tr>
<tr>
<td></td>
<td>(0.162)</td>
<td>(0.195)</td>
</tr>
<tr>
<td>Joint Democracy</td>
<td>0.108**</td>
<td>0.235</td>
</tr>
<tr>
<td></td>
<td>(0.055)</td>
<td>(0.146)</td>
</tr>
<tr>
<td>Contiguity</td>
<td>1.210***</td>
<td>1.350***</td>
</tr>
<tr>
<td></td>
<td>(0.056)</td>
<td>(0.066)</td>
</tr>
<tr>
<td>Alliance</td>
<td>-0.631***</td>
<td>-0.523***</td>
</tr>
<tr>
<td></td>
<td>(0.101)</td>
<td>(0.109)</td>
</tr>
<tr>
<td>Peace Years</td>
<td>-0.053***</td>
<td>-0.123***</td>
</tr>
<tr>
<td></td>
<td>(0.007)</td>
<td>(0.013)</td>
</tr>
<tr>
<td>Peace Years$^2$</td>
<td>0.001***</td>
<td>0.003***</td>
</tr>
<tr>
<td></td>
<td>(0.0002)</td>
<td>(0.0006)</td>
</tr>
<tr>
<td>Peace Years$^3$</td>
<td>-3.83<em>e$^{-06}$</em>**</td>
<td>-2.93<em>e$^{-05}$</em>**</td>
</tr>
<tr>
<td></td>
<td>(1.31*e$^{-06}$)</td>
<td>(6.37*e$^{-06}$)</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.409***</td>
<td>-3.213***</td>
</tr>
<tr>
<td></td>
<td>(0.228)</td>
<td>(0.291)</td>
</tr>
<tr>
<td>Observations</td>
<td>373,789</td>
<td>218,694</td>
</tr>
</tbody>
</table>

Notes: Cell entries are coefficient estimates; numbers in parentheses are estimated robust standard errors. Standard errors are clustered by leader-dyads.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$ (two-tailed).

$^a$: logged variable.
Table 2.7 The Impact of Tenure on the Likelihood of MID Initiation using Polity Score, 1919-2001

<table>
<thead>
<tr>
<th></th>
<th>Democracy by Polity (1919-2001)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenure (^a) (Challenger)</td>
<td>0.016**</td>
</tr>
<tr>
<td></td>
<td>(0.008)</td>
</tr>
<tr>
<td>Democracy (Challenger)</td>
<td>0.340***</td>
</tr>
<tr>
<td></td>
<td>(0.092)</td>
</tr>
<tr>
<td>Tenure (^a) *Democracy</td>
<td>-0.059***</td>
</tr>
<tr>
<td></td>
<td>(0.014)</td>
</tr>
<tr>
<td>Tenure (^a) (Target)</td>
<td>0.004</td>
</tr>
<tr>
<td></td>
<td>(0.007)</td>
</tr>
<tr>
<td>Age (Challenger)</td>
<td>0.006***</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
</tr>
<tr>
<td>Age (Target)</td>
<td>0.003***</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
</tr>
<tr>
<td>Power Parity</td>
<td>0.031</td>
</tr>
<tr>
<td></td>
<td>(0.062)</td>
</tr>
<tr>
<td>Joint Democracy</td>
<td>-0.167***</td>
</tr>
<tr>
<td></td>
<td>(0.038)</td>
</tr>
<tr>
<td>Contiguity</td>
<td>1.202***</td>
</tr>
<tr>
<td></td>
<td>(0.020)</td>
</tr>
<tr>
<td>Alliance</td>
<td>-0.516***</td>
</tr>
<tr>
<td></td>
<td>(0.028)</td>
</tr>
<tr>
<td>Peace Years</td>
<td>-0.048***</td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
</tr>
<tr>
<td>Peace Years(^2)</td>
<td>0.001***</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
</tr>
<tr>
<td>Peace Years(^3)</td>
<td>-3.64<em>e(^{-9})</em>**</td>
</tr>
<tr>
<td></td>
<td>(7.40*e(^{-7}))</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.539***</td>
</tr>
<tr>
<td></td>
<td>(0.089)</td>
</tr>
<tr>
<td>Observations</td>
<td>1,424,812</td>
</tr>
</tbody>
</table>

Notes: Cell entries are coefficient estimates; numbers in parentheses are estimated robust standard errors. Standard errors are clustered by leader-dyads. The Democracy variable is coded using Polity Scores.

*** p < 0.01; ** p < 0.05; * p < 0.1 (two-tailed).

\(^a\) : logged variable.
Table 2.8 The Impact of Tenure on the Likelihood of MID Initiation in Dictatorships

<table>
<thead>
<tr>
<th>Variable</th>
<th>Squared Tenure (Dictatorships)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenure^2 (Challenger)</td>
<td>-0.012 (0.008)</td>
</tr>
<tr>
<td>Tenure (Challenger)</td>
<td>0.184* (0.106)</td>
</tr>
<tr>
<td>Military Dictatorship</td>
<td>0.273*** (0.061)</td>
</tr>
<tr>
<td>Civilian Dictatorship</td>
<td>0.163*** (0.056)</td>
</tr>
<tr>
<td>Tenure (Target)</td>
<td>-0.009 (0.011)</td>
</tr>
<tr>
<td>Age (Challenger)</td>
<td>0.013*** (0.002)</td>
</tr>
<tr>
<td>Age (Target)</td>
<td>0.005*** (0.001)</td>
</tr>
<tr>
<td>Power Parity</td>
<td>0.252** (0.101)</td>
</tr>
<tr>
<td>Joint Democracy</td>
<td>-0.073 (0.126)</td>
</tr>
<tr>
<td>Contiguity</td>
<td>1.333*** (0.033)</td>
</tr>
<tr>
<td>Alliance</td>
<td>-0.512*** (0.049)</td>
</tr>
<tr>
<td>Peace Years</td>
<td>-0.059*** (0.006)</td>
</tr>
<tr>
<td>Peace Years^2</td>
<td>0.001*** (0.0002)</td>
</tr>
<tr>
<td>Peace Years^3</td>
<td>-3.86<em>e^-16</em>** (1.24*e^-06)</td>
</tr>
<tr>
<td>Constant</td>
<td>-4.081*** (0.398)</td>
</tr>
<tr>
<td>Observations</td>
<td>642,725</td>
</tr>
</tbody>
</table>

Notes: Cell entries are coefficient estimates; numbers in parentheses are estimated robust standard errors. Standard errors are clustered by leader-dyads.

*** p < 0.01; ** p < 0.05; * p < 0.1 (two-tailed).

^a: logged variable.
Table 2.9 Rare Events Logit Analyses

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rare Events Logit (Sampling Zero Observations)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 %</td>
<td>0.043</td>
<td>0.079**</td>
<td>0.042</td>
</tr>
<tr>
<td>(0.030)</td>
<td>(0.032)</td>
<td>(0.038)</td>
<td></td>
</tr>
<tr>
<td>Democracy (Challenger)</td>
<td>0.717*</td>
<td>1.057**</td>
<td>0.908*</td>
</tr>
<tr>
<td>(0.372)</td>
<td>(0.416)</td>
<td>(0.492)</td>
<td></td>
</tr>
<tr>
<td>Tenure * Democracy</td>
<td><strong>-0.170</strong>*</td>
<td><strong>-0.221</strong>*</td>
<td><strong>-0.207</strong>*</td>
</tr>
<tr>
<td>(0.055)</td>
<td>(0.061)</td>
<td>(0.072)</td>
<td></td>
</tr>
<tr>
<td>Tenure a (Target)</td>
<td>0.036</td>
<td>0.018</td>
<td>0.018</td>
</tr>
<tr>
<td>(0.026)</td>
<td>(0.027)</td>
<td>(0.031)</td>
<td></td>
</tr>
<tr>
<td>Age (Challenger)</td>
<td>0.030***</td>
<td>0.028***</td>
<td>0.035***</td>
</tr>
<tr>
<td>(0.003)</td>
<td>(0.003)</td>
<td>(0.004)</td>
<td></td>
</tr>
<tr>
<td>Age (Target)</td>
<td>0.012***</td>
<td>0.011***</td>
<td>0.008**</td>
</tr>
<tr>
<td>(0.003)</td>
<td>(0.003)</td>
<td>(0.004)</td>
<td></td>
</tr>
<tr>
<td>Power Parity</td>
<td>0.551**</td>
<td>0.326</td>
<td>0.240</td>
</tr>
<tr>
<td>(0.216)</td>
<td>(0.237)</td>
<td>(0.276)</td>
<td></td>
</tr>
<tr>
<td>Joint Democracy</td>
<td>-0.067</td>
<td>-0.035</td>
<td>0.041</td>
</tr>
<tr>
<td>(0.129)</td>
<td>(0.137)</td>
<td>(0.164)</td>
<td></td>
</tr>
<tr>
<td>Contiguity</td>
<td><strong>3.716</strong>*</td>
<td><strong>3.833</strong>*</td>
<td><strong>4.173</strong>*</td>
</tr>
<tr>
<td>(0.071)</td>
<td>(0.082)</td>
<td>(0.128)</td>
<td></td>
</tr>
<tr>
<td>Alliance</td>
<td><strong>-1.519</strong>*</td>
<td><strong>-1.552</strong>*</td>
<td><strong>-1.907</strong>*</td>
</tr>
<tr>
<td>(0.111)</td>
<td>(0.122)</td>
<td>(0.142)</td>
<td></td>
</tr>
<tr>
<td>Peace Years</td>
<td><strong>-0.188</strong>*</td>
<td><strong>-0.184</strong>*</td>
<td><strong>-0.163</strong>*</td>
</tr>
<tr>
<td>(0.016)</td>
<td>(0.017)</td>
<td>(0.016)</td>
<td></td>
</tr>
<tr>
<td>Peace Years^2</td>
<td>0.003***</td>
<td>0.003***</td>
<td>0.003***</td>
</tr>
<tr>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.001)</td>
<td></td>
</tr>
<tr>
<td>Peace Years^3</td>
<td><strong>-1.52e-05</strong></td>
<td><strong>-1.44e-05</strong></td>
<td><strong>-1.21e-05</strong></td>
</tr>
<tr>
<td>(3.46e-06)</td>
<td>(3.68e-06)</td>
<td>(3.27e-06)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td><strong>-5.750</strong>*</td>
<td><strong>-4.962</strong>*</td>
<td><strong>-3.297</strong>*</td>
</tr>
<tr>
<td>(0.331)</td>
<td>(0.353)</td>
<td>(0.419)</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>118,387</td>
<td>59,845</td>
<td>12,911</td>
</tr>
</tbody>
</table>

Notes: Cell entries are coefficient estimates; numbers in parentheses are estimated robust standard errors.

*** p < 0.01; ** p < 0.05; * p < 0.1 (two-tailed).

a: logged variable, b: p-values of joint hypothesis tests
<table>
<thead>
<tr>
<th></th>
<th>(1) Full Sample</th>
<th>(2) Full Sample</th>
<th>(3) Territorial Claims</th>
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<tbody>
<tr>
<td>Tenure (Challenger)</td>
<td>0.015</td>
<td>0.018*</td>
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<td>(0.010)</td>
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<td>(0.123)</td>
<td>(0.124)</td>
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<tr>
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<td>-0.166***</td>
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<td>(0.018)</td>
<td>(0.018)</td>
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<td>Tenure (Target)</td>
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</table>

Notes: Cell entries are coefficient estimates; numbers in parentheses are estimated robust standard errors.

*** p < 0.01; ** p < 0.05; * p < 0.1 (two-tailed).

a: logged variable, b: p-values of joint hypothesis tests
Figure 2.1 Domestic Constraints Game
Figure 2.2 Comparative Statics

\[ \begin{align*}
0 & \quad s + \kappa - 1 & w^* & \quad \frac{\partial p^*}{\partial w} > 0 & \quad s + \bar{\kappa} - 1 \\
0 & \quad w + \kappa - 1 & \quad \frac{\partial p^*}{\partial s} < 0 & \quad s^* & \quad w + \bar{\kappa} - 1
\end{align*} \]
Figure 2.3 Public Support for the Governing Party in UK, 1951-2001.

Notes: Data for approval rating are drawn from the Market Opinion and Research International.
Figure 2.4 Average Number of Domestic Unrests

Notes: Data for domestic unrests are drawn from Banks (2007).
Figure 2.5  The Marginal Impact of Tenure on the Likelihood MID Initiation, 1946-2001

Notes: This figure was generated by 10,000 simulations using the estimates of the three models in Table 2.2 and the model in Table 2.3. In the first three columns from the left, Y axis shows marginal effects of tenure, as a form of % change, on the relative risk of MID initiation when tenure is increasing by one standard deviation from the mean. The marginal effects in the fourth column are calculated by comparing the 1st year of tenure and the period after the 1st year.
Figure 2.6 Number of Wars Initiated by Democracies in Election Cycle Quantiles, 1815-1980

Source: Gaubatz 1991
Figure 2.7 The Marginal Impact of Tenure on the Likelihood of MID Initiation in Democracies

Notes: This figure was generated by 10,000 simulations using the estimates shown in Table 2.5. Graph (1), (2), and (3) shows the relative risks of MID initiation across the range of logged tenure. The samples are different among these graphs. The Y-axis was adjusted in a way to make fair comparison of the magnitude of impact of logged tenure on the likelihood of MID initiation. The dashed lines show 95% confidence intervals. Graph (4) shows the marginal effects of tenure, as a form of % change, on the relative risk of MID initiation when tenure is increasing by one standard deviation from the mean across different samples. The solid lines show 95% confidence intervals which are all below zero indicating that the impact of tenure is negative in democracies.
Figure 2.8 The Marginal Impact of Tenure on the Likelihood of MID Initiation Using Polity, 1919-2001

Notes: This figure was generated based on the results shown in the model of Table 2.7. Notice that the independent variable, democracy, is coded using Polity scores, and the temporal dimension is extended back to 1919. Y axis shows marginal effects of tenure, as a form of % change, on the relative risk of MID initiation when tenure is increasing by one standard deviation from the mean.
Figure 2.9 The Marginal Impact of Tenure on the Likelihood of MID Initiation in Dictatorships

Notes: This figure was generated based on the results shown in the model of Table 2.8. Notice that this model includes a squared term of logged tenure. The sample is restricted to dictatorships.
Chapter 3

A Leader’s Sensitivity to Public Electoral Punishment and International Conflict

3.1 Introduction

Do the presidents in the second term show systematically different conflict behavior than those in the first term? If so, how to theorize their different conflict behavior and why leaders with strong electoral incentives behave differently than those with weak incentives? More generally, how do a leader’s foreign policy interests and conflict behavior change over the course of tenure? Even though scholars have extensively studied the impact of domestic institutions and regime type on international conflict for a couple of decades, these questions still remain largely unanswered for the following reasons.

The first reason is that leader-specific domestic sources of international conflict have been relatively understudied compared to regime comparison. More importantly, the importance of leader’s tenure (i.e., time in office) has been underestimated. The conflict literature tends to overlook the possibility that tenure itself could have systematic effects on leader’s conflict behavior, and the fact that leader is not a constant term but a theoretical and empirical unit whose political interests and institutional constraints keep changing over the course of tenure. Second, extant studies on the variation in leader’s foreign policy interests over time fit better with specific research questions than with broader or more general ones. This paper attempts to provide a general theory and answer those unanswered questions by focusing on leader’s
sensitivity to potential electoral punishment by the public. To do so, I endogenize two determinants of leaders’ conflict behavior, audience costs and costs of war, to the level of leader’s sensitivity to public electoral punishment.

One mechanism through which a leader makes a credible threat is to generate audience costs (Fearon 1994, 1997). A leader’s public signal would be credible when reneging the public commitment is costly. This paper, however, demonstrates that not all leaders can generate audience costs large enough to make their public signal credible to the opponent. When, how much, and under what conditions the costs are generated has yet to be fully explored. This paper suggests that the variation in leader’s sensitivity to electoral punishment over the course of tenure is one of the critical domestic sources of the variation in audience costs. Scholars have largely focused on the cross-regime variation of audience costs. For example, Fearon (1994) argues that democracies have a higher level of audience costs than nondemocracies because due to democratic leaders’ higher accountability and domestic constraints. However, how the costs vary within a regime still remains in question. This paper examines the variation of audience costs even for a leader over the course of tenure within a regime rather than exploring cross-regime variations.

In a similar vein, costs of war have been often treated as an exogenous factor or a parameter endogenous to regime type. For example, the Kantian thesis suggests that democracies

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58 In this sense, a recent study on the microfoundation of autocratic leaders’ audience costs is a meaningful addition to the literature (Weeks 2008).

59 There could be non-domestic factors which affect the magnitude of audience costs too. For example, the more salient the foreign policy issue at stake is to the public, the greater would be audience costs. Also, when the opponent is a strong major power, the public might not punish harshly the leader who backs down because the public is also concerned about the high costs of war they will have to pay. On the other hand, the initial confrontation against the strong opponent would be more likely to be rewarded by the public because it could be seen as a leader's competence. However, these external sources are out of the scope of this paper, could be a potentially promising extension of this research.
tend to pay higher costs of war than nondemocracies because democratic leaders face greater public constraints on their decision to initiate a costly military conflict than nondemocratic leaders. But in this paper, I argue that even the same amount of economic and human loss would be perceived as more or less costly depending on the level of leader’s sensitivity to the extent of the public influence on leadership survival over the course of tenure.

I suggest two leader-specific domestic determinants of how much sensitive a leader is to the public electoral punishment focusing on the U.S. presidents: the strength of a leader's electoral incentives measured by specific time-periods over the tenure, and the magnitude of uncertainty over future electoral outcome measured by the public perception on leader’s competence. In a crisis game, I show that these factors systematically affect leader’s conflict behavior. The equilibrium behavior suggests that less sensitive leaders are more likely to initiate a militarized dispute than more sensitive types. Empirical tests provide evidence for this proposition.

In the following sections, I first discuss the domestic sources of leader’s sensitivity to public electoral punishment and how they affect the magnitude of audience costs and costs of war. Then, I present a formal model and solution concepts. Comparative statics generate the main hypotheses about the relationship between the level of sensitivity and the likelihood of initiating a militarized dispute. Next, I discuss how to create a valid measure of the level of

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60 For more explanations on the Kantian perspective, see Kant 1983[1795]; Morgan and Campbell 1991; Bueno de Mesquita and Lalman 1992.

61 Due to limited data availability on term limits and approval for other countries, it is difficult to create a measure of leader’s sensitivity. Thus, I am quite cautious of generalizing the empirical support for my theory into other systems such as parliamentary democracies and authoritarian regimes. A crude measure of authoritarian leader’s sensitivity might be created using leader’s tenure: e.g., authoritarian leaders might be systematically more sensitive to the domestic audience’s reaction to foreign policy outcome early than later due to their concern over potential domestic challenge during the early period of power struggle in the absence of strong institutional protection.
sensitivity, and test the hypotheses using a fine-grained monthly dyadic data set for the U.S. presidents between 1953 and 2001. Finally, I discuss the implications of this paper for future research.

3.2 Leadership Sensitivity and Audience Costs

Audience costs are by definition assumed to be costly to some extent as long as they actually exist. An important question is how costly audience costs should be in order to make the opponent believe that a public threat is credible. Audience costs would be costly enough only when a leader’s prospect of staying in office or being reelected is endangered by the costs. In other words, only if a leader takes audience costs seriously with respect to his leadership survival, the opponent is likely to believe that a threat is not a bluff but a credible signal. In extreme cases, audience costs might be too high for a leader to back down in an international crisis if the leader who fails to carry out a public threat is expected to have a risk of being removed from the office. In most of the models of international crisis, audience costs are assumed to be fixed within a regime type or within a state. I argue, however, the magnitude of audience costs depends on how sensitive a leader is to the potential public electoral punishment over the course of tenure even within a state.

I argue that the extent to which leaders are sensitive to the public opinion or punishment for backing down is neither fixed nor constant over the course of tenure, and further suggest that leader’s sensitivity affects the magnitude of audience costs. To put it differently, even the same amount of audience costs could be perceived as more costly for some leaders, while less costly for others. The key idea of this paper is that this variation also exists for a single leader in different periods over the course of tenure. I introduce two domestic determinants of the level of
sensitivity to electoral punishment: (1) the strength of electoral incentives, and (2) the magnitude of electoral uncertainty.

### 3.2.1 Strength of Electoral Incentives

One of the core assumptions in domestic politics and international relations is that leaders are office-seeking rational actors. However, does the office-seeking rationale exist constantly over the tenure? To put it slightly differently, what if it is unlikely that a leader will stay in office any longer due to institutional constraints? Some might argue that even though a president is supposed to leave the office by term limits, he still has an incentive to stay in office longer than allowed. A leader might try to amend the constitution to stay in office longer than allowed either by force or by appropriate legal procedures. However, most presidential democracies with term limits experience regular leadership turnover. Then, a more realistic assumption would be leader’s office-seeking interests vary over the course of tenure.

This variation in leader’s office-seeking interests over the course of tenure is one of the major sources of varying audience costs. The logic behind audience costs implies that domestic audiences would politically punish a leader who reneges a public promise on a military action against the opponent, so that the leader’s public threat would be credible because it is a costly signal. What if, however, the leader is insensitive to the public opinion and does not care much about electoral punishment just because he is supposed or likely to leave the office soon? Even in this case, audience costs would not be zero because the leader still cares about his domestic

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62 The presence or absence of office-seeking interest significantly affects a leader’s foreign policy decision making. Assuming that a leader is a self-interested rational actor, the leader makes a foreign policy decision in a way to maximize the likelihood of staying in office or being reelected. However, if office-seeking is not the leader’s major self-interest any more, then the utility function might change in a way to maximize other self-interests.
reputation or public support necessary to accomplish policy goals, and his own party’s electoral prospect. However, I argue that the level of audience costs significantly decreases when staying in office is no more the major self-interest for the leader.

It does not mean that voters want to punish an insensitive leader less than a sensitive one. What matters is how much voters are able to punish a leader or how hurting domestic blame is to a leader. Unless the political institution and particular domestic situations of a state impose on a leader fear for electoral punishment by the public, it is hard for him to send a credible signal to the opponent because the signal would not be costly. Smith (1998) elaborates this point clearly:

“Without the ability of the electorate to remove leaders, leaders cannot credibly communicate their intentions. Domestic conditions limit whether leaders can make credible statements. Absolute rulers, who cannot be removed, cannot communicate their intentions to other nations. Similarly, lameduck presidents find it hard to make credible commitments. Without voter retaliation to keep them honest, their threats are less likely to be believed” (632).

In sum, the strength of a leader’s electoral incentives is a critical source of varying audience costs within a regime and over the course of tenure.

Let me introduce a familiar example of this logic. The U.S. presidents in the first term would be more sensitive to the public opinion than those in the second term. I am not arguing that the president in the second term does not care about the public opinion at all. The president wants his party to win the next election, and the public opinion on the president’s performance largely affects his party’s electoral prospect. Thus, the public political punishment is also hurting to the president in the second term. According to this logic, a president would become more sensitive as the election is coming near even during the second term. However, I argue that the degree to which a president perceives audience costs as costly is clearly different between the
first and second terms. First-term presidents would suffer more politically from audience costs than those in the second term because they care their own personal reelection more than parties’ electoral victory.\footnote{There might be another reason why audience costs are not fixed for a leader. The public know that a president in the reelection period would be very sensitive to the public opinion, so they would expect that the president tries to align his preferences with the public’s and avoid any foreign policy failures in that period. If the president reneges a foreign policy promise in that period, the public’s disappointment would be larger and they would punish the leader harder. Thus, a leader in the reelection period might be more sensitive to the public opinion and suffer more from audience costs.}

One might wonder if this argument can be applied to leaders in parliamentary democracies, one-term presidential systems, and authoritarian regimes. It seems difficult to apply the U.S. example to different political systems, but I argue that it’s an empirical matter. Theoretically, the core argument is that audience costs are perceived differently depending on leader’s type. For example, assuming that the size of audience costs is relatively small in authoritarian regimes, they would also vary throughout an authoritarian leader’s tenure. Authoritarian leaders are quite vulnerable to violent domestic challenges particularly in the early period because “autocrats will often be most unsure of their ability to retain office shortly after they gain it. It is at this time that authoritarian leaders are most vulnerable to challenge and least secure in the stability of their winning coalition” (Gelpi and Grieco 2001, 801). Thus, the potential domestic defectors have a greater incentive to exploit an authoritarian leader’s foreign policy failure early than later. Accordingly, the leader might perceive audience costs as more costly early than later. In parliamentary systems without fixed time horizon constitutionalized, the ruling parties or a coalition might be able to expect when the election will be held to some extent. So they would become more sensitive to potential public electoral punishment as an election is expected to be
held soon. How to operationalize these variations in different regime types is out of the scope of this paper as well as an empirical matter.

3.2.2 Uncertainty over Electoral Outcomes

Another source of the variation in audience costs is the magnitude of uncertainty over electoral outcome which can be measured by how competent a leader is in the eyes of the public. More specifically, the public perception on leader’s competence determines electoral outcome, and in turn affects leader’s sensitivity to public punishment. For example, in the election period, a president with the mid-range approval would be more sensitive than one with very high or low approval. In an extreme case, a president who is certain about winning or losing an upcoming election would be much less sensitive to or be hurt less by the public political punishment than one who expects a close election. Thus, the marginal impact of the crisis outcome on voters’ electoral decision would be greater when a close election is expected than in case of a lopsided or almost predetermined election. Smith’s (1998) model also shows that “When the voters are not heavily inclined toward a leader, their evaluation of international competence has a large effect on their decision.”

Uncertainty over electoral outcome is a conditioning (weighting) factor rather than an independent determinant of a leader’s level of sensitivity. That is because electoral uncertainty may not even matter for leaders who do not take reelection or staying in office seriously. Moreover, if leaders have enough time to boost their popularity until the election, the current level of electoral uncertainty might have little impact on their sensitivity to potential electoral

\[64\] It is quite important to distinguish between the public opinion on leader’s competence and the actual level of leader’s foreign policy competence. This distinction will be discussed at length later in this section.
punishment. At a given level of electoral incentives, when a highly competitive election is expected or the magnitude of electoral uncertainty is high, leaders would be highly sensitive to potential public punishment. Thus, the marginal damage that audience costs would bring to a leader would be much larger when the leader is highly uncertain about the election outcome. The left graph in Figure 3.1 illustrates this logic. Y-axis shows the level of leader’s sensitivity taking into account both strength of electoral incentives and electoral uncertainty. It is always higher when the strength of electoral incentives (or the initial sensitivity) is higher, but for each line it is also relatively higher when the popularity (or the public perception on leader’s competence) is in the middle range (high electoral uncertainty) than in the extremes (low electoral uncertainty).

[Figure 3.1 about here]

One might wonder if a leader’s popularity or competence in the eyes of the public might linearly affect the level of sensitivity: i.e., highly popular leaders might be less sensitive to audience costs than unpopular leaders. Smith (1998) asks a question “… if citizens are happy with their leader overall, then why should they throw her out of office simply because she fails to carry out one particular threat?” (623). This question is quite intuitive because there are many other criteria by which the public evaluates a leader’s performance or competence. Is a foreign policy failure, specifically not carrying out a public threat, critical enough to punish a competent leader? For example, if a leader has managed the national economy and social welfare policies successfully, backing down and avoiding a costly military conflict might not be so big a deal as to remove the competent leader from the office. The favorable public opinion on leader’s overall competence would counterbalance the failure to fulfill a public commitment.

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65 In Smith (1998), this is expressed as a bias term which indicates voters’ predisposition toward the incumbent. The bias term determines the likelihood of keeping the incumbent in office, and it exists before updating their beliefs on the leader’s ‘foreign policy’ competence by the conflict outcomes.
However, this argument does not necessarily lead to a conclusion that unpopular leaders necessarily suffer more from or can generate larger audience costs than popular leaders. Audience cost is a latent factor which is invisible before it is revealed ex post, so it is unknown before a leader actually makes a foreign policy decision in a crisis. What makes audience costs higher or lower is how seriously a leader considers the costs with respect to his electoral prospect. Electoral outcome for highly unpopular leaders is as certain as for highly popular leaders. Then, why are highly unpopular leaders necessarily more sensitive to the public punishment than highly popular leaders even though unpopular leaders are expected to be punished electorally at any rate? The opponent has little reason to believe that audience costs are more hurting to highly unpopular leaders than to highly popular leaders. In addition, the public might have an initially low expectation on leaders who they think are incompetent. So breaking a public promise might not be a huge deviation from their evaluation on highly unpopular leaders. That is because I argue that the impact of public opinion on leaders’ competence on the level of sensitivity is inverted U-shaped.

The concept of competence and the relationship between competence and audience costs are quite different between this paper and Smith (1998). The primary research goal of this paper is to find domestic factors by which audience costs vary over the course of tenure of a leader. On the other hand, Smith (1998) seeks to find the origin of audience costs from leader’s actual competence or ability. In this paper, competence refers to the public perception on a leader’s overall performance in state affairs including foreign policy. However, according to Smith, there exists a real level of competence (denoted by $\theta$) for a leader which represents his ability of
dealing with crises, and the probability of winning a war is a linear function of the competence level.66

Then, between the public perception on leaders’ competence and the actual level of competence, which concept is more appropriate for explaining the variation in audience costs in this paper? These two concepts are not identical because the public would perceive a leader as incompetent if even winning a war is carried with too much economic cost and many casualties. Foreign policy success in the international arena does not necessarily lead to domestic electoral success. In terms of electoral punishment by the public, no matter how severe it is, what matters is not the actual ability of leaders to achieve military victory but how the crisis outcome is perceived in the eyes of the public with respect to leaders’ overall domestic performance.

Smith (1998) argues that audience costs “are endogenously generated by equilibrium behavior” in which only least competent leaders break their public commitments because they are predestined to perform poorly in conflicts (631). In equilibrium, a competent leader never breaks the public promise to carry out a public threat. Following this logic, one can explain the presence or absence of audience costs by leader’s real competence, but not necessarily the variation in the size of audience costs across different levels of public perception on leader’s competence. That is because audience costs generated by competent leaders are never realized according to Smith (1998). Thus, I explicitly do not consider the unobserved actual ‘foreign

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66 By this assumption, it is known and expected by voters and leaders themselves that competent leaders are better at handling international crises than incompetent ones. Voters do not directly observe leaders’ competence but update their prior beliefs on leaders’ competence based on the war outcome. According to this logic, incompetent leaders are supposed to perform poorly in conflicts, so only the least competent leaders renege public commitments because engaging in conflicts necessarily reveals their incompetence which in turn damages their electoral prospect. On the contrary, carrying out the military threat emboldens voters’ confidence in competent leaders. In sum, Smith argues that the origin of audience costs is voters’ electoral judgement on incompetent leaders who have no other rational choice but to break the public commitment and avoid a war.
policy’ competence in the model, nor its effects on the war outcome and the magnitude of audience costs.

To summarize, the initial level of sensitivity calculated by the strength of electoral incentives is adjusted by the magnitude of electoral uncertainty which is determined by the public perception on leaders’ competence. In the next section, I also apply the same logic to calculating the costs of war.

3.3 Leadership Sensitivity and Costs of War

The public cares about not only winning a war but also how much costs they pay. Money raised to deal with current and future military threats and to support military operations is mostly paid by the public through taxation and loans along with public debt. Those who die in the battle fields are not leaders but members of the public. Voters would not regard just winning a war as a victory if they had already paid so much economic and human costs.

Applying the same logic presented above with respect to audience costs suggests that some types of leaders should be less sensitive to the public blame on the costs of war than others. Leaders with strong electoral incentives and high uncertainty over electoral outcome would

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67 Regarding what the public care most about war and their support, Gelpi et al. (2009) argue that casualties are not as detrimental to the public support and presidents’ political survival as they appear to be. According to their analyses based on the survey data, expectations of success in terms of the initial purpose of military operations are what the American public care most with respect to their support for ongoing military missions. If casualties do not really affect the public support, why sensitive leaders necessarily pay higher costs of war than insensitive leaders given the war outcome? First, support for ongoing military missions is one thing, and post-war evaluation on leaders’ performance or competence is another. Second, as long as the level of sensitivity to the public opinion is concerned in this paper, the possibly weak impact of casualties on the level of public support would be still perceived differently between sensitive and insensitive leaders. Even though casualties have limited influence on public support, I still believe that electorally sensitive leaders would concern about the high number of casualties more than insensitive leaders with respect to post-war public punishment or reward. Finally, casualties are just a part of costs of war.
perceive the same economic and human losses as more costly than those with weaker electoral incentives and less uncertainty over electoral outcome. In other words, when leaders take into account the costs of war when calculating their payoff from war, but the costs are perceived differently depending on how sensitive they are to the public opinion.\(^{68}\)

### 3.4 The Formal Model

Under uncertainty about the opponent’s resolve or value of war, initiating a military conflict is a gamble which entails stakes risked on it in a probabilistic way. A leader gambles on initiating a militarized dispute hoping that the target will make a concession rather than resist the initial challenge. However, the leader’s expectation on target’s concession is not deterministic. If the target resists the military threat, the leader should either back down and avoid a costly military confrontation or stand firm and go to war. I argue that leaders who are highly sensitive to the public electoral punishment should pay either higher audience costs from backing down or higher costs of war than insensitive leaders. Thus, the utility risked on the gamble would be higher for highly sensitive leaders than insensitive ones. In the following section, I incorporate this logic into a formal game of international crisis.

#### 3.4.1 Players

In this section, I present a formal model.\(^{69}\) I assume that two states have a dispute over an incompatible issue or good such as a piece of territory or a policy. Figure 3.2 depicts the crisis

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\(^{68}\) This logic can be applied to war duration or termination too. Even when the public do not want to pay any more costs of a war, an insensitive type of leader might want to continue the war to achieve the initial goal or generate some satisfactory outcomes in the end.

\(^{69}\) I base the game protocol and solution concepts on the model of Schultz’s (1999).
model with sequence of moves and each player’s payoffs. To be consistent with the leader-specific theory, I consider the leaders of two states as players of this game: \( L_i \) where \( i = \{1, 2\} \). Two leaders bargain over the possession of some good whose value is normalized to 1. I assume, without loss of generality, \( L_2 \) possesses the whole good in the status quo.

3.4.2 The Sequence of Moves

The game starts with \( L_1 \)’s decision either to make a challenge (\( CH \)) or to remain in the status quo (\( SQ \)). I assume that \( L_1 \)’s initial challenge takes a form of an explicit military threat such as a verbal threat or an actual use of military force along with the demand of yielding the good. Upon observing the military challenge, \( L_2 \) either concedes the good to \( L_1 \) (\( CD \)) or resists the challenge (\( RS \)). In case of conceding, the game ends with \( L_1 \)’s possession of the good. If \( L_2 \) resists the initial challenge, \( L_1 \) chooses either to back down from the challenge (\( BD \)) or to stand firm (\( SF \)). In case of backing down, the game ends peacefully with \( L_1 \) paying audience costs and \( L_2 \) keeping the possession of the good. In case of standing firm, the game ends with a war.

3.4.3 Payoffs

In the status quo, \( L_2 \) maintains the good and receives a payoff of one, and \( L_1 \) receives a payoff of zero. If \( L_2 \) concedes in the second node, his payoff is zero and \( L_1 \) receives a payoff of one. If \( L_2 \) resists the challenge and \( L_1 \) backs down, \( L_2 \) maintains the good with a payoff one while \( L_1 \) incurs audience costs. The magnitude of audience costs consists of two parts. First, I assume that there exists a fixed amount of audience costs that a leader should pay for breaking a public promise,
which are denoted by \(-a\) where \(a > 0\). Then, it is allowed to vary depending on the level of sensitivity of \(L_1\) to the public electoral punishment which is denoted by \(s \in (0, 1)\). In other words, the payoff from backing down for \(L_1\) is audience costs weighted by the level of leader’s sensitivity indicating that the audience costs increase as the level of sensitivity increases: i.e., \(-as\).

If they go to war, \(L_i\) receives their expected values of war which are denoted by \(w_i\). \(L_i\)’s value of war is expressed by \((v_i - c_i)\), where \(v_i\) is \(L_i\)’s expected payoff from winning a war, and \(c_i\) is the costs of war \(L_i\) expects to incur. I assume that \(w_i\) are nonpositive values for the sake of comparability and without loss of generality. I rewrite \(L_1\)’s costs of war \((c_1)\) using two parameters, \(k\) and \(s\): i.e., \(c_1 = ks\). I assume that there exist exogenous costs of war \((k)\) which would be determined by balance of power, domestic costs of mobilization, level of domestic support, intelligence capacities, alliance support, and so on. However, these costs are not literally factored into \(L_1\)’s payoffs. I allow these costs to be adjusted by the level of leader’s sensitivity to potential domestic political punishment. In other words, \(ks\) indicates the total costs of war are weighted by the level of sensitivity.\(^{70}\)

### 3.4.4 Information and Beliefs

I solve this game under both complete and incomplete information. In the complete information version, \(w_i\) is common knowledge. In the incomplete information version, \(L_i\) knows his own expected costs of war but is uncertain about the opponent’s. However, I assume that both leaders have common prior beliefs, so they agree not only that they are uncertain about each other’s

\(^{70}\)By this, I admit that the exogenous costs of war are always greater than the weighted costs of war the incumbent should pay.
costs of war but also that the opponent’s costs of war follow a certain probability distribution. More specifically, I incorporate this uncertainty into the game by assuming that \( c_i \) is randomly drawn from the uniform distribution over the range \([c_i, \overline{c}_i]\). Formally, \( c_i \sim U[c_i, \overline{c}_i] \), where \( 0 < c_i < \overline{c}_i \). In turn, the payoffs from war could be expressed as a stochastic form: \( w_i \sim U[v_i - \overline{c}_i, v_i - c_i] \). By the assumption that \( c_1 = ks, w_1 \) is rewritten as \( w_1 \sim U[v_1 - \overline{k}s, v_1 - ks] \).

### 3.4.5 Complete Information Equilibrium

In the complete information version, both leaders know each other’s costs and values of war. An equilibrium is easily found using backward induction. At the final node, \( L_1 \) should decide either to back down incurring audience costs (\( -as \)), or to stand firm receiving the expected value of war (\( w_1 \)). Thus, \( L_1 \) will stand firm if the value of war exceeds the audience costs.

\[
w_1 > -as. \tag{1}
\]

This condition is a critical factor to determine players’ optimal choices. \( L_2 \) knows whether this condition holds so that his optimal choice in the second node depends on this knowledge. If condition (1) holds, \( L_2 \) expects \( L_1 \) to stand firm and a war to occur. In this scenario, \( L_2 \) receives a payoff of \( w_2 < 0 \) which is smaller than \( EU_2(CD) = 0 \). Then, given that condition (1) holds, \( L_2 \)’s optimal choice would be to concede the good to \( L_1 \). Knowing this, \( L_1 \) always makes the initial challenge because \( EU_1(SQ) = 0 < EU_1(CH) = 1 \). Thus, \( L_2 \) is certain that \( L_1 \)’s initial threat is genuine when condition (1) holds.

On the other hand, if condition (1) does not hold, \( L_1 \) backs down, and \( L_2 \) knows this. In this case, \( EU_2(RS) = 1 > EU_2(CD) = 0 \). So \( L_2 \) prefers resisting the initial challenge to
conceding the good. Knowing this, \( L_1 \) is better off by staying in the status quo rather than making a threat because he knows that \( EU_1(CH) = -as < EU_1(SQ) = 0 \). Thus, condition (1) distinguishes between a genuine threat and bluff. If condition (1) does hold then the initial threat made by \( L_1 \) is genuine, whereas if it does not hold then the threat is a bluff because \( L_1 \) will ultimately back down. This logic drives \( L_1 \) to make only a genuine threat because he knows that the challenge will be resisted when condition (1) does not hold and he will eventually retreat and incur audience costs.

The equilibrium strategies for this complete information version are (1) \( L_1 \) plays \( \{CH, SF\} \) if \( w_1 > -as \), and \( \{SQ, BD\} \) otherwise, and (2) \( L_2 \) plays \( CD \) if \( w_1 > -as \), and \( RS \) otherwise. There are two equilibrium outcomes: \( L_1(SQ) \) and \( L_2(CD) \). Let the probability that condition (1) holds be \( r \), and it can be expressed as follows:

\[
\text{Prob}_1(CH \& SF) = r = \text{Prob}(w_1 > -as) = \frac{v_1 - ks + as}{ks - ks}.
\]

Under this equilibrium, \( L_2 \) resists a challenge with zero probability because \( L_2 \) knows whether \( L_1 \) will commit himself to the initial threat. So in this equilibrium the \textit{ex ante} probability that a war will occur is also zero. A more interesting implication is drawn from equation (2). \( r \) is a decreasing function of \( s \) indicating that as the adjusted level of sensitivity increases the probability that \( L_1 \) challenges decreases. Substantively speaking, the more sensitive a leader is to the public punishment the less likely he is to make a genuine challenge.

### 3.4.6 Incomplete Information Equilibrium
In the incomplete information version, $L_2$ is uncertain about $L_1$’s costs of war and so is $L_1$ about $L_2$’s. $L_2$ can no more discern a genuine threat from a bluff because all he can do is to infer from $L_1$’s behavior. Now, some types of $L_1$ have an incentive to bluff and try to convince $L_2$ that the value of war is high enough to make the threat look genuine. Given the threat, $L_2$ could resist if he thinks the threat is a bluff, but a war follows if his belief turns out to be wrong.

The equilibria under incomplete information show that some type of leaders actually bluff even when the value of war is smaller than the payoff from backing down. The formal derivations are shown in Appendix B. in detail. Here, I briefly discuss what the equilibria look like and the focus is on the challenger’s choice between making a military threat and staying in the status quo. First, when the maximum possible value of war of $L_1$ is greater than the payoff from backing down,\(^7\)

\[
L_1 \text{ plays } \{CH, SF\} \text{ if } w_1 > -as, \text{ and } \{CH, BD\} \text{ otherwise}
\]

when $\tau^* < v_1 - \bar{k}s < 0$, where $\tau^* = (v_1 - \bar{k}s + as)(v_2 - c_2) - as$, \hspace{1cm} (3)

or when $\tau^{**} < v_1 - \bar{k}s \leq \tau^*$,

\[
\text{where } \tau^{**} = (v_1 - \bar{k}s + as)\left[(v_2 - c_2) - \frac{(e_2 - c_2)}{as + 1}\right] - as. \hspace{1cm} (4)
\]

\(^7\)max($w_1$) = $v_1 - \bar{k}s > -as$. Here, I assume $k > a$ to show less restricted equilibrium concepts, but I relax this assumption in this appendix and the main implication from the formal model does not change.
Condition (3) and (4) define Case 1 and Case 2 respectively, and the corresponding values of $s$ are denoted by $s_1$ and $s_2$. These equilibria show that $L_1$ always makes the threat and stands firm whenever $w_1 > -as$.

Some types bluff even when the value of war is less than the payoff from backing down. The following type of $L_1$ for Case 3 makes a challenge or stays in the status quo, and the corresponding value of $s$ under the following condition is denoted by $s_3$.

When $v_1 - \bar{k}s \leq \tau^{**}$, where $\tau^{**} = (v_1 - \bar{k}s + as) \left[ (v_2 - c_2) - \frac{(c_2 - c_2)}{as + 1} \right] - as$

$L_1$ plays $\{CH, SF\}$ if $w_1 > -as$,

$\{CH, BD\}$ if $\tau^{**} < w_1 \leq -as$, and

$\{SQ, BD\}$ if $v_1 - \bar{k}s < w_1 \leq \tau^{**}$. (5)

This type of $L_1$ bluffs even when $w_1 \leq -as$ as long as $\tau^{**} < w_1$. However, he remains in the status quo when $w_1 \leq \tau^{**}$. Then, the probability that this type of $L_1$ makes the challenge is

$\text{Prob}_1(w_1 > \tau^{**})$

$\text{Prob}_1(CH) = \text{Prob}_1 \left[ w_1 > (v_1 - \bar{k}s + as) \left[ (v_2 - c_2) - \frac{(c_2 - c_2)}{as + 1} \right] - as \right]$

$= \frac{(v_1 - \bar{k}s + as) \left[ 1 - (v_2 - c_2) + \frac{(c_2 - c_2)}{as + 1} \right]}{\bar{k}s - \bar{k}s}$ (6)

Comparative statics from equation (6) shows that $\text{Prob}_1(CH)$ is a decreasing function of $s_3$ in Case 3. See Appendix B for proof.

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72 The adjusted level of sensitivity ($s$) for each type of $L_1$ meets the following condition: $s_1 < s_2 < s_3 < s_4$. See the appendix for proof.
Finally, when the maximum possible value of war of $L_1$ is smaller than the payoff from backing down (Case 4), $L_1$ always play \{SQ, BD\} and the corresponding values of $s$ is $s_4$.

Considering all four types and their equilibrium behavior, $\text{Prob}_1(CH)$ is weakly decreasing in $s$ because $s_1 < s_2 < s_3 < s_4$: $\text{Prob}_1(CH)$ is one for $s_1$ and $s_2$, decreasing in $s_3$, and eventually becomes zero in $s_4$. Thus, I expect that

**Hypothesis 1**: As the level of sensitivity increases, the likelihood of making the initial military threat decrease.

Because the adjusted level of sensitivity is increasing in the strength of electoral incentives regardless of the popularity level as shown in Figure 1, I also expect that, after controlling for the level of popularity, the stronger is leader’s electoral incentives the lower is the likelihood of making a challenge.

**Hypothesis 2**: As the strength of electoral incentives increases, the likelihood of making the initial military threat decreases.

I defined $r$ as $\text{Prob}_1(w_1 > -as)$ given that $L_1$ makes a challenge. $L_2$ believes that if he resists, war is likely with probability $r$ and $L_1$ will back down with probability $1 - r$.\(^{73}\) Thus, in the equilibria, $L_2$ resists only when $w_2$ is sufficiently large in order to make sure that gambling on resisting the challenge is worthy. Not knowing whether $w_2$ is sufficiently large, $L_1$’s threat is also a kind of gambling with a hope of $L_2$’s concession. However, the utility risked on the

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\(^{73}\) For Case 3, $\text{Prob}_1(w_1 > -as) = \gamma$ which is equivalent to $r$ for other types. See Appendix B.
gambles would be higher when $L_1$ is highly sensitive to the public punishment whether he backs down or stands firm. Thus, under the uncertainty for both sides, $L_1$ is weakly better off not making the threat when he cares so much about electoral punishment.

3.5 Research Design

The unit of analysis is dyad-month for the U.S. presidents. Using the EUGene program (Bennett and Stam 2000), I generated a dyad-year data set first, and then transformed it into a monthly data set. In the Militarized Interstate Disputes (MIDs) dataset (Ghosn et al. 2004), every dispute involving the U.S. has the record of initiation month, so I could match each dispute with the month when it was initiated. Using monthly data, I expect to keep more fine-grained information on term periods, presidential approval, and economic indicators that yearly or quarterly data would lose. Monthly data also allow me to measure the strength of electoral incentives much more accurately than data with a longer time span. For example, yearly data cannot capture unexpected leadership changes in the United States such as Kennedy assassination and Johnson’s succession, Johnson’s announcement not to run for reelection, and Nixon’s resignation and Ford’s succession. The temporal dimension is between January 1953 and December 2001 with 588 months. The starting year is 1953 because Dwight D. Eisenhower was the first president since the 22nd Amendment for the U.S. presidential term limits was ratified.

3.5.1 Variables and Measures

I excluded ongoing disputes and joiners’ dyads because I believe that the onset of conflict should be treated differently from ongoing disputes, and that the mechanism behind joining a conflict might be different from the initiation as an originator which refers to a state that was involved in a militarized dispute on the first day.
The dependent variable is whether the U.S. initiated a militarized dispute in a given month against a potential target: the U.S. is considered as an initiator if it was on the “side A” when a MID occurred following the MIDs’ codling rule.

I have two main independent variables: the initial level of sensitivity (or the strength of electoral incentives) and the level of sensitivity adjusted by presidential approval. The initial level of sensitivity is an ordinal variable which represents how strong a president’s electoral incentives are in a given period compared to other periods. If a first-term president is in the period between the midterm election and the reelection month, the strength of electoral incentives is coded as 4 (strongest), and 3 (moderately strong) in the period before the midterm. If a second-term president is in the period between the midterm and presidential election, the strength of electoral incentives is coded as 2 (moderately weak), and 1 (weakest) in the period between the end of the first term and the midterm. As argued above, the president in the second term also cares about the electoral prospect of his party so I give a higher value to the second period of the second term than to the first period. Also I took great care to code November and December in the reelection year of the first term because after an election in early November, the president does not have any electoral incentives any more for these two months. Thus, the strength of electoral incentives is coded as 1 for these presidential months. For robustness checks, I also use a dichotomous measure of the strength of electoral incentives: presidents in the second

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75 A different cut point could be used such as one year before reelection, but I argue that the midterm election is less arbitrary than just one year because after the midterm election presidents and parties tend to relate their policies to the prospect of winning the next election (see, for example, Quandt 1986).  
76 Because Lyndon B. Johnson announced not to run for reelection in March 1968, I code the strength of electoral incentives as 2 for presidential months between 03/1968 and 12/1968. In this period there are no personal electoral incentives but still his party’s.
term are coded as one and zero otherwise.\textsuperscript{77} I expect that this \textit{second-term} variable has positive effects on the likelihood of MID initiation.

To construct the \textit{adjusted level of sensitivity}, presidential approval rating is used as an indicator of the magnitude of uncertainty over electoral outcome. The monthly approval rating data were drawn from the American Presidency Project (Wooley and Peters 2009),\textsuperscript{78} and I used the Gallup polls that were conducted in each presidential month.\textsuperscript{79} This variable is lagged by one month.\textsuperscript{80} I transform the data on approval rating into a new measure called \textit{electoral uncertainty} in a way that the approval rating closer to the sample mean (55) obtains higher values: the election outcome is assumed to be getting more uncertain as the approval rating is getting closer to the mean.\textsuperscript{81} Then, I normalize this measure of \textit{electoral uncertainty}, and multiply it to the measure of the strength of electoral incentives. By doing so, the initial level of sensitivity is weighted. In Figure 1, I compare the theoretical concept of the adjusted level of sensitivity with the empirical measure I constructed using the actual data. They are not exactly the same but the overall pattern is similar between them.\textsuperscript{82}

\textsuperscript{77} The correlation between the ordinal and dichotomous measure is -0.826.
\textsuperscript{78} The minimum is 23\% for Richard Nixon in July 1974, and the maximum is 88\% for George W. Bush in September 2001. The mean is 55\%, and the standard deviation is 12\%.
\textsuperscript{79} If there is no record for a specific month, I used the most recent one before the month. There exist a few missing records. If there are multiple records for a specific month, I take the average of them.
\textsuperscript{80} A newly elected president does not have any prior approval rating before the first month. Thus, if I lag the presidential approval by one month, I miss one case per president-dyad. I filled in the missing approval assuming that the missing approval is the same as that of the first month. Using the measure with missing values does not really affect the results though.
\textsuperscript{81} The median is 55.5. When I use 50 as a cut point, the results remain largely the same.
\textsuperscript{82} There are some missing parts of the lines in the right graph largely because the distribution of approval rating in some periods is not wide enough to cover the whole range.
To control for domestic economic conditions, I employ two indicators: monthly unemployment and inflation rate.\textsuperscript{83} The literature suggests that economic conditions are influential factors for presidents’ foreign policy decision making (e.g., see Fordham 1995, 1998a, 1998b; Derouen 2000; Arena and Palmer 2009). In addition, the public might consider the past economic performance as the signal of the government’s economic competence (Smith 1996, 136). These variables are also lagged by one month.\textsuperscript{84}

I include several other control variables in the regressions. First, for models where the level of sensitivity is not adjusted by approval, I control for the approval rating lagged by one month and its squared term in order to see, after controlling for the effects of sensitivity, whether presidents are more likely to use force when their approval rating is getting closer to the middle. I include the potential target’s Polity score that ranges between -10 (highly autocratic) and 10 (highly democratic) according to Polity IV index (Marshall and Jaggers 2009). I control for the balance of capabilities using the Composite Index of National Capabilities (CINC) score (Singer 1987): this power parity variable is measured by the lower score divided by the sum of both states’ scores. I also control for the level of contiguity, and their alliance similarity using $S$ score (Signorino and Ritter 1999). Finally, I control for the number peace months since the last militarized dispute for a dyad, and also include the squared and cubed terms of this variable to control for time dependence caused by temporal correlation in the binary dependent variable (Carter and Signorino 2008).

\textsuperscript{83} The data on inflation are from Inflation Data (2009) and the unemployment data are from Federal Reserve Bank of St. Louis (2009).

\textsuperscript{84} The data on economic indicators are available for all the months even before the first month of a newly elected president. Thus, I filled in the previous month before the first presidential month using the same data available. The unemployment rate ranges from 2.5 to 10.8, and the inflation rate ranges from -0.74 to 14.76. For a robustness check, I also use the misery index which is created by adding the inflation and unemployment rate (Okun 1970), and the main empirical results remain the same. The misery index ranges between 2.97 and 21.98.
3.5.2 Empirical Models

I run probit regressions to test the hypotheses. The first model tests *Hypothesis 1* using the measure of adjusted level of sensitivity. The next two models test *Hypothesis 2*, and the main independent variables are the ordinal and dichotomous measures of the strength of electoral incentives. I use robust standard errors clustered on dyads.85

3.6 Results

Before discussing the regression results, I present simple descriptive statistics which are informative as a first-cut relationship between terms and presidents’ conflict behavior. Figure 3.3 shows that the expected number of conflict initiation per month is, on average, about 45% higher for the presidents in the second term than for those in the first term. Considering that presidents in the second term have a systematically lower level of sensitivity than those in the first term, this result is consistent with the expectation of *Hypothesis 2*.

[Figure 3.3 about here]

Table 3.1 shows the regression results. First, the results of Model 1 indicate that the impact of the adjusted level of sensitivity is significant and negative supporting *Hypothesis 1*. This finding holds in a more parsimonious model where dyadic controls except the peace month

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85 For a robustness check, I also clustered standard errors on presidents for the following reasons. First, the theory says that even a leader might have different level of sensitivity to the public opinion over the course of tenure, so clustering captures this within-unit variation to some extent. Second, the results might be driven mainly by cross-president variations because presidents might have unique preferences and characteristics which in turn generate their unique conflict behavior. Finally, clustering on presidents could capture the temporal effects to some extent which might not be perfectly controlled by peace year variables. The results remain the same.
variables are excluded. When the level of adjusted sensitivity increases by one standard deviation from the mean, the predicted probability appears to increase by about 37\%.\(^{86}\)

[Table 3.1 about here]

I also ran simulations to see how the 95% confidence intervals change over the range of the sensitivity measure. I found that the confidence intervals are wider for insensitive leaders. The fact that they are insensitive to electoral punishment does not necessarily mean that they always want to initiate a conflict, but they might not want to do even though they can do with less domestic constraints. In other words, insensitive leaders tend to have greater opportunities to initiate a conflict than sensitive leaders, and on average insensitive leaders are more likely to initiate a conflict than sensitive ones.

Some presidents did not serve the second term, and the sensitivity measures for these one-term presidents are quite different from those for presidents who served two terms. According to the coding scheme of the sensitivity measures, the first term is supposed to take higher values than the second term. Thus, by including all the one-term and two-term presidents in the sample, the negative effects of sensitivity might be overestimated and the positive effects of the second-term variable might be underestimated because cases of one-term presidents with relatively high sensitivity are expected to make the likelihood of MID initiation lower than it really is. To deal with this concern, I ran the same regressions using only cases where presidents served two terms. Table 3.2 shows that the overall results remain largely the same, but the negative impact of the adjusted level of sensitivity appears to decrease and the positive impact of second-term appears to increase.

\(^{86}\) The predicted probability of MID initiation when the adjusted level of sensitivity is at its mean is 0.0012 with 95% confidence intervals (0.00023, 0.0034). When the sensitivity level increases by one standard deviation, the predicted probability decreases to 0.0009 with 95% confidence intervals (0.00016, 0.0025).
As another robustness check, I treat only MIDs short of war as the dependent variable. The primary outcome of interest in the formal model is the likelihood of making a military challenge at the first node, not necessarily including war which can be considered as the outcome at the final node. If so, the empirical outcome variable may misrepresent the theoretical outcome. The results remain robust.

Hypothesis 2 is also strongly supported by the remaining results of Table 3.1. I use an ordinal measure of the strength of electoral incentives in Model 2, and a dichotomous measure in Model 3. It appears that the stronger electoral incentives presidents have, the smaller is the likelihood of initiating a MID. Also the second-term presidents with weaker electoral incentives appear to be more likely to initiate a MID than the first-term presidents.

The diversionary argument does not fully explain when leaders are more or less likely to divert under the same level of domestic vulnerability: e.g., early vs. later in the tenure, or in the first vs. second term. Presumably, leaders would be more likely to divert when they have strong electoral incentives, but Colaresi (2007) suggests that rally effects are small in election years. Rather than focusing on rally effects, this paper suggests that the level of sensitivity to the potential public punishment differentiates leaders’ conflict behavior over the tenure and between terms.

In addition, this paper shows that leader’s tenure matters in relation to sensitivity, which is distinguished from the sheer amount of time in office (e.g., see Potter 2007; Horowitz et al. 2005). To some extent, these findings appear to be consistent with the electoral cycle literature. For example, Gaubautz (1991) shows that wars or crises are more likely early in the election
cycle than later.\textsuperscript{87} However, the literature on electoral cycle cannot explain why leaders behave differently between the first and second terms. This paper also supplements the constraints perspective which argues that highly constrained leaders are in general less likely to use force. The findings of this paper are largely consistent with the constraints perspective in that less constrained second-term presidents are more likely to use force than more constrained first-term presidents.

One interesting finding with respect to control variables is that approval rating does not have significant impact on the likelihood of conflict initiation after controlling for leader’s sensitivity in Model 2 and 3 of Table 3.1. The approval variable remains insignificant even when I exclude the squared term. This finding is quite contradictory to the diversionary perspective which suggests that presidents with low approval are more likely to use force than those with high approval.

On the other hand, unemployment has significant and positive effects in all models, which appears to be consistent with the diversionary expectation. However, even this finding does not fully support the diversionary argument. I ran Model 1 in Table 3.1 with the interactions between the Democratic party variable and economic indicators to see the positive impact of unemployment holds regardless of party ideology (Fordham 1998; Arena and Palmer 2009).\textsuperscript{88}

\textsuperscript{87} Smith (1996) presents a scenario that electoral cycle matters to the potential target’s conflict behavior. He claims that democracies would be more aggressive at the end of the electoral term because leaders do not want to appear incompetent when conflicting issues are at stake near the election. Knowing this, the potential target might avoid conflict with these aggressive democratic leaders (Smith 1996). However, Gowa (1998) argues that electoral cycle does not explain the variance in the U.S. disputes.

\textsuperscript{88} Fordham (1998) argues that “Although voters simply have demanded both low inflation and low unemployment, the Democratic elite has viewed sustained low unemployment as the most important goal, whereas the Republican elite constituency has preferred low inflation” (Fordham 1998, 423). Fordham found that Democrats (Republicans) are more likely to use force when inflation (unemployment) is high because they do not want to increase unemployment (inflation) rate to deal with high inflation (unemployment) and conflict is a good alternative to divert
First, the coefficient estimate of the adjusted sensitivity does not change much, but the coefficient estimate of the interaction term is significant and negative: the impact of unemployment becomes negative for Democratic presidents. This finding is inconsistent with the diversionary expectation that Democrats with a greater incentive to lower unemployment rate than inflation should be more likely to initiate a diversionary conflict when the unemployment rate is high. This finding renders support to the constraints perspective suggested by Arena and Palmer (2009).  

Finally, I performed a couple of more robustness checks. The Cold War dummy has little influence on the coefficient estimates of the main independent variables. I lagged approval and economic indicators by two months instead of one month because it might take longer than one month to observe the effects of approval rating and economic conditions. The results are robust using the two-month threshold.

### 3.7 Independent Impact of Electoral Uncertainty

The main independent variable is a president’s sensitivity either measured by tenure alone or adjusted by electoral uncertainty measured by approval rating. In this section, I examine whether electoral uncertainty over election outcome itself could be used as an independent variable that measures of the level of a president’s sensitivity to potential electoral punishment.

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The attention of the public. Arena and Palmer (2009) suggests a different logic based on constraints. They found that right parties have greater constraints on using force when inflation is getting higher.

Even though Arena and Palmer (2009) do not find strong support for their expectation regarding unemployment and constraints on democrats, they used 20 developed democracies while this paper looks at only the U.S. However, this finding provides an interesting empirical evidence for the constraint perspective which is quite contradictory to the diversionary arguments. The diversionary perspective implies that democrats might be much more likely to use force when unemployment is high because they have stronger incentives to divert the attention of the constituents they care most when unemployment is high.
To do so, I create a new measure of electoral uncertainty using the Gallup’s pre-election polls on the Democratic and Republican presidential candidates of the United State between 1952 and 2001 (Gallup Brain 2012). This measure appears to capture what the approval data cannot: high approval rating does not always guarantee the high likelihood of electoral victory. Moreover, the public opinion on the opponent’s personal characteristics and competency should be taken into consideration in measuring electoral uncertainty. For example, Obama’s approval in September and October 2012 was hovering below 40. Yet the low approval was not a good indicator for the results of pre-election polls against Mitt Romney.

I collected all available pre-election Gallup polls whenever after the Democratic and Republican parties decided their official presidential candidates, or when pre-election polls were conducted for two highly likely presidential candidates even before the official nominations, and these likely candidates are the same as official candidates. Excluding polls in the latter category significantly reduces the sample size. However, I included only the polls that two parties’ presidential candidates were almost certain even before the official nominations. Then, I calculated the differences between the two candidates’ likely vote percentages according to the poll results, and the differences are transformed into negative numbers. A small (large) negative number indicates that the electoral outcome before a presidential election is highly uncertain (certain). In other words, this indicator measures the magnitude of pre-election electoral uncertainty, and further measures the level of the incumbent president’s sensitivity to potential electoral punishment.

[ Table 3.3 about here ]

Table 3.3 shows that this measure of electoral uncertainty has a negative impact on the likelihood U.S. MID initiation. The first model includes only domestic economic and political
indicators, and the second model further includes dyadic control variables used in the previous analyses. Assuming that the U.S. president is more sensitive to potential electoral punishment before election when the electoral outcome is quite uncertain, this empirical finding supports Hypothesis 1.

3.8 Discussion

This paper has two broad implications in international relations. The first implication is that “leader” is not a constant term but an institutionally built and constrained unit whose self-interests and domestic political status keep changing over the course of tenure. This paper identifies a critical leader-specific determinant (the level of sensitivity to electoral punishment) by which audience costs and costs of war vary over the tenure. Further, this paper introduces two domestic sources (the magnitude of electoral incentives and uncertainty over electoral outcomes) that determine a leader’s sensitivity type in a certain period of time throughout the tenure. These leader-specific domestic sources might be a part of many determinants of audience costs and costs of war, but they lead us to consider that audience costs and costs of war are not fixed even for the same leader within a regime.

Another implication is that we should take time more seriously as one of the most important institutional determinants of leaders’ conflict behavior. The significant impact of sensitivity provides a piece of evidence that a leader’s office seeking interests and foreign policy interests do change over the course of tenure. For an obvious example, this paper shows that presidential term limits significantly affect the U.S. presidents’ conflict behavior by changing the level of sensitivity to the public opinion and audience costs. Another important institutional
impact of term limits would be on leadership survival. Term limits are one of the most effective means of guaranteeing a democratic leader’s survival in office. Taking into account of this time-sensitive institutional aspect could raise a more important question on the literature about the relationship between leadership survival and conflict behavior or outcome: i.e., are democratic leaders with fixed terms guaranteed necessarily more vulnerable to the public punishment for their foreign policy failure than autocratic leaders?

Finally, I suggest several research questions to expand this project in the future. How does the domestic variation of audience costs affect a leader’s escalatory behavior? What could be the domestic sources of audience costs in authoritarian regimes? (e.g., Weeks 2008). What are the non-domestic sources of varying audience costs and how do they affect leaders’ conflict behavior? Are there any systematic variations in audience costs between dovish and hawkish leaders? I expect that answering these questions might be able to reveal a more complete picture of the microfoundation of audience costs.
Table 3.1 The Impact of Sensitivity on U.S. MID Initiation, 1953-2001

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sensitivity (Adjusted by Approval)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted Sensitivity a</td>
<td>-0.101**</td>
<td>-0.079**</td>
<td>-0.000</td>
</tr>
<tr>
<td></td>
<td>(0.040)</td>
<td>(0.037)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Electoral Incentives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second Term</td>
<td></td>
<td></td>
<td>0.258***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.081)</td>
</tr>
<tr>
<td>Approval Rating a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approval^2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Democratic Party</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alliance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contiguity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Parity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polity (Target)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peace Months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peace Months^2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peace Months^3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>72,084</td>
<td>70,987</td>
<td>70,987</td>
</tr>
</tbody>
</table>

**Note:** Cell entries are coefficient estimates; numbers in parentheses are estimated robust standard errors. Standard errors are clustered by dyads. 
*** p < 0.01; ** p < 0.05; * p < 0.1 (two-tailed). 
^a: variables lagged by one month
Table 3.2 The Impact of Sensitivity on U.S. MID Initiation for Two-term Presidents, 1953-2001

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sensitivity (Adjusted by Approval)</td>
<td>Electoral Incentives</td>
<td>Second Term</td>
</tr>
<tr>
<td>Adjusted Sensitivity(a)</td>
<td>-0.088** (0.043)</td>
<td>-0.086** (0.038)</td>
<td>0.262*** (0.100)</td>
</tr>
<tr>
<td>Electoral Incentives</td>
<td></td>
<td>-0.086** (0.038)</td>
<td></td>
</tr>
<tr>
<td>Second Term</td>
<td></td>
<td></td>
<td>0.262*** (0.100)</td>
</tr>
<tr>
<td>Approval Rating(a)</td>
<td>0.039 (0.027)</td>
<td>0.038 (0.029)</td>
<td></td>
</tr>
<tr>
<td>Approval^2</td>
<td>-0.000 (0.000)</td>
<td>-0.000 (0.000)</td>
<td></td>
</tr>
<tr>
<td>Unemployment(a)</td>
<td>0.074** (0.037)</td>
<td>0.069 (0.043)</td>
<td>0.084* (0.048)</td>
</tr>
<tr>
<td>Inflation(a)</td>
<td>0.002 (0.022)</td>
<td>0.008 (0.028)</td>
<td>0.021 (0.028)</td>
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<tr>
<td>Democratic Party</td>
<td>0.214 (0.156)</td>
<td>0.190 (0.170)</td>
<td>0.228 (0.176)</td>
</tr>
<tr>
<td>Alliance</td>
<td>-0.863*** (0.304)</td>
<td>-0.886*** (0.301)</td>
<td>-0.902*** (0.303)</td>
</tr>
<tr>
<td>Power Parity</td>
<td>1.489*** (0.289)</td>
<td>1.473*** (0.289)</td>
<td>1.431*** (0.289)</td>
</tr>
<tr>
<td>Polity (Target)</td>
<td>-0.019 (0.012)</td>
<td>-0.018 (0.012)</td>
<td>-0.018 (0.012)</td>
</tr>
<tr>
<td>Peace Months</td>
<td>-0.003*** (0.001)</td>
<td>-0.003*** (0.001)</td>
<td>-0.003*** (0.001)</td>
</tr>
<tr>
<td>Peace Months^2</td>
<td>3.42e^{-06}*** (9.98e^{-07})</td>
<td>3.47e^{-06}*** (1.00e^{-06})</td>
<td>3.49e^{-06}*** (1.01e^{-06})</td>
</tr>
<tr>
<td>Peace Months^3</td>
<td>-1.04e^{-09}*** (3.56e^{-10})</td>
<td>-1.06e^{-09}*** (3.58e^{-10})</td>
<td>-1.06e^{-09}*** (3.59e^{-10})</td>
</tr>
<tr>
<td>Constant</td>
<td>-3.135*** (0.246)</td>
<td>-4.062*** (0.827)</td>
<td>-4.580*** (0.863)</td>
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<tr>
<td>Observations</td>
<td>43,284</td>
<td>42,810</td>
<td>42,810</td>
</tr>
</tbody>
</table>

Note: Cell entries are coefficient estimates; numbers in parentheses are estimated robust standard errors. Standard errors are clustered by dyads. ** ** \( p < 0.01\); \* \( p < 0.05\); \* \( p < 0.1\) (two-tailed). \(a\) : variables lagged by one month
Table 3.3 The Impact of Electoral Uncertainty on the U.S. MID Initiation, 1953-2001

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electoral Uncertainty</td>
<td>-0.049**</td>
<td>-0.053**</td>
</tr>
<tr>
<td></td>
<td>(0.020)</td>
<td>(0.026)</td>
</tr>
<tr>
<td>Approval Rating (^a)</td>
<td>0.067</td>
<td>0.065</td>
</tr>
<tr>
<td></td>
<td>(0.147)</td>
<td>(0.210)</td>
</tr>
<tr>
<td>Approval^2</td>
<td>-0.001</td>
<td>-0.000</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>Unemployment (^a)</td>
<td>0.180</td>
<td>0.292</td>
</tr>
<tr>
<td></td>
<td>(0.299)</td>
<td>(0.362)</td>
</tr>
<tr>
<td>Inflation (^a)</td>
<td>-0.514***</td>
<td>-0.644***</td>
</tr>
<tr>
<td></td>
<td>(0.156)</td>
<td>(0.223)</td>
</tr>
<tr>
<td>Democratic Party</td>
<td>1.308</td>
<td>2.321</td>
</tr>
<tr>
<td></td>
<td>(2.143)</td>
<td>(2.147)</td>
</tr>
<tr>
<td>Unemployment (^a) * Democratic Party</td>
<td>-0.455</td>
<td>-0.631**</td>
</tr>
<tr>
<td></td>
<td>(0.334)</td>
<td>(0.304)</td>
</tr>
<tr>
<td>Inflation (^a) * Democratic Party</td>
<td>0.629***</td>
<td>0.792***</td>
</tr>
<tr>
<td></td>
<td>(0.203)</td>
<td>(0.264)</td>
</tr>
<tr>
<td>House Seats</td>
<td>-0.070*</td>
<td>-0.094*</td>
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<td></td>
<td>(0.038)</td>
<td>(0.049)</td>
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<td>Alliance</td>
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<td>-0.855**</td>
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<td></td>
<td>(0.969)</td>
</tr>
<tr>
<td>Joint Democracy</td>
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<td>0.442</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.269)</td>
</tr>
<tr>
<td>Peace Months</td>
<td></td>
<td>2.088***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.364)</td>
</tr>
<tr>
<td>Peace Months^2</td>
<td>-0.001</td>
<td>0.003*</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>Peace Months^3</td>
<td>0.000</td>
<td>-0.000</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Peace Months^2</td>
<td>-2.459</td>
<td>-4.056</td>
</tr>
<tr>
<td></td>
<td>(3.153)</td>
<td>(5.018)</td>
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<td>Observations</td>
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<td>9,354</td>
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<tr>
<td>Log-likelihood</td>
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<td>-36.60</td>
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<tr>
<td>Pseudo R-squared</td>
<td>0.1011</td>
<td>0.3621</td>
</tr>
<tr>
<td></td>
<td>(0.246)</td>
<td>(0.827)</td>
</tr>
</tbody>
</table>

Note: Cell entries are coefficient estimates; numbers in parentheses are estimated robust standard errors. Standard errors are clustered by dyads.

*** p < 0.01; ** p < 0.05; * p < 0.1 (two-tailed).

\(^a\): variables lagged by one month.
Figure 3.1 The Level of Sensitivity by Electoral Uncertainty and Presidential Approval
Figure 3.2 Crisis Model

\[ L_1 \] Challenge \((CH)\) \hspace{1cm} \[ L_2 \] Resist \((RS)\) \hspace{1cm} \[ L_4 \] Stand Firm \((SF)\) \hspace{1cm} WAR \((w_1, w_2)\)

\begin{align*}
L_1 & \quad \text{Challenge (CH)} \\
L_2 & \quad \text{Resist (RS)} \\
L_4 & \quad \text{Stand Firm (SF)} \\
\text{Status Quo} & \quad \text{Concede} \quad \text{Back Down} \\
SQ (0, 1) & \quad CD (1, 0) \quad BD (–as)
\end{align*}
Figure 3.3 Monthly Propensity of U.S. Conflict Initiation

Note: The temporal dimension is between January 1953 and December 2001 (588 months).
4.1 Introduction

Past studies on authoritarian time horizons appear to show significant empirical evidence supporting Olson’s theoretical claim\(^9\) that autocrats with long time horizons are more likely to pursue productive economic policies such as protecting property rights and investing in public goods than those with short time horizons (see for example Clague et al. 1996; Wright 2008; Li 2009; Chang and Golden 2010; Dionne 2011). By contrast, “whenever a dictator has a sufficiently short time horizon, it is in his interest to confiscate the property of his subjects, to abrogate any contracts he has signed in borrowing money from them, and generally to ignore the long-run economic consequences of his choices” (Olson 1993, 572). The intuition behind Olson’s claim is that leaders with short time horizons have an incentive to extract rents as much as possible to maximize their private profits given the short expected time in leadership regardless of the prospect of domestic economy.

In this paper, I ask one simple question the answer of which appears to be challenging to the conventional Olsonian view. Is authoritarian rulers’ predation constrained by time horizon and post-tenure fate? I argue that dictators are highly concerned about the negative influence of their predatory behavior on their prospect of political survival as well as post-tenure fate. Leader tenure and predation are not independent of each other, so that even dictators with short time horizons would be afraid of the possibility that their tenure could be shortened further by their

predatory policies and that they could face dire punishments by domestic audiences who suffer from their leader’s predatory behavior once the dictators are out of power. Further, the very source of dictators’ short time horizons is their domestic vulnerability that makes them more constrained to pursue predatory policies than those with a solid dictatorial power base. Vulnerable dictators with short time horizons might not want to endanger the private goods they currently hold but want to secure their resources by taking a more benevolent posture in the eyes of domestic audiences. This conjecture is particularly sensible when the dictators with short time horizons expect harsh post-tenure punishments.

Based on this conjecture, I show that when dictators are highly concerned about violent or irregular leadership failure in the near future, they become less predatory than otherwise. I examine my conjecture with regard to two particular policy issues, military conflict initiation and taxation, so that my empirical findings may not be able to reject nor fully revise the Olsonian hypothesis whose implication might embrace all sorts of domestic economic policies. This research, however, addresses a missing piece between the conventional Olsonian perspective and the real world authoritarian politics. That is, I demonstrate that the conventional Olsonian view puts too much emphasis on the aspects of authoritarian rulers’ incentives under monopoly power, while undermining the burden of domestic constraints by domestic power competition.

To the best of my knowledge, this is the first study that attempts to evaluate Olson’s theory in a foreign policy issue. In addition, the empirical findings have several important implications with respect to the scholarly debate about whether domestic hardships are a source of diversionary incentives in dictatorships or a source of domestic constraints. More importantly, the theoretical model and research design have potential to be used for future studies both in comparative politics and international relations.
In the following section, I review the past empirical studies and formal theoretical models to discuss how Olson’s conjecture has been examined. Followed is the non-formal discussion about dictators’ dilemma between political survival and predatory behavior in the shadow of domestic constraints. Then, I develop a simple formal model demonstrating that Olson’s conjecture can be modified once one allows dictators’ predation to be a function of the likelihood of political survival and post-tenure fate. This formal model produces two propositions both of which suggest that when autocrats expect a violent and irregular leadership failure in the near future, they become less predatory. To create testable hypotheses, I link the level of predation to the foreign policy indicator, initiating military conflict. Then, the hypotheses are tested using two-stage analyses with non-parametric bootstrapping where the first stage estimates the likelihood of different types of authoritarian leadership failure, and the second stage estimates the propensity of interstate conflict initiation.

4.2 Literature Review

Mancur Olson’s pioneering research provides a powerful explanation not only about how a state is initially formed under anarchy but also about how dictators maximize their private interests depending on their time horizons in office (see for example Olson 1991, 1993; McGuire and Olson 1992, 1996). Olson argues that autocrats with short time horizons resemble roving bandits who have an incentive to be as predatory as they can be in order to maximize their short-term private gains. For example, McGuire and Olson (1996) argue that “An autocracy is by definition a society where one person (or clique) is above the law. When that person or group has a short time-horizon, the person or group will gain from confiscating all capital goods whose tax yields over the horizon are less than their capital value: in effect, reverting to roving banditry” (93-4).
On the other hand, if an autocrat has a sufficiently long time horizon and extremely strong encompassing interests with domestic audiences, the autocrat’s private income is dependent not only his or her predation but also domestic productivity. To put it simply, an extremely high tax rate or a universal confiscation of private properties does not fully serve the private interests of autocrats with long time horizons because long-term gains also depend on the domestic economic stability and productivity. Domestic productivity, however, has less influence on the aggregate private income of autocrats with short time horizons because investing in economic security and public goods and in turn improving domestic productivity can rarely reward these myopic autocrats in the near future. Thus, the best strategy for autocrats with short time horizons is to confiscate public and private resources as much as possible.

Empirical evidence supporting Olson’s conjecture can be found in many studies. Clague et al. (1996) show that short time horizons are associated with increased rent extraction. Haggard and Kaufman (1992) argue that leaders with short time horizons have an incentive to distort the monetary policy in a way that increases their economic gains. Li (2009) examines the relationship between time horizons and governments’ propensity to expropriate private property. He finds that leaders with shorter time horizons are more likely seize private properties than those with longer time horizons. Chang and Golden (2010) show that dictators with short time horizons are more prone to corruption than those with long time horizons. Dionne (2011) also shows that leaders with long time horizons are more likely to provide public goods such as health expenditure than those with short time horizons.

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91 His reasoning is somewhat different from the conventional Olsonian perspective in that the purpose of expropriation is to increase his economic and political power so as to increase their chances of political survival.
Studies that point out the limitations of Olson’s model also exist. For example, Klick (2005) argues that “the stationary bandit model does not incorporate the centrality of the tenure extension motive in political decisions, limiting its usefulness as a positive description of government” (295). Klick’s (2005) model of limited autocracy suggests that “we should see more public good provision in those situations where the ruler’s hold on power is more precarious” (303). Robinson (2001), demonstrates in a formal model that autocrats with longer time horizons would be more likely to pursue predatory policies than those with shorter time horizons. His prediction is based on the intuition that authoritarian leaders have an incentive to make predatory policies that would prevent the potential domestic challengers from gaining power from economic development. Robinson (2001) shows that one of the main comparative statics is “the opposite of the conventional wisdom that long time horizons make for efficient public investment even if governments are self-interested” (13). Robinson (2001) also suggests that “both highly encompassing elites, and those with dynastic pretensions and therefore long horizons, are the most predatory” (15).

4.3 Predation, Time Horizon, and Post-tenure Fate

The underlying assumption of Olson’s logic is that leaders are capable of making such policies that the outcome is expected to maximize their economic interests. However, the capability that leaders can accomplish their policy goals is endogenous to time horizon. A vulnerable dictator with a short time horizon is not always able to pursue adventurous and predatory policies because domestic vulnerability itself actually constrains the leader’s predatory behavior. The reason why dictators with short time horizons are believed to prefer predatory policies is that they can maximize their own economic gains by a high level of predation for the given short
time spans. This logic implicitly assumes that a dictator with a short time horizon is always able to pursue predatory policies, and that domestic audiences are always compliant with the dictator’s predation.

According to the Olsonian view, predatory behavior of a dictator with a short time horizon is not a gamble on political survival but an insurance policy for maximum private profits. If an autocrat’s time horizon is fixed, the variable that determines a dictator’s payoff would be the level of predation. However, predatory policies affect an autocrat’s prospect of political survival too. Unless a dictator is highly risk-accepting, the dictator might not want to endanger his or her political survival by predatory policies that make domestic audiences more willing to replace the dictator particularly when the dictator is domestically vulnerable and when domestic audiences are able to punish the dictator.

For example, if a dictator expects to leave office in the near future due to failures in his or her national economic policies, further predatory economic policies may not bring much economic gains to the dictator but increase the risk of being challenged, even in a violent manner, by potential domestic dissenters. In this case, domestic vulnerability is a source of constraints rather than a source of predatory incentives. Conversely, policies that are expected to bring more private goods to a dictator for a short time period may not necessarily serve the dictator’s private interests because those policies would make the dictator much more vulnerable to domestic challenges than otherwise. Domestic turmoil could also significantly reduce the current level of domestic production and in turn the dictator’s income.

Hirshleifer (1991, 1994) argues that the weak or the poor have comparative advantage over the strong or the rich in conflictual processes because the less well-endowed parties are motivated to fight harder and invest more than the better-endowed parties. According to
Hirshleifer, this comparative advantage often disappears when the relative power of the strong is
decisively great in conflict. The very reason why some autocrats expect to stay in office for a
short time span in the future is that their dictatorial power is not decisive enough to be able to
repress potential domestic challenges. Given that autocrats with short time horizons would not
have decisive power advantage over domestic audiences, it is questionable that the optimal
strategy of autocrats with short time horizons is to further motivate domestic dissent and instigate
conflict by domestic audiences who have comparative advantage.

More importantly, my critique appears to become more convincing when post-tenure fate
is taken into account. Debs (2010) demonstrates that when dictators are highly concerned about
harsh post-tenure fate, they are tempted to democratize. Post-tenure fate is a non-negligible
factor that affects a dictator’s decision-making in office. A rational dictator’s expected payoffs in
office would be significantly undermined by the dictator’s expectation on harsh punishments out
of office. When autocrats with short time horizons expect dire post-tenure punishments, the
negative influence of their predatory behavior on their post-tenure fate would be significant
because domestic audiences would punish harder more predatory dictators out of office than less
predatory ones. Post-tenure punishment is a greater concern for autocrats with short time
horizons than those with long time horizons not only because any potential post-tenure
punishments would be more imminent to the former but also because even the same level of
domestic predation would have a greater negative influence on the post-tenure fate of the former
who expect to have less time to appease domestic grudge than the latter.

Olson (2000) argues that “at the limit, when an autocrat has no reason to consider the
future output of a society, his incentives are those of a roving bandit, which is, in effect, what he
becomes” (26). This claim appears to become less convincing once one takes into account the
fact that the expected amount of economic gains generated by predations would be significantly undermined if autocrats’ predatory behavior makes domestic audiences more willing and able to punish them in and out of office. Predation is not only a source of economic incentives but also that of domestic constraints. This is true particularly for autocrats with short time horizons whose leadership is unstable and likely to break down in the near future.

To summarize my critique, Olson’s logic overlooks two sources of domestic constraints on the predatory behavior of autocrats with short time horizons. First, an autocrat’s predatory behavior is constrained by domestic vulnerability and instability that results in a short time horizon. Second, when autocrats with short time horizons expect harsh post-tenure punishments, they would be extremely cautious of pursuing predatory policies that are likely to exacerbate domestic dissent and post-tenure punishment. In the following section, I incorporate these two types of constraints into a simple formal model of a dictator’s predation in the shadow of leadership failure and post-tenure punishment.

### 4.4 The Formal Model

In this section, I develop a formal model demonstrating the striking difference between the conventional Olsonian perspective and the Constraints perspective by specifying the level of predation as a function of time horizon and the level of post-tenure punishment. An autocrat’s time horizon is measured by the expected likelihood of leadership survival denoted by $s \in [0,1]$, and the expected level of post-tenure punishment, denoted by $x > 0$, is associated with the expected likelihood of leadership failure. $V$ is a recursive sum of the expected discounted present
value. An autocrat’s optimal choice of the level of predation is given by optimizing the following utility function of an autocrat.

\[ V = E_0 \sum_{t=0}^{\infty} \delta^t V_t \]

\[ = k(s, x)[a(R + G)] - G + \delta[\gamma(sV - (1 - s)x) + (1 - \gamma)V] \]  (1)

\( k = \) Level of predation for private good generation, \( k = f(s, x) \)
\( a = \) productivity
\( R = \) Total amount of resources available
\( G = \) Amount of public good provision
\( \delta = \) Discount factor, \( \delta \in (0,1) \)
\( \gamma = \) Indicator of replacement attempt
\( s = \) Likelihood of leadership survival
\( x = \) Post-tenure punishment

At time \( t \), an autocrat makes a public investment \( (G) \), and domestic audiences produce goods using pre-existing resources \( (R) \) and the government investment depending on their productivity level \( (a) \). The autocrat takes a portion of the produced goods for his or her own private benefits by the magnitude of predation \( (k) \). In case of replacement attempt by domestic audiences \( (\gamma = 1) \), if the autocrat survives then the payoff at time \( t + 1 \) is \( V \), and if not the payoff is \(-x\) (post-tenure punishment). Because leadership survival is not deterministic at any time, these two

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92 This model is based on Robinson (2001) and McGuire and Olson (1996), but the parameters and utility functions were modified to serve my research purpose.
payoffs can be put together using the likelihood of survival \((s)\): that is \(\delta[sV - (1 - s)x]\). In the absence of replacement attempt \((\gamma = 0)\), the autocrat’s payoff at time \(t\) is discounted by \(\delta\), that is \(\delta V\).

4.4.1 Assumptions

Assumption 1. \(\gamma = 1\).

\(\gamma\) is an operator determining whether the leadership is challenged by domestic audiences. I assume that domestic audiences out of the leadership structure are always to some degree trying to replace the autocrat and/or his or her ruling coalition. Because I am interested in how the level of predation is determined depending on the likelihood of a successful replacement attempt and the severity of post-tenure punishment, I limit my research to the situation where \(\gamma = 1\). This assumption does not change the main propositions of this model, but simplifies the optimization process. Thus, Equation (1) can be simplified as follows:

\[
V = k(s, x)[a(R + G)] - G + \delta[sV - (1 - s)x].
\]  

(2)

Assumption 2.

\[
\frac{\partial V}{\partial x} < 0 \quad \forall \ x.
\]

I assume that the autocrat’s utility is always decreasing in post-tenure punishment.

Assumption 3.

\[
\frac{\partial x}{\partial k} > 0 \quad \text{if} \ x > x^* > 0.
\]
In addition, I assume that \( x \) is increasing in \( k \) if \( x \) is sufficiently large (i.e., greater than \( x^* \)). This assumption shows that when the autocrat expects a negligible amount of post-tenure punishment, for example when the autocrat expects a peaceful leadership turnover, an increase in the level of predation would not necessarily make the expected post-tenure fate worse. If an autocrat expects to leave office by a peaceful and constitutional election, the autocrat would feel safer in office and be less concerned about the potential backlash of further predations than otherwise. However, if \( x \) is large enough to make the autocrat expect severe punishments such as imprisonment or death, the autocrat would be highly concerned about the aggravating effect of further predations on the likely post-tenure punishments.

**Assumption 4.**

\[
k[a(R + G)] - G > 0
\]

I assume that the autocrat would never make a public investment large enough to exceed the expected rents from the total amount of domestic production.

**4.4.2 Analysis**

In this section, I show under what conditions the autocrat’s utility is maximized, particularly with respect to \( k, s, \) and \( x \). The following Equation (3) shows that the first order condition for \( V \) with respect \( s \) can be rewritten using the chain rule.

\[
\frac{\partial V}{\partial s} = \left[ \frac{\partial V}{\partial k} \frac{\partial k}{\partial s} [a(R + G)] + \delta x \right] \frac{1 - \delta s}{(1 - \delta s)^2} \left[ 1 - \delta s + \delta [a(R + G)] - G + \delta x s - x \right] (3)
\]
With some algebra and by Assumption 4, it can be shown that \( \frac{\partial V}{\partial k} \frac{\partial k}{\partial s} < 0 \) to satisfy the first order condition. Assumption 3 indicates that \( \frac{\partial V}{\partial k} \frac{\partial k}{\partial s} = \frac{\partial V}{\partial x} \frac{\partial x}{\partial k} \frac{\partial k}{\partial s} < 0 \) if \( x > x^* \) and \( \frac{\partial k}{\partial s} > 0 \). This finding is summarized in the following proposition.

**Proposition 1.**

\[ \exists x > x^*, \max(V) \text{ if and only if } \frac{\partial k}{\partial s} > 0 ; \quad s.t. \quad \frac{\partial V}{\partial k} \frac{\partial k}{\partial s} < 0 \quad (4) \]

This proposition shows that the autocrat’s utility function can be maximized if \( x \) is sufficiently large and if \( k \) increases in \( s \). In other words, if the autocrat expects a sufficiently severe post-tenure punishment, then the shorter is the time horizon the lower would be the level of predation.

I now turn to the optimization problem with respect to the level of post-tenure punishment. The following equation illustrates the first order condition for \( V \) with respect \( x \).

\[ \frac{\partial V}{\partial x} = \frac{\frac{\partial V}{\partial k} \frac{\partial k}{\partial x}}{1 - \delta s} [a(R + G)] - \delta(1 - s) = 0 \iff \frac{\partial V}{\partial k} \frac{\partial k}{\partial x} = \frac{\delta(1 - s)}{a(R + G)} > 0. \quad (5) \]

Equation (5) indicates that \( \frac{\partial V}{\partial k} \frac{\partial k}{\partial x} \) should be positive in order to meet the first order condition. Let \( s^* \) divide \( s \) into two areas over the continuum of \( s \) such that above \( s^* \) or if \( s \in (s^*, 1] \) leadership survival is highly likely and the time horizon is long, but below \( s^* \) or if \( s \in [0, s^*] \) leadership failure is highly likely and the time horizon is short.
The Olsonian perspective suggests that when an autocrat’s time horizon is sufficiently short, his or her welfare function increases in the level of predation. In contrast, if an autocrat’s time horizon is sufficiently long, his or her private income has a negative relationship with the level of predation. That is, the more predation the better for autocrats with short time horizons, but the less predation the better for those with long time horizons.\footnote{For a more detailed formal expression on this implication of the Olsonian perspective, see Appendix C.}

On the other hand, the constraints perspective suggests that when the likelihood of leadership survival is sufficiently low (i.e., when the likelihood of leadership failure is sufficiently high or when an autocrat’s time horizon is sufficiently short), predatory behavior would not best serve the private interests of the autocrat because it is risky and costly under the initially high level of domestic vulnerability. Rather, further predations would make potential domestic dissenters more willing to stand against the predatory autocrat, more likely to exploit the autocrat’s political vulnerability, and less likely to comply with predatory policies. Thus, in case of short-time horizon, $V$ declines in $k$, i.e., $\frac{\partial v}{\partial k} < 0$.

**Proposition 2.**

\[
\frac{\partial V}{\partial k} < 0 \text{ if } s \in [0, s^*] \Rightarrow \frac{\partial k}{\partial x} < 0; \quad \text{s.t.} \quad \frac{\partial V \partial k}{\partial k \partial x} > 0.
\]

Proposition 2 indicates that to meet the condition in Equation (5), $\frac{\partial k}{\partial x}$ should be negative or the level of predation ($k$) should decline in the expected magnitude of post-tenure punishment ($x$). In other words, autocrats with short time horizons would become less predatory when they expect harsh post-tenure punishments. This proposition implies that an autocrat who expects to leave office in a violent or irregular manner in the near future would not want to gamble his or her life.
on predatory rents that are hard to obtain under the high level of domestic constraints. Equivalently, for autocrats with short time horizons, the level of predation \((k)\) should increase in the expected magnitude of post-tenure punishment \((x)\). In other words, an autocrat who expects to leave office in a peaceful and nonviolent in the near future would want to increase their predations in order to increase their private profits without too much concern about harsh post-tenure punishments. This latter interpretation of Proposition 2 also indicates that Olson’s thesis might be valid only if expected post-tenure punishments are sufficiently small.

\[
\frac{\partial V}{\partial k} > 0 \text{ if } s \in (s^*, 1] \quad \Rightarrow \quad \frac{\partial k}{\partial x} > 0; \quad s.t. \quad \frac{\partial V}{\partial k} \frac{\partial k}{\partial x} > 0. \tag{7}
\]

Under the constraints perspective, when the likelihood of leadership survival is sufficiently high (i.e., when the likelihood of leadership failure is sufficiently low or when an autocrat’s time horizon is sufficiently long), the autocrat is willing and able to pursue predatory policies that increase his or her private gains under weak domestic constraints, i.e., \(\frac{\partial V}{\partial k} > 0\). However, when the autocrat’s time horizon is sufficiently long, extreme predations would significantly undermine the long-term productivity of economic actors. Thus, I am very cautious of concluding that \(\frac{\partial V}{\partial k} > 0\) if \(s \in (s^*, 1]\). Assuming that this claim is true, for a further discussion, Equation (7) shows that to meet the condition in Equation (5), \(\frac{\partial k}{\partial x}\) should be positive or the level of predation \((k)\) should increase in the expected level of post-tenure punishment \((x)\). In this situation, autocrats with long time horizons face less domestic constraints with a solid dictatorial power base. They are better off by increasing the level of predation, and they would become
more predatory when they expect harsh post-tenure punishments. This state of the world is, to some extent, consistent with Robinson’s (2001) model that suggests that long time horizons would increase a dictator’s desire to maintain their power by predatory behavior rather than investment.

Post-tenure fate is not directly observable \textit{ex ante} because it can be observed once a dictator is out of power. If an autocrat’s expectation on his or her post-tenure fate is measurable with some probability even before leadership failure, the two formal propositions suggest that an autocrat who expects a leadership failure with an unsafe post-tenure fate in the near future is likely to make a less predatory policy decision than an autocrat who does not have a concern about harsh post-tenure punishment. In addition, a proxy exists with a significantly strong correlation with this \textit{ex ante} expectation, which is the manner of leadership failure. The Archigos data set\textsuperscript{94} shows that when political leaders who exited office in regular ways between 1875 and 2004, about 93% of them avoided any harsh post-tenure punishments such as exile, imprisonment, and death. On the other hand, only about 19% of leaders who exited office by irregular means such as coups, revolts, and assassinations were safe from harsh post-tenure punishments. Thus, both Proposition 1 and Proposition 2 generate the following implications.

\begin{itemize}
\item \textbf{Implication 1.} (from Proposition 1 and Proposition 2)
\begin{quote}
\textit{The likelihood of unsafe or irregular leadership failure has a negative relationship with the level of predation in authoritarian regimes.}
\end{quote}
\item \textbf{Implication 2.} (from Proposition 2)
\end{itemize}
\textsuperscript{94} Version 2.9 (Goemans et al. 2009)
The likelihood of safe or regular leadership failure has a positive relationship with the level of predation in authoritarian regimes.

4.5 Predatory Foreign Policy

These implications can be tested against different types of predatory policies, and it is useful to test my theory in multiple policy dimensions to ensure its generalizability. However, this article focuses only a single foreign policy issue, international conflict. I also run empirical tests regarding another policy issue, the government’s tax revenue, and these tests are discussed in detail in Appendix D.

I argue that authoritarian rulers are power-seeking rational actors, and that their foreign policy is not separated from their own private interests. Authoritarian rulers need extract military resources from domestic production not only to provide private goods to military officers who are necessary to secure their leadership but also to weaken the power of potential domestic challengers. Dictators have, on average, more discretion in military resources they can use than democratic leaders, and they are less likely to be questioned about where the resources are used. Even when they spend military resources on generating extra private goods at the expense of domestic production, the domestic constraints on their reckless foreign policy are weaker than those on democratic leaders’ (Bueno de Mesquita et al. 2003). For example, “autocrats have more to gain from winning territory relative to a colonialist democracy, because the spoils of war are divided among many in the more democratic state” (Fearon 2008, 19). In general, “Autocrats fight for spoils, to gain territory and riches, and only rarely to overthrow their foreign foes” (Bueno de Mesquita 2002, 6).
In addition, military tension, engagement, and mobilization often damage domestic economy. There are such wars that protect a country’s territory and sovereignty such as anti-colonial wars, and these wars would not necessarily serve solely an authoritarian leader’s private interests. However, the outcome is still often disproportionately distributed between the public and the autocrat at the expense of the public sacrifices. During wartime, the overall economic activities become less vitalized than during peace time, and even war preparations for potential future warfare are very costly to domestic audiences. There are cases where post-war economies revived as studies on the phoenix factor suggest (Organski and Kugler 1977, 1980). The phoenix factor, if at all, should apply only to autocrats with long time horizons because it takes at least a couple of decades for a dictator sees the positive economic influence of the phoenix factor. Thus, in general, I argue that initiating a military conflict could be an indirect measure of an autocrat’s predation which is relatively more broadly defined in this case. The hypothesis is as follows.

**Hypothesis:** In authoritarian regimes, the likelihood of unsafe or irregular leadership failure has a negative relationship with the propensity of initiating a military conflict, while the likelihood of safe or regular leadership failure has a positive relationship with the propensity of initiating a military conflict.

### 4.6 Research Design

The unit of analysis is leader-year, and the cases include all authoritarian leader-years between 1946 and 2001. To select those cases, I use a new data set recently compiled by Geddes et al. (2012). I use two-stage methods where the first stage estimates the probability of different types of authoritarian leadership failure as an instrumental variable for authoritarian time horizon, and
the second stage regression uses this instrument to estimate the impact of authoritarian time horizon on the level of authoritarian predation.

4.6.1 Measuring Authoritarian Time Horizon

Authoritarian time horizon as a theoretical concept is the main explanatory variable that is expected to capture the variations in the level of predation. Yet time horizon and predation have a potentially endogenous relationship with each other. Thus, the potential influence of the outcome of interest (predation) on time horizon may bias the baseline estimates of the second stage. A solution for this concern is to construct an instrumental variable for authoritarian time horizon (Sovey and Greene 2011).

A substantive reason for using an instrumental variable is that a conventional method of measuring time horizon may not be able to explain the time-varying aspects of a leader’s time horizon. For example, the number of past leadership turnovers or the number of past coups does not account for the possibility that the likelihood of leadership failure might vary over the course of a leader’s tenure. In addition, regime durability or regime age can explain regime stability to a large extent but not necessarily authoritarian leadership stability and its temporal variations. There might be cases where regime changes do not correctly match with leadership changes. An autocrat might want to democratize the political systems as a symbolic gesture while maintaining his or her grip on dictatorial power, and rotating leadership among ruling cliques does not necessarily involve any significant regime changes. Thus, estimating time horizon using exogenous regressors would be a better method of explaining the temporal variations in the risk of authoritarian leadership failure than the conventional method of using individual indicators.
Using a two-stage method, however, requires a researcher to make an assumption that authoritarian leaders do calculate their time horizons based on the political and economic circumstances home and abroad as researchers do. Further, one need assume that a researcher’s estimation would resemble a leader’s own expectation. For example, a researcher may not be able to use any inside information about which a leader might have better knowledge. On the other hand, while a researcher can use even post-tenure information to reveal a potentially generalizable empirical pattern, a leader can use only past and current information. The literature on authoritarian time horizon rarely addresses this issue in empirical tests.

However, this potential critique is not unique to two-stage methods, but equally applied to the conventional methods which assume that a leader’s expected time horizon can be approximated by a single indicator which conveys a particular set of historical information about regime or leadership stability. The conventional methods further assume that a leader expects to stay in office for a short time if past leaders have experienced a lot of political instability, and the leader’s expectation remains the same over the course of his or her tenure. This assumption is problematic because a leader’s calculation would not be based on the information conveyed by a single indicator. Thus, using two-stage methods does not suffer more from these assumptions than the conventional methods. Yet I perform a series of empirical analyses comparing the estimated authoritarian time horizons using the full sample with those using limited samples excluding post-tenure information.

Further, even a leader might be uncertain about their leadership fate as well as post-tenure fate, and the level of uncertainty might also vary over the course of tenure. Only using the point estimates of the first stage regression as an instrumental variable does not capture this uncertainty, so I include the standard errors around the point estimates in the second stage
estimation to account for a leader’s uncertainty over time horizon. This uncertainty variable is also substantively interesting with respect to the impact of leaders’ uncertainties over their time horizons on their various policy choices.

Technically, the most serious concern in using two-stage methods would be how strong an instrument is. Weak instruments cannot reveal any reliable relationships between authoritarian time horizon and predation because the first stage estimation would not be able to generate a measure what a researcher intends to measure. In the empirical analysis, I test the strength of the instrument. Another important concern would be how to correct the potential bias in the standard errors of the second stage regression. To deal with this concern, I use non-parametric bootstrapping which is an alternative to using Mulphy-Topel correction (Murphy and Topel 1985; Bas et al. 2008). I argue that as long as these two concerns are mitigated, two-stage methods have theoretical and empirical advantages over the conventional methods.

4.6.2 Two-stage Model

The following is the two-stage research design for the number of militarized interstate disputes as the second-stage dependent variable. The reduced form equations for the first and second stages are

First Stage: \( S_{it} = \alpha + \beta l_{it} + \gamma X_{it} + \delta \tau_{it} + \epsilon_{it} \),

Second Stage: \( G(MID_{i}t) = a + bI_{it} + cX_{it} + d\tau_{it} + eD_{i} + u_{it} \).

Notice that the first stage has a set of same explanatory variables as the second stage: \( X_{it} \) and \( \tau_{it} \). The main reason for using an instrumental variable is to obtain a variable which is exogenous to the second-stage dependent variable or the second-stage error term. In other words, an ideal
situation would be that the first-stage residuals ($\epsilon_{it}$) are not endogenous to the second stage estimates of $MID_{it}$. If the first stage does not have some variables shown in the second stage, it becomes more likely that $\epsilon_{it}$ is correlated with $MID_{it}$ through these missing variables. Thus, as long as these variables do not significantly distort the first-stage estimation which should be driven by one or more instruments, it is desirable to include these variables in the first stage too.

$S_{it}$ is a multinomial variable indicating whether a certain type of leadership failure occurred in country $i$ in a given year $t$, $F(\cdot)$ is a link function. $I_{it}$ is an instrument which is the logged number of domestic $UNREST_{it-1}$. This is measured by the total sum of different types of mass and elite unrests such as anti-government protests, riots, strikes, purges, and government crises (Banks 2001). $X_{it}$ is a set of time-varying covariates indicating a country’s political and economic conditions, leadership or regime characteristics, and $\tau_{it}$ consists of a set of temporal indicators such as $TENURE_{it}$ (logged number of years in office up to time $t$ using the Archigos database), $TENURE^{2}_{it}$, $TENURE^{3}_{it}$, and $COLD\;WAR_{it}$ dummy. $D_i$ is country fixed effects.

I use multinomial logit regressions with standard errors clustered by country for the first stage estimation (i.e., $F(\cdot)=\text{logit}$), and the dependent variable is different types of leadership failure. I examine two sets of multinomial indicators of authoritarian leadership failure using the Archigos database (Goemans et al. 2009): (1) $POSTTENURE\; FATE$ takes a value of zero if a leader survives in office, one for a failure with safe post-tenure fate, and two for a failure with unsafe post-tenure fate, and (2) $FAILURE\; MODE$ is coded as zero in the absence of leadership failure, one for a regular failure, and two for an irregular failure. Unsafe post-tenure fate is defined as an authoritarian leader’s exit with a harsh post-tenure punishment such as exile.

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95 To make sure that this instrument is a right choice, I will discuss the strength of this instrument in the next section.
96 A cubic polynomial, instead of duration time dummies, is included to control for duration dependence in a binary response model (Carter and Signorino 2010).
imprisonment (including house arrest), or death (Goemans et al. 2009). The Archigos data set codes an irregular leadership failure as a failure by a coup, a revolt, or an assassination, and I also consider a leadership failure due to foreign intervention as a type of irregular leadership failure (Goemans et al. 2009). But a leadership failure by natural death is excluded from this category of irregular leadership failure.

Both equations include common time varying covariates measuring political and economic conditions, and regime characteristics for a given leader-year ($X_{lt}$). To control for economic conditions, I include log $GDP_{lt-1}$ per capita, economic $GROWTH_{lt}$ and log $POPULATION_{lt}$ using the Penn World Table database (Alan et al. 2009). I also control for leader $AGE_{lt}$ using the Archigos database (Horowitz et al. 2005; Potter 2007; Bak and Palmer 2010). To capture the characteristics of political institutions, I include $LEGISLATURE_{lt}$ measuring the legislature and party status (Cheibub et al. 2010). To account for regime characteristics, I include two variables indicating authoritarian regime type ($MILITARY_{lt}$ and $MONARCHY_{lt}$ dummies) (Cheibub et al. 2010). Finally, I include the number of $RIVALRIES_{lt-1}$ (Klein, Goertz, and Diehl 2006), $CINC_{lt-1}$ score (Singer and Small 1972).

$MID_{lt}$ is a dichotomous indicator measuring the number of high-level militarized interstate dispute initiations using the Militarized Interstate Disputes ($MID$) data set (Ghosn et al. 2004). $G(·)$ is a link function, and the second stage equation is estimated with negative

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97 The party status within the legislature is coded as zero if there is no legislature or all members are nonpartisan, one if the legislature consists of only members for the ruling party, and two if the legislature allows participation of multiple parties within it.

98 CINC refers to the Composite Index of national Material Capabilities.

99 A verbal threat without any tangible military actions is excluded from this category. When I code $MIDS$s less than the “use of force” category in the hostility level as zero, the empirical results show even stronger support for my hypotheses.
binomial regressions with country fixed effects (country dummies). A set of estimates ($IV_{lt}$) in the first stage are used as instrumental variables in the second stage. That is, $IV_{lt}$ are a set of instrumental variables showing linear estimates of the likelihood of authoritarian time horizon which is estimated by the first stage multinomial logit regressions. When the dependent variable is \textit{POSTTENURE FATE} (\textit{FAILURE MODE}), $IV_{lt}$ includes linear estimates for $SAFE_{xb}$ and $UNSAFE_{xb}$ leadership failures ($REGULAR_{xb}$ and $IRREGULAR_{xb}$ failures). I also include the standard errors around the point estimates of different types of leadership failure into the second stage equation: $SAFE_{se}$, $UNSAFE_{se}$, $REGULAR_{se}$, and $IRREGULAR_{se}$.

4.7 Results

Before discussing the second stage results, I need to check if the first stage estimation is reliable in terms of three issues: (1) the strength and exogeneity of the instrument, (2) the assumption of independence of irrelevant alternatives (IIA), and (3) the use of post-tenure information.

4.7.1 First Stage

First of all, I need to make sure that the instrument ($UNREST_{lt}$) is sufficiently strong. Staiger and Stock (1997) suggests the conventional threshold for weak instruments: the $F$ statistic of the first-stage regression is below 10. However, it is unclear whether this criterion can be applied to the first-stage regression with a binary dependent variable. First, Table 4.1 shows that this instrument is statistically significant at the 0.01 level regardless of the different dependent

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\footnote{I use negative binomial due to overdispersion in the count dependent variable. Studies using negative binomial with similar dependent variables include Pickering and Kisangani (2005) and Lai and Slater (2006). I include country dummies because Allison and Water (2002) show that the canned package of Stata for fixed-effects negative binomial does not control for the true fixed effects but the country-specific variation in the dispersion parameter.}
variables. The Wald test for the instrument when the dependent variable is POSTTENURE FATE shows that $\chi^2(2) = 34.91$, which indicates that the $F$ statistic is 17.5 that exceeds the threshold. When I run the same model using OLS with two dichotomous dependent variables, UNSAFE and SAFE, the $F$ statistics are 16.13 and 15.7.\textsuperscript{101} These $F$ statistics exceed the threshold for weak instruments. The Wald test for the instrument when the dependent variable is FAILURE MODE shows that $\chi^2(2) = 40.85$, which indicates that the $F$ statistic is 20.4 that exceeds the threshold. When I run the same model using OLS with two other dichotomous dependent variables, IRREGULAR and REGULAR, the $F$ statistics are 13.6 and 23.45 both of which exceed the threshold for weak instruments. In general, I argue that this instrument is strong enough to make a reliable instrumental variable for the second-stage estimation.

Moreover, I could not find significant statistical evidence that this instrument is endogenous to the unobservable attributes of the second-stage dependent variable. I ran the two-stage model using GLM for the second stage, and regressed the second-stage residuals against the instrument. The F-statistic shows little evidence that the instrument is endogenous.

[ Table 4.1 about here ]

In addition, the Hausman test for the assumption of the independence of irrelevant alternatives (IIA) shows that the first stage regressions for both dependent variables survive the test (Hausman and McFadden 1984; Long and Freese 2006).\textsuperscript{102} These instrumental variables for authoritarian time horizon and their standard errors are incorporated into the second stage models using bootstrapped samples, and this procedure is repeated 1000 times.

\textsuperscript{101} The linear predictions for unsafe failure from the multinomial logit are correlated by about 0.9 with those using OLS.

\textsuperscript{102} This test was performed using the Stata command “mlogtest” suggested by Long and Freese (2006).
It is theoretically impossible for a leader to take into account the post-tenure information to calculate his or her time horizon in office. Even though it is not a heroic assumption that there exists universal empirical patterns which can be measured using all the information available for a researcher with some precision, I still need make sure that using post-tenure information does not significantly bias the first-stage estimation on autocrats’ time horizons. Thus, I run the same multinomial logit regression multiple times excluding post-tenure information. Time horizons for each year are estimated using information available only for the past twenty years. For example, an autocrat’s time horizons in 1982 are measured using only information available between 1962 and 1981 for twenty years. However, I take into account only the estimates using more than 1000 observations (about one-third of the full sample) to ensure a reasonably wide data coverage. Then I compare these estimates using limited samples with those using the full sample. Figure 4.1 and Figure 4.2 show that the use of limited samples excluding post-tenure information still produces estimates quite close to those using the full sample. The differences between two samples are smaller in linear predictions than in standard errors. It is not surprising that the standard errors using limited samples are on average larger than those using the full sample. Given that these alternative measures excluding post-tenure information are not significantly different from those using all information available, it seems that using more information and generating better model fit is a better method of approximating authoritarian time horizon than using limited information.

[Figure 4.1 and 4.2 about here]

In Table 4.1, several explanatory variables in the first-stage multinomial logit regressions are worth mentioning. First, leaders in countries with high CINC scores appear to be less likely to be removed from office in irregular ways and less likely to experience unsafe post-tenure fate.
Military dictators appear to be more likely to experience harsh post-tenure punishments and irregular leadership failures. Regardless of types of failures, old leaders are more likely to be removed from office. The higher GDP per capita a country has, the lower is the likelihood of unsafe post-tenure fate and irregular failure. Leaders who face more legislative constraints appear to be safer from harsh post-tenure fate as well as irregular leadership failures.

4.7.2 Second Stage

Table 4.2 shows that the coefficient estimates for $SAFE_{xb}$ and $REG_{xb}$ are positive and statistically significant at the 0.01 level. On the contrary, the coefficient estimates for $UNSAFE_{xb}$ and $IRREG_{xb}$ are negative and significant at the 0.05 level. These findings suggest that the likelihood of safe and regular leadership failure is on average positively related with the number of MID initiations, but the likelihood of unsafe and irregular failure is on average negatively associated with the number of MID initiations. In other words, as the hypotheses suggests, an autocrat’s concern over harsh post-tenure punishments constrains his or her predatory foreign policy decision-making. On the other hand, when autocrats expect a peaceful and safe leadership turnover in the near future, they appear to become more predatory in foreign policy or become less constrained to use force abroad than otherwise. These findings support the hypothesis.

[ Table 4.2 about here ]

One interesting finding is that the coefficient estimates of $UNSAFE_{se}$ and $IRREG_{se}$ are negative and significant. These two variables measure autocratic leaders’ uncertainty over the likelihood of unsafe or irregular leadership failure. This finding suggests that when autocrats are highly uncertain about their harsh post-tenure fate, they become more constrained to initiate a military conflict than otherwise. This finding is somewhat counter-intuitive with respect to my
theory because I expect that an autocratic leader be most constrained when he or she is certain about extremely harsh post-tenure punishments in the near future. Rather, this finding implies that uncertainty over the likelihood of unsafe or irregular leadership failure makes an autocrat more constrained. One possible explanation would be that uncertainty over unsafe leadership failure might make autocrats more optimistic about the positive influence of their less predatory behavior. Even though a dictator’s expectation on unsafe or irregular leadership failure significantly constrains his or her decision to initiate a military conflict, the dictator might be more motivated to remain constrained when the initial expectation is likely to be inaccurate.

Several estimates of control variables are worth mentioning. The number of enduring rivalries is positively associated with the number of MID initiations. Military regimes appear to be more constrained to initiate a military conflict than civilian regimes, which is somewhat inconsistent with the finding of Lai and Slater (2006). Military conflicts are more likely during the Cold War. Old autocrats are less likely to initiate a military conflict than younger ones. Countries with high GDP per capita and high economic growth are more likely to initiate a MID than those with low values. Countries with more population appear to be less prone to military conflict than those with less.

4.8 Discussion

The theoretical finding sheds light on studies of authoritarian time horizon in comparative politics, and the propositions are novel and applicable to many different areas of domestic economic policy. One example would be the empirical tests on the impact on authoritarian time horizon and tax revenue shown in Appendix D. Even though economic data in authoritarian regimes are very limited and prone to errors in official reports, scholars might be interested in
replicating the existing studies using the new method of measuring different types of authoritarian time horizon.

The empirical finding appears to provide more insights to the international relations literature, particularly conflict studies about the relationship between authoritarian regime types and international conflict. The main finding that authoritarian time horizon has a negative impact on the number of MID initiations is a piece of significant counterevidence against the diversionary perspective on autocrats’ conflict behavior.

Two recent studies on authoritarian leaders’ diversionary conflict behavior focus on authoritarian regime types. Lai and Slater (2006) show that military regimes are more likely to initiate a military conflict than single-party regimes using the ‘infrastructural power’ perspective; Pickering and Kisangani (2010) find, relying on the ‘political incentive’ perspective (Bueno de Mesquita et al. 2003), that single party regimes are likely to use diversionary use force and benefit from it in terms of mitigating domestic problems. Regardless of their inconsistent findings, the assumption of both studies is that autocrats use diversionary force in responding to domestic hardships. Yet to date, none has examined whether the diversionary assumption in authoritarian regimes is valid. The findings of this chapter suggest that autocrats’ domestic vulnerability might be more likely to be a source of domestic constraints rather than a diversionary motive.

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103 They argue that single-party regimes are better at dealing with domestic unrest by non-military means than military regimes because the well-established political organizations in single-party regimes are often ideologically legitimized by the public acceptance compared to military regimes’ lack of these buffer institutions. As Pickering and Kisangani (2010) note, they do not directly test their diversionary argument though.

104 They argue that single-party regimes should provide “a much higher quality and quantity of public goods” to the relatively large winning coalition than personalist regimes (or military regimes to a lesser degree) where leaders have relatively large stock of goods on their own discretion for the small winning coalitions (480). Thus, leaders in single-party regimes have greater incentives to use diversionary force to deal with the public dissent because it is cheaper and more effective than other options given the limited resources.
In addition, the methodological approach might be quite useful for future studies that attempt to measure authoritarian time horizon as either a dependent or an independent variable. The concept of authoritarian time horizon is often endogenous to another outcome of interest that indicates a leader’s domestic policy choices. Foreign countries’ policy decisions such as foreign aid or foreign direct investment are highly dependent on a recipient leader’s time horizon too. Thus, the two-stage method used in this chapter would be a useful choice.

There are several shortcomings of this study to overcome in the future too. First, the choice of variables in the first and second stages appears to have an impact on the empirical results. For example, finding one or more exogenous instruments is not an easy task particularly in predicting authoritarian time horizon because leadership failure is an outcome caused by multiple domestic factors rather than simple regime characteristics or institutional settings. In addition, missing data are also a non-negligible issue particularly in authoritarian regimes. Further, the first-stage diagnostics are not widely available in the literature especially when the first-stage outcome is non-continuous. Finally, using post-tenure information in measuring authoritarian time horizon requires further theoretical and empirical justifications in addition to those used in this chapter. In spite of these shortcomings, I believe that this method is still superior to the conventional method of using an individual indicator of authoritarian time horizon because the conventional method is neither free from these shortcomings nor more theoretically and empirically justifiable than the two-stage method.
Table 4.1 The First Stage Multinomial Logit Regression on Different Types of Leadership Failure, 1946~2001.

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>(1) POSTTENURE FATE</th>
<th>(2) FAILURE MODE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Outcome 1</td>
<td>Outcome 2</td>
</tr>
<tr>
<td></td>
<td>SAFE</td>
<td>UNSAFE</td>
</tr>
<tr>
<td>UNREST&lt;sub&gt;it-1&lt;/sub&gt;</td>
<td>0.076*** (0.018)</td>
<td>0.090*** (0.020)</td>
</tr>
<tr>
<td>RIVALRIES&lt;sub&gt;it-1&lt;/sub&gt;</td>
<td>-0.082 (0.063)</td>
<td>-0.017 (0.072)</td>
</tr>
<tr>
<td></td>
<td>12.419 (15.005)</td>
<td>-29.317 (39.403)</td>
</tr>
<tr>
<td>MILITARY&lt;sub&gt;it&lt;/sub&gt;</td>
<td>0.286 (0.207)</td>
<td>0.485** (0.240)</td>
</tr>
<tr>
<td>MONARCHY&lt;sub&gt;it&lt;/sub&gt;</td>
<td>0.238 (0.381)</td>
<td>-0.594 (0.484)</td>
</tr>
<tr>
<td>COLD WAR&lt;sub&gt;it&lt;/sub&gt;</td>
<td>-0.236 (0.158)</td>
<td>0.183 (0.227)</td>
</tr>
<tr>
<td>AGE&lt;sub&gt;it&lt;/sub&gt;</td>
<td>0.049*** (0.006)</td>
<td>0.033*** (0.011)</td>
</tr>
<tr>
<td>GDP&lt;sub&gt;it-1&lt;/sub&gt;</td>
<td>-0.065 (0.121)</td>
<td>-0.343** (0.137)</td>
</tr>
<tr>
<td>GROWTH&lt;sub&gt;it&lt;/sub&gt;</td>
<td>0.005 (0.007)</td>
<td>-0.019* (0.010)</td>
</tr>
<tr>
<td>POPULATION&lt;sub&gt;it&lt;/sub&gt;</td>
<td>-0.079 (0.076)</td>
<td>-0.145 (0.112)</td>
</tr>
<tr>
<td>LEGISLATURE&lt;sub&gt;it&lt;/sub&gt;</td>
<td>-0.157 (0.109)</td>
<td>-0.364*** (0.126)</td>
</tr>
<tr>
<td>TENURE&lt;sub&gt;it&lt;/sub&gt;</td>
<td>-0.546 (0.482)</td>
<td>-0.777 (0.586)</td>
</tr>
<tr>
<td>TENURE&lt;sup&gt;2&lt;/sup&gt;&lt;sub&gt;it&lt;/sub&gt;</td>
<td>0.060 (0.352)</td>
<td>0.338 (0.471)</td>
</tr>
<tr>
<td>TENURE&lt;sup&gt;3&lt;/sup&gt;&lt;sub&gt;it&lt;/sub&gt;</td>
<td>-0.007 (0.071)</td>
<td>-0.045 (0.097)</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.816** (1.357)</td>
<td>0.250 (1.571)</td>
</tr>
<tr>
<td>Observations</td>
<td>2,882</td>
<td>2,882</td>
</tr>
<tr>
<td>Log Likelihood</td>
<td>-1123.26</td>
<td>-987.12</td>
</tr>
<tr>
<td>Pseudo R&lt;sup&gt;2&lt;/sup&gt;</td>
<td>0.0803</td>
<td>0.1079</td>
</tr>
</tbody>
</table>

**Note:** Cell entries are coefficient estimates; numbers in parentheses are estimated standard errors. 
*** p < 0.01; ** p < 0.05; * p < 0.1 (two-tailed).
Table 4.2 The Second Stage Fixed-Effects Negative Binomial Regression on # of MID Initiations, 1946-2001.

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>(1) POSTTENURE FATE</th>
<th>(2) FAILURE MODE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SAFExb (REGxb)</strong></td>
<td>3.424*</td>
<td>2.080***</td>
</tr>
<tr>
<td></td>
<td>(1.187)</td>
<td>(0.773)</td>
</tr>
<tr>
<td><strong>SAFEse (REGse)</strong></td>
<td>0.261</td>
<td>1.898**</td>
</tr>
<tr>
<td></td>
<td>(1.619)</td>
<td>(0.967)</td>
</tr>
<tr>
<td><strong>UNSAFEExb (IRREGxb)</strong></td>
<td>-2.913*</td>
<td>-2.883***</td>
</tr>
<tr>
<td></td>
<td>(1.525)</td>
<td>(1.073)</td>
</tr>
<tr>
<td><strong>UNSAFEse (IRREGse)</strong></td>
<td>-4.544***</td>
<td>-6.014***</td>
</tr>
<tr>
<td></td>
<td>(1.583)</td>
<td>(1.574)</td>
</tr>
<tr>
<td><strong>RIVALRIES_{it-1}</strong></td>
<td>0.629***</td>
<td>0.790***</td>
</tr>
<tr>
<td></td>
<td>(0.131)</td>
<td>(0.166)</td>
</tr>
<tr>
<td><strong>MILITARY_{it}</strong></td>
<td>0.093</td>
<td>0.336</td>
</tr>
<tr>
<td></td>
<td>(0.306)</td>
<td>(0.308)</td>
</tr>
<tr>
<td><strong>MONARCHY_{it}</strong></td>
<td>-2.803**</td>
<td>-1.019</td>
</tr>
<tr>
<td></td>
<td>(1.238)</td>
<td>(0.621)</td>
</tr>
<tr>
<td><strong>COLDWAR_{it}</strong></td>
<td>0.983</td>
<td>2.110**</td>
</tr>
<tr>
<td></td>
<td>(0.763)</td>
<td>(0.988)</td>
</tr>
<tr>
<td><strong>AGE_{it}</strong></td>
<td>-0.053</td>
<td>0.064***</td>
</tr>
<tr>
<td></td>
<td>(0.040)</td>
<td>(0.020)</td>
</tr>
<tr>
<td><strong>GDP_{it-1}</strong></td>
<td>-0.573</td>
<td>-1.227**</td>
</tr>
<tr>
<td></td>
<td>(0.516)</td>
<td>(0.601)</td>
</tr>
<tr>
<td><strong>GROWTH_{it}</strong></td>
<td>-0.071*</td>
<td>-0.053***</td>
</tr>
<tr>
<td></td>
<td>(0.036)</td>
<td>(0.019)</td>
</tr>
<tr>
<td><strong>POPULATION_{it}</strong></td>
<td>-0.879**</td>
<td>-1.112***</td>
</tr>
<tr>
<td></td>
<td>(0.378)</td>
<td>(0.393)</td>
</tr>
<tr>
<td><strong>LEGISLATURE_{it}</strong></td>
<td>-0.495*</td>
<td>-1.053**</td>
</tr>
<tr>
<td></td>
<td>(0.281)</td>
<td>(0.424)</td>
</tr>
<tr>
<td><strong>TENURE_{it}</strong></td>
<td>-0.820*</td>
<td>-0.396</td>
</tr>
<tr>
<td></td>
<td>(0.465)</td>
<td>(0.452)</td>
</tr>
<tr>
<td><strong>TENURE^2_{it}</strong></td>
<td>1.240**</td>
<td>0.694**</td>
</tr>
<tr>
<td></td>
<td>(0.489)</td>
<td>(0.327)</td>
</tr>
<tr>
<td><strong>TENURE^3_{it}</strong></td>
<td>-0.226***</td>
<td>-0.143**</td>
</tr>
<tr>
<td></td>
<td>(0.080)</td>
<td>(0.064)</td>
</tr>
<tr>
<td>Constant</td>
<td>13.922*</td>
<td>12.268**</td>
</tr>
<tr>
<td></td>
<td>(7.621)</td>
<td>(5.387)</td>
</tr>
<tr>
<td>Observations</td>
<td>2,882</td>
<td>2,882</td>
</tr>
</tbody>
</table>

Note: Cell entries are coefficient estimates; numbers in parentheses are estimated standard errors. Country dummies are omitted in this report. *** p < 0.01; ** p < 0.05; * p < 0.1 (two-tailed).
Figure 4.1 Scatter Plots of the Linear Predictions and Standard Errors Using the Full Sample and Limited Samples (POSTTENURE FATE)
Figure 4.2 Scatter Plots of the Linear Predictions and Standard Errors Using the Full Sample and Limited Samples (FAILURE MODE)
Chapter 5
Conclusion

My dissertation was initially motivated by several gaps in the international relations literature, particularly with respect to temporal variations in democratic and nondemocratic leaders’ political accountability to domestic audiences. In spite of the burgeoning interests in domestic politics and leadership survival as the primary determinants of international conflict, I acknowledged that the literature pays too much attention to cross-regime comparisons largely focusing on the conventional democratic accountability argument, while undermines within-regime temporal variations in leaders’ foreign policy interests and domestic constraints. Even though the approach of cross-regime comparisons has produced several prominent research programs such as democratic peace, democratic selection, and democratic victory, I argue that the clear-cut distinction between democracies and nondemocracies in terms of political accountability has yet to be fully examined.

In recent years, scholars have acknowledged this gap in the literature, and started to introduce more nuanced mechanisms of foreign policy accountability across regime types. One of the most notable efforts to fill this gap is to disentangle authoritarian regimes (Peceny et al. 2002; Lai and Slater 2006; Weeks 2008, 2012; Pickering and Kisangani 2010). These studies have found that the level of domestic accountability systematically varies depending on authoritarian regime types, so that some dictators respond to domestic political dissent and pressure differently than others. Another prominent challenge to the conventional democratic accountability argument was made by a series of studies on the impact of foreign policy outcome
on leadership survival across different regime types (Chiozza and Goemans 2004; Debs and Goemans 2010). These studies show that democratic leaders are not necessarily more answerable in terms of leadership survival for foreign policy failure than nondemocratic leaders.¹⁰⁵

One of the most recent efforts to fill this gap was made by Bak and Palmer (2011) that shows that democratic leaders are not necessarily more cautious of selecting their targets of international conflict, and military regimes are the driving force that makes democracies appear to be more selective. Excluding military regimes almost washes out democracies’ higher selectiveness making democracies not more selective than other types of dictatorships.

I strongly believe that the very reason why the literature based on the conventional democratic accountability argument faces a lot of challenges is that scholars started to acknowledge the shortcomings of the conventional approach as I do in my dissertation. My dissertation pushes further these recent scholarly challenges into a new direction that examines the temporal variations in the level of domestic constraints and leaders’ conflict behavior both within individual regime type and across different regimes types.

My dissertation research does not entirely deny the conventional wisdom that democratic leaders are more accountable to and more constrained by domestic audiences in their foreign policy than nondemocratic leaders. Rather, the primary research goal is to reveal any systematic temporal variations in the level of domestic accountability and constraints over the course of leadership tenure. Further, my dissertation investigates whether the temporal variations differ between democracies and nondemocracies.

¹⁰⁵ This striking finding challenges the conventional democratic accountability argument. However, notice that it is still debatable whether democracies are more likely to choose such wars that are not likely to affect their leadership survival than nondemocratic leaders.
The main finding of Chapter 2 is that democratic leaders are less constrained and more likely to initiate a military conflict earlier than later, while dictators are more constrained and less likely to do so earlier than later. This finding implies that leadership tenure alone could be a strong predictor of leaders’ conflict behavior. Chapter 3 further shows that even within democracies, leaders with strong electoral incentives and high electoral uncertainty are more constrained to initiate a military conflict. For example, I find that the U.S. presidents in the second term are systematically more prone to conflict initiation than those in the first term. Chapter 4 shifts my attention from tenure to time horizon. By supplementing the conventional Olsonian perspective with respect to post-tenure fate, I argue that when autocrats with short time horizons expect harsh post-tenure punishments, they are more constrained to pursue predatory foreign policy such as initiating a military conflict and obtaining rents from military mobilization and conflict outcome.

These findings can be summarized as follow: leadership tenure and time horizon systematically affect the level of foreign policy constraints on both democratic and nondemocratic leaders, and these temporal variations differ between democracies and nondemocracies. The main implications are (1) leader is not a constant theoretical unit over the course of tenure with respect to domestic political accountability and foreign policy constraints, (2) democratic leaders are not always more accountable to domestic audiences than nondemocratic leaders in foreign policy decision-making over the course of their tenure, and (3) leadership vulnerability constitutes a source of domestic constraints in foreign policy rather than a diversionary motive.
Even though my dissertation reveals several novel empirical patterns, it still suffers from many shortcomings. These shortcomings provide a set of specific research subjects for future studies rather than entirely discredit the empirical findings.

Regarding the main theory on the temporal variation in the level of domestic constraints, I admit that this theory takes multiple steps to reach the main hypotheses. Each step needs further investigation. Without scrutinizing the theoretical mechanism in each step, it is difficult to make a valid inference unless I rely on too many assumptions. I justify my contention that democratic leaders (dictators) are more (less) constrained to use force earlier than later using the information presented in the past studies and my own descriptive analyses. Yet a more desirable approach to justify this theoretical mechanism would be to create a direct measure of domestic constraints in foreign policy.

In addition, I equate leadership vulnerability to foreign policy constraints assuming that military conflict is always costly and burdensome to domestic audiences and also assuming that domestic audiences are always concerned more or less about their leaders’ predatory foreign policy behavior. A potential critique against these assumptions would be that in some foreign policy issues, domestic audiences might be willing to bear the costs of conflict and not be concerned about their leader’s rent-seeking behavior. In spite of my efforts to justify and relax these assumptions in formal and non-formal theoretical discussions, this critique is still valid on its own because some historical cases of military conflict such as wars against colonialism or nationalistic wars do not conform to my assumptions. Thus, I plan to examine whether domestic audiences’ perception on the costs and the nature of military conflict is different in some cases than others, and I plan to find such cases where domestic audiences are cooperative to their
leader’s war efforts even in times they have strong power to constrain their leader’s conflict behavior.

In addition, the formal model in Chapter 2 does not address strategic interactions with a potential foreign opponent. Debs and Goemans (2010) would be a nice example where leaders in two countries bargain over some goods in dispute, and at the same time these leaders interact with their own domestic audiences. Compared to their model, my formal model appears to overlook the interstate interactions. I plan to extend my formal model adding two more actors: a foreign leader and his or her own domestic audiences. By doing so, I expect to reveal a variety of implications about how a foreign leader reacts to the opponent leader’s domestic vulnerability and foreign policy constraints.

More specifically, I am interested in how a leader’s target selection mechanism differs depending on the leader’s domestic constraints as well as the opponent leader’s domestic constraints. My dissertation provides some insights on this topic: democratic leaders might be more cautious in selecting their targets of international conflict later in the election period than earlier in the honeymoon period, while dictators might be more selective earlier than later. Moreover, I conjecture that potential foreign enemies might be more likely exploit their opponent leaders’ domestic vulnerability by initiating a costly military conflict and making them give more policy concessions. In addition, economic sanctions might be more effective in times when the target leader is domestically vulnerable. These conjectures have yet to be examined in the conflict literature.

Even though my dissertation focuses on international conflict as an outcome of interest, my theory has potential to be used to predict the temporal variations in a leader’s domestic economic policies. The literature on the impact of political business cycles on economic policies
and outcomes is well established with regard to democratic countries (see Franzese 2002 for a comprehensive review of the literature). Yet it has yet to be examined whether any systematic temporal variations in economic policies and outcomes exists in dictatorships. Chapter 4 addresses this issue to some extent by revising the Olsonian perspective on the relationship between the length of time horizon and the level of economic predation.

In Chapter 3, I change the payoffs from war in the last decision node into a leader’s political payoffs rather than assuming that a country’s payoffs are the same as a leader’s. However, some utility functions are not yet perfectly oriented toward a leader’s political utilities. In spite of the conventional game-theoretic setup to equate a country’s payoffs to a leader’s, I argue that a political leader does not always serve the interests of domestic audiences. My theory on predatory conflict directly addresses this issue. For example, the pie as a bargaining outcome over goods in dispute is not entirely given to domestic audiences, nor to a leader. How much a leader takes from the pie is also determined by domestic bargaining. I plan to replicate the conventional bargaining model (e.g., Fearon 1995, 1997) distinguishing between a leader’s payoffs and domestic audiences’ with respect to international bargaining outcome.

Chapter 3 examines only the U.S. presidents, but I will extend the temporal dimension to other presidential democracies too. To measure a president’s sensitivity to potential political punishment, I might have to collect further data on presidential term limits.\footnote{For data currently available, see Beck et al. 2001; Baturo 2010.} In addition, I plan to replicate Haynes (2012) using the new extended data set.

Chapter 4 has the greatest potential for extension in the future. First of all, this particular research provides a new insight to the current literature on authoritarian time horizon. Post-tenure fate is an overlooked factor that could supplement the conventional Olsonian perspective.
(Olson 1993). Considering that harsh post-tenure punishment is a big concern particularly for dictators, I argue that dictators’ predatory policies could make them more cautious of predatory rent-seeking, and further argue that this is particularly true for dictators with short time horizons. Consistent with the overall theme of my dissertation, autocrats’ domestic vulnerability should be also understood as a source of constraints on their policy decision-making. The literature on authoritarian time horizon appears to put too much emphasis on autocrats’ incentives to maximize their private gains.

The main implication of the formal model is largely applicable to many types of domestic and foreign policies such as foreign policy concessions in exchange for foreign aid, tax rate, public investment, and capital mobilization. The example in Appendix D suffers from several empirical shortcomings such as missing data, reporting bias, and the weakness of the instrument. In the future, I plan to extend this particular analysis using different economic indicators that provide more accurate information about autocrats’ economic predation.

Regarding the potential theoretical extension of this project, the formal model needs further examinations. The propositions are drawn mainly focusing on two parameters, the likelihood of political survival and post-tenure punishment. However, the amount of public investment and the public economic productivity are also important parameters that are related to autocrats’ predatory behavior.

Methodologically, I will produce a separate paper that addresses many methodological issues in measuring authoritarian time horizon. In Chapter 4, I discuss the merits of using a two-stage method, but the potential weaknesses of a two-stage method are yet to be further investigated including the issue of using post-tenure information. Further, the first-stage diagnostics should be strengthened. I noticed that researchers have difficulty in using two-stage
methods because statistical packages allow only a limited set of models. Even though developing a more general statistical tool for a wide variety of two-stage models might be an extremely difficult, I believe that this effort would benefit researchers who need more flexibility in their two-stage models.

Finally, I hope to find historical cases that are consistent with my theories in this dissertation as well as cases that are contradictory to my thesis. By doing so, I expect to figure out how to further revise and advance the current research. In addition, I expect to advance the research program on domestic sources of international conflict by identifying historical anomalies that the conventional democratic accountability argument cannot explain.
Appendix A

Proofs for the Formal Model from Chapter 2

This appendix shows the proofs for Proposition 1-4, and the summary of a set of perfect Bayesian equilibria in the range of all possible parameter space.

Proof of Proposition 1. \((s - w < 1 - \kappa)\)

When the domestic audience’s payoffs for replacement attempt are sufficiently small \((s - w < 1 - \kappa)\), the domestic audience’s optimal strategy is not dependent on the incumbent’s decision on conflict initiation. Regardless of the presence or absence of conflict initiation, the domestic audience is always better off by not attempting to replace the incumbent: i.e., \(s - w < 1 - \nu < 1\). Knowing that this is true, the incumbent’s optimal strategy would be to initiate a conflict because this is the best possible scenario for the incumbent that significantly increases his initial power share without any replacement threat: i.e., \(x + \nu x > x\).

This pure strategy perfect Bayesian equilibrium is unique because there exist a set of parameter values that satisfy \(s - w < 1 - \nu\). The smallest possible value for \(1 - \nu\) is \(1 - \kappa\), so for all possible values of \(\nu\), there always exist \(s\) and \(w\) that meets \(s - w < 1 - \nu\).

Proof of Proposition 2. \((s - w \geq 1 - \kappa)\)

When the domestic audience’s payoffs for replacement attempt are sufficiently large \((s - w \geq 1 - \kappa)\), the replacement threat is highly credible \textit{ex ante}. Under this condition, the domestic audience is always better off by attempting replace the incumbent only if the incumbent initiates
a military conflict. Notice that even though a replacement attempt gives the domestic audience sufficiently large payoffs, they are still smaller than those from the payoffs from keeping the incumbent in office in the absence of conflict: $U_D(a_R, m_C) < U_D(a_{-R}, m_{-C})$. This strategy could be part of an equilibrium only if the incumbent initiates a military conflict. However, recall the assumption that $x + vx \in (0,1)$, implying that the incumbent’s payoffs from military conflict cannot exceed the full share of power because one represents the situation where the incumbent possesses all the power of his country. Given the domestic audience does want to replace the incumbent, this assumption suggests that the incumbent has an incentive to deviate from conflict initiation ($m_C$) to the peaceful status quo ($m_{-C}$) because $U_I(a_R, m_C) < U_I(a_{-R}, m_{-C})$: i.e., $(1 - s)(x + vx) < x \because x + vx < 1$. In other words, there exists a set of strategies that gives the better payoffs to the incumbent, and thus this set of strategies does not meet the incentive compatibility condition.

**Proof of Proposition 3.**

$$1 - \kappa \leq s - w < 1 - \kappa$$ (1)

When the domestic audience’s payoffs for replacement attempt are moderately large such that Equation (1) is satisfied, there exist two perfect Bayesian equilibria depending on the size of $\kappa$.

**Lemma 1.** The range of uncertainty over the level of predation is sufficiently large.

$$\left(\kappa - \kappa\right) > s(\kappa - 1 + s - w)$$ (2)

**Proof of Lemma 1.**

Inequality (2) can be rewritten as the following,
\( \bar{\kappa}(1 - s) - \underline{\kappa} + s(1 - s + w) > 0 \)  \hspace{1cm} (3)

Equation (1) shows that \( \underline{\kappa} < 1 - s - w \leq \bar{\kappa} \). Inserting the two boundary values \( (\underline{\kappa}, \bar{\kappa}) \) into Equation (3) shows that Equation (3) is always true given the continuous possible range of \( (1 - s - w) \) because

\[
\bar{\kappa}(1 - s) - \underline{\kappa} + s(1 - s + w) = \bar{\kappa} - \underline{\kappa} > 0.
\]

\[
\bar{\kappa}(1 - s) - \underline{\kappa} + s(1 - s + w) = (1 - s)(\bar{\kappa} - \underline{\kappa}) > 0.
\]

**Lemma 2.** There exists \( \kappa^* \) such that

\[
\underline{\kappa} < \kappa^* \leq 1 - s + w \leq \bar{\kappa}, \hspace{1cm} (4)
\]

\[
\kappa^* = \frac{\bar{\kappa} - s(1 + \bar{\kappa})(\bar{\kappa} - 1 + s - w)}{\bar{\kappa}}. \hspace{1cm} (5)
\]

**Proof of Lemma 2.**

Inequality (4) can be rewritten as the following,

\[
\left[1 - \frac{s(1 + \bar{\kappa})}{\bar{\kappa}}\right](\bar{\kappa} - 1 + s - w) \leq 0 \hspace{1cm} (6)
\]

The first term of the left side of Equation (6) is always smaller than zero: i.e., \( \left[1 - \frac{s(1 + \bar{\kappa})}{\bar{\kappa}}\right] < 0 \Rightarrow \bar{\kappa} < \frac{s}{1-s} \). This is true because \( x + vx \in (0,1) \ \forall v, \) and \( x = 1 - s \). The second term is always greater than or equal to zero because of Inequality (1). Thus, Inequality (6) is always true. In other words, there exists a threshold \( \kappa^* \) such that \( \underline{\kappa} < \kappa^* \leq 1 - s + w \), and this threshold divides the equilibrium of Proposition 3 into two parts.
The posterior probability that the domestic audience attempts to replace the incumbent given conflict initiation is

\[ \gamma_c^* = \Pr(s - w > 1 - v) = \frac{s - w - 1 + \kappa}{\bar{\kappa} - \kappa} \]  

(7)

Given that the condition (1) under Proposition 3 is true, \( \gamma_c^* = 0 \) if \( s - w = 1 - \kappa \), and \( 0 < \gamma_c^* < 1 \) if \( 1 - \kappa < s - w < 1 - \kappa \).

The equilibrium probability of conflict initiation is \( p^* = \Pr[r(1 - s)(x + vx) + (1 - r)(x + vx)] \). By Lemma 1 and 2 and some algebra, the following constitutes the incumbent’s equilibrium probabilities:

\[ p^* = 0 \text{ if } \kappa \geq \kappa^*, \text{ and} \]

\[ p^* = \frac{\bar{\kappa}(\kappa - \kappa) - s(\bar{\kappa} + 1)(\bar{\kappa} - 1 + s - w)}{(\bar{\kappa} - \kappa)[(\bar{\kappa} - \kappa) - s(\bar{\kappa} - 1 + s - w)]} \text{ if } \kappa < \kappa^* \]  

(8)

**Proof of Proposition 4.**

By differentiating \( p^* \) in (8) with respect to \( w \) and \( s \), I obtain

\[ \frac{\partial p^*}{\partial w} = \frac{2s^2(\bar{\kappa} + 1)(-w + s + \bar{\kappa} - 1) + s(\bar{\kappa} - \kappa)}{(\bar{\kappa} - \kappa)[-s(-w + s + \bar{\kappa} - 1) + (\bar{\kappa} - \kappa)]^2} > 0 \]

\[ \frac{\partial p^*}{\partial s} = \frac{-(2s - w + \bar{\kappa} - 1)(\bar{\kappa} - \kappa)}{(\bar{\kappa} - \kappa)[-s(-w + s + \bar{\kappa} - 1) + (\bar{\kappa} - \kappa)]^2} < 0 \]
Appendix B

Proofs for the Formal Model from Chapter 3

This appendix demonstrates the equilibria of the incomplete information game more in detail along with mathematical proofs. Four different perfect Bayesian equilibria are drawn based on the relative values of the parameters and a couple of cut points.

[1] **Type 1 (Case 1, 2, and 3)**: \( v_1 - ks > -as \) and \( k > a \)

**Case 1**: \( r^* < v_1 - ks \leq 0 \), where \( r^* = (v_1 - ks + as)(v_2 - c_2) - as \).

Under the conditions above, the following beliefs and strategies constitute a perfect Bayesian equilibrium to the game.

1. \( L_1 \) plays \{CH, SF\} if \( w_1 > -as \), and \{CH, BD\} otherwise.
2. \( L_2 \)'s posterior belief that \( w_1 > -as \) given that \( L_1 \) challenges is \( r \).
   \[ r = \frac{v_1 - ks + as}{ks - ks} \]
3. \( L_2 \) plays CD.

**Proof 1**.

At the final node, \( L_1 \) always prefers SF to BD whenever \( w_1 > -as \). \( L_2 \)'s posterior belief suggests that \( L_1 \) plays SF with probability \( r \). \( r \) is derived from this condition and Bayes’ rule.
At the second node, $L_2$ decides either to concede with a payoff of zero or to resist with a probabilistic payoff ($w_2$ with probability $r$, and 1 with probability $1 - r$). Thus, the expected utility from resisting is

$$EU_2(RS) = r \cdot w_2 + (1 - r)$$

If $L_2$’s expected utility of resisting is greater than $EU_2(CD) = 0$, he prefers $RS$ to $CD$. Thus, the probability that $L_2$ resists is

$$Prob_2(RS) = u = Prob(r \cdot w_2 + (1 - r) > 0) = Prob\left(w_2 > \frac{r - 1}{r}\right)$$

$$= Prob\left(w_2 > \frac{v_1 - ks + as}{v_1 - ks + as}\right)$$

$$= \frac{(v_2 - c_2)(v_1 - ks + as) - (v_1 - ks + as)}{(c_2 - c_2)(v_1 - ks + as)}$$

Equation (3) shows that $L_2$ always concedes under the following condition because $Prob_2(RS) = 0$. 

\[ Prob_2(RS) = 0. \]
max(w_2) = v_2 - c_2 \leq \frac{r - 1}{r} \tag{4}

The condition to satisfy the inequality (4) is \( \tau^* < v_1 - ks \leq 0 \), where \( \tau^* = (v_1 - ks + asr) - c2as \). Thus, if condition (4) holds, \( L_2 \) always plays CD and \( L_1 \) always makes a challenge because \( EU_1(CH) \) is always greater than \( EU_1(SQ) \) under this condition.

**Case 2:** \( \tau^{**} < v_1 - \bar{k}s \leq \tau^* \),

where \( \tau^* = (v_1 - ks + as)(v_2 - c_2) - as \), and

\[
\tau^{**} = (v_1 - ks + as) \left[ (v_2 - c_2) - \frac{c_2 - c_2}{as + 1} \right] - as .
\]

Under the conditions above, the following beliefs and strategies constitute a perfect Bayesian equilibrium to the game.

1. \( L_1 \) plays \( \{CH, SF\} \) if \( w_1 > -as \), and \( \{CH, BD\} \) otherwise.

2. \( L_2 \)'s posterior belief that \( w_1 > -as \) given that \( L_1 \) challenges is \( r \).

\[
r = \frac{v_1 - ks + as}{ks - ks}
\]

3. \( L_2 \) plays RS under the following condition, and CD otherwise.

\[
w_2 > \frac{v_1 - ks + as}{v_1 - ks + as}
\]
Proof 2.

As in Type 1, $L_1$ always prefers $SF$ to $BD$ whenever $w_1 > -as$. $L_2$’s posterior belief suggests that $L_1$ plays $SF$ with probability $r$. $r$ is derived from this condition and Bayes’ rule. Equation (3) shows the ex ante probability that $L_2$ resists is

$$u = \text{Prob}(r \cdot w_2 + (1 - r) > 0) = \frac{(v_2 - c_2)(v_1 - ks + as) - (v_1 - \bar{k}s + as)}{(c_2 - c_2)(v_1 - ks + as)}$$

$L_1$ considers this probability ($u$) when he makes the challenge. $L_1$ expects $L_2$ to play $RS$ with probability $u$ and $CD$ with probability $1 - u$. If $L_1$ makes the challenge even when $w_1 < -as$, all types of $L_1$ makes the challenge in equilibrium. The following equations are $L_1$’s expected utilities of $CH$ when $w_1 < -as$.

$$EU_1(CH \mid w_1 < -as) = u \cdot (-as) + (1 - u) \cdot 1$$

$$= 1 - u(as + 1)$$

$$= 1 - (as + 1) \left( \frac{(v_2 - c_2)(v_1 - ks + as) - (v_1 - \bar{k}s + as)}{(c_2 - c_2)(v_1 - ks + as)} \right)$$

(5)

$L_1$ makes the challenge when $w_1 < -as$ if $EU_1(CH \mid w_1 < -as) > EU_1(SQ) = 0$.

The condition satisfying the inequality is $\tau^{**} \leq v_1 - \bar{k}s \leq \tau^*$, where

$$\tau^{**} = (v_1 - ks + as) \left[ (v_2 - c_2) - \frac{(c_2 - c_2)}{as + 1} \right] - as.$$
The condition **Type 2** (3) in equilibrium was already shown in equation (3) above.

**Case 3**: \( v_1 - \bar{k}s < \tau^* \),

where \( \tau^* = (v_1 - \bar{k}s + as) \left[ (v_2 - c_2) - \frac{(c_2 - c_2)}{as + 1} \right] - as \).

Under the conditions above, the following beliefs and strategies constitute a perfect Bayesian equilibrium to the game.

1. \( L_1 \) plays \( \{ CH, SF \} \) if \( w_1 > -as \),
   \( \{ CH, BD \} \) if \( \tau^* < w_1 \leq -as \), and
   \( \{ SQ, BD \} \) if \( v_1 - \bar{k}s < w_1 \leq \tau^* \).

2. \( L_2 \)'s posterior belief that \( w_1 > -as \) given that \( L_1 \) challenges is \( \gamma \).

   \[ \gamma = \frac{v_1 - \bar{k}s + as}{v_1 - \bar{k}s - \tau^*} \]

3. \( L_2 \) plays \( RS \) under the following condition, and \( CD \) otherwise.

   \[ w_2 > \frac{as + \tau^*}{v_1 - \bar{k}s + as} \]

**Proof 3.**

\( L_1 \) always prefers \( SF \) to \( BD \) whenever \( w_1 > -as \). \( L_2 \)'s posterior belief that \( w_1 > -as \) is denoted as \( \gamma \) which is different from \( r \) in Type 1 and 2. Notice that the initial condition for this type restricts \( w_1: v_1 - \bar{k}s < \tau^* \). \( \gamma \) is derived from \( L_1 \)'s equilibrium strategies and Bayes’s rule.
For this type, the probability that \( L_1 \) resists in equation (3) should be rewritten as follows using \( \gamma \) instead of \( r \).

\[
\text{Prob}_2(RS) = \mu = \text{Prob}(\gamma \cdot w_2 + (1 - \gamma) > 0) = \text{Prob}(w_2 > \frac{\gamma - 1}{\gamma})
\]

\[
= \text{Prob}\left(w_2 > \frac{as + \tau^{**}}{v_1 - ks + as}\right)
\]

\[
= \frac{(v_2 - c_2)(v_1 - ks + as) - (\tau^{**} + as)}{(c_2 - c_2)(v_1 - ks + as)}
\]

(6)

To show that \( L_1 \)'s strategy at the first node is sequentially rational, \( L_1 \) should be indifferent between \( CH \) and \( SQ \) when \( w_1 = \tau^{**} \). Because \( \tau^{**} < -as \), \( L_1 \) is indifferent under the following condition.

\[
EU_1(CH \mid w_1 < -as) = u \cdot (-as) + (1 - u) \cdot 1 = 0
\]

\(\Leftrightarrow \left(u = \frac{1}{1 + as}\right)\)  

(7)

Then, equating \( \mu \) with \( u \) shows that the cutpoint \( \tau^{**} \) is the same as defined above ensuring that the derivation of the cut point is correct.

\[
u = \frac{1}{1 + as} = \mu = -p + \frac{p - ms - \tau^{**}}{p - ms + as}
\]

\(\Leftrightarrow \tau^{**} = (p - ms + as) \cdot \left(\frac{as}{as + 1} - p\right) - as\)
[2] **Type 2**: $v_1 - ks \leq -as$

**Case 4**: $v_1 - ks \leq -as$ and $k > a$

Under the conditions above, the following beliefs and strategies constitute a perfect Bayesian equilibrium to the game.

1. $L_1$ plays $\{SQ, BD\}$
2. $L_2$’s posterior belief that $w_1 > -as$ given that $L_1$ challenges is $r$.
   
   $$r = 0$$

3. $L_2$ plays $RS$.

**Proof 4.**

When $v_1 - ks < -as$, it is impossible that $w_1 > -as$. So all types of $L_1$ back down at the final node. Also $L_2$’s posterior belief that $L_1$ stands firm given that $L_1$ challenges is zero. Thus, $L_2$’s optimal strategy for these types of $L_1$ is always $RS$, and in turn $L_1$ prefers $SQ$ to $CH$. 

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[ ComparativeStatics ]

**Case 1 & 2:** $L_1$ always challenges. (Let $s_1$ and $s_2$ denote the range of $s$ for these types respectively.)

**Case 3:** Let $s_3$ denote the range of $s$ for this type. The probability that State 1 makes the challenge is $\text{Prob}_1 (w_1 > \tau^{**})$

\[
\text{Prob}_1(CH) = \text{Prob}_1 \left[ w_1 > (v_1 - ks + as) \left( \frac{v_2 - c_2}{as + 1} - \frac{(c_2 - c_2)}{as + 1} \right) - as \right] = \frac{(v_1 - ks + as) \left[ 1 - \frac{v_2 - c_2}{as + 1} + \frac{(c_2 - c_2)}{as + 1} \right]}{ks - ks}, \text{ and (8)}
\]

\[
\frac{\partial \text{Prob}_1(CH)}{\partial s} = \frac{v_1 as (v_2 - c_2) - v_1 c_2 - v_1 as - v_1}{(k-k)(as+1)s^2} < 0 \text{ (9)}
\]

**Case 4:** $L_1$ always stays in the status quo. (Let $s_4$ denote the range of $s$ for this type.)

The following figure shows the corresponding value of the level of sensitivity for each case of perfect Bayesian equilibrium.

<table>
<thead>
<tr>
<th>Case 1 ($s_1$)</th>
<th>Case 2 ($s_2$)</th>
<th>Case 3 ($s_3$)</th>
<th>Case 4 ($s_4$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>$\frac{v_1 - \tau^*}{k}$</td>
<td>$\frac{v_1 - \tau^{**}}{k}$</td>
<td>$\frac{v_1}{k-a}$</td>
</tr>
</tbody>
</table>

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As the adjusted level of sensitivity increases (\( s_1 < s_2 < s_3 < s_4 \)), the probability of making a challenge is weakly decreasing because \( \text{Prob}_1 (w_1 > \tau^*) \) is a strictly decreasing function of \( s_3 \) for Case 3 according to the partial derivative in equation (9).

Notice that if \( k \leq a \), the condition for Type 1 (\( v_1 - ks > -as \)) always holds because both \( v_1 \) and \( s \) are positive. Then, Type 2 where \( v_1 - ks \leq -as \) does not even exist in the equilibrium. In other words, this condition restricts the equilibrium concepts to those cases where the maximum possible payoff from war is always greater than the payoffs from backing down. Thus, there is no equilibrium where \( \text{Prob}_1(CH) = 0 \) under this condition. However, the primary implication on the relationship between \( s \) and \( \text{Prob}_1(CH) \) remains the same: i.e., as the level of sensitivity increases, the likelihood of conflict initiation decreases.
Appendix C

The Olsonian Proposition from Chapter 4

This appendix illustrates how Proposition C.1 is different from the proposition implied by the Olsonian perspective. Equation (C.1) and (C.2) summarize the Olsonian implication formally, and incorporates it into Equation (5) in the main text to find the optimal relationship between the level of predation ($k$) and the expected magnitude of post-tenure punishment ($x$).

**Proposition C.1 (Olsonian Perspective)**

\[
\frac{\partial V}{\partial k} > 0 \text{ if } s \in [0, s^*] \quad \Rightarrow \quad \frac{\partial k}{\partial x} > 0 ; \quad \text{s. t.} \quad \frac{\partial V}{\partial k} \frac{\partial k}{\partial x} > 0 \quad (C.1)
\]

\[
\frac{\partial V}{\partial k} < 0 \text{ if } s \in (s^*, 1] \quad \Rightarrow \quad \frac{\partial k}{\partial x} < 0 ; \quad \text{s. t.} \quad \frac{\partial V}{\partial k} \frac{\partial k}{\partial x} > 0 \quad (C.2)
\]

According to the Olsonian perspective, when the likelihood of leadership survival is sufficiently low (i.e., when the likelihood of leadership failure is sufficiently high or when an autocrat’s time horizon is sufficiently short), $\frac{\partial V}{\partial k} > 0$. To meet the condition in Equation (5), $\frac{\partial k}{\partial x}$ should be positive or the level of predation ($k$) should be an increasing function of the expected magnitude of post-tenure punishment ($x$). In this Olsonian world, autocrats with short time horizons would become more predatory when they expect harsh post-tenure punishments than otherwise. This implication suggests that autocrats who are already vulnerable to violent domestic challenges would want to become more predatory in office in order to compensate their dire post-tenure fate.
When the likelihood of leadership survival is sufficiently high (i.e., when the likelihood of leadership failure is sufficiently low or when an autocrat’s time horizon is sufficiently long), \( \frac{\partial v}{\partial k} < 0 \). To meet the condition in Equation (5), \( \frac{\partial k}{\partial x} \) should be negative or the level of predation \( (k) \) should be a decreasing function of the expected magnitude of post-tenure punishment \( (x) \). In this situation, autocrats with long time horizons would be better off by reducing the level of predation, and they would become less predatory when they expect harsh post-tenure punishments than otherwise. While autocrats with solid dictatorial power and long time horizons might want to guarantee their post-tenure safety by depriving potential punishers of resources necessary to punish them, the Olsonian perspective suggests that they want to be more benevolent when they expect harsh post-tenure punishments.
Appendix D

Testing Hypotheses on Tax Revenue from Chapter 4

The past empirical studies employing Olson’s logic tends to focus on economic issues other than taxation. The formal model in McGuire and Olson (1996), however, considers the optimal tax rate maximizing a leader’s private good production as the main parameter that illustrates a leader’s predation, even though the government’s public investment or public good provision could be another indicator that determines the level of predation. In my formal model, the parameter $k$ (the level of predation) in my formal model is equivalent to the ‘tax rate’ parameter in McGuire and Olson (1996), and $G$ (public investment) is a parameter that is assumed to be independent of $k$. Thus, tax revenue per capita would be a more desirable outcome of interest that is directly associated with Implication 1 of my formal model. The first hypothesis for empirical test is as follows.

D.1 Hypothesis

The likelihood of unsafe and irregular leadership failure has a negative relationship with the amount of tax revenue per capita in authoritarian regimes.

D.2 Research Design

The following is the two-stage research design for tax revenue per capita as the second-stage dependent variable. The reduced form equations for the first and second stages are
First Stage: \( S_{it} = \alpha + \beta I_{it} + \gamma X_{it} + \delta T_{it} + \epsilon_{it} \).

Second Stage: \( TAX_{it} = a + b IV_{it} + c TAX_{it-1} + d X_{it} + h D_{i} + u_{it} \).

The research design is the same as that used in Chapter 4 except the following.

\( TAX_{it} \) indicates tax revenue per capita which is measured by total tax revenue \(^{107}\) divided by total population \(^{108}\) in a given year. \(^{109}\) \( X_{it} \) includes log \( GDP_{it-1} \) per capita, economic \( GROWTH_{it} \) and log \( POPULATION_{it} \) using the Penn World Table database (Alan et al. 2009); \( POLITY_{it-1} \) score (Marshall and Jaggers 2009); \( MILITARY_{it} \) and \( MONARCHY_{it} \) dummies (Cheibub et al. 2010); \( OIL\&GAS_{it} \) rents per capita (Ross 2008) \(^{110}\); the total amount of \( GRANT_{it-1} \) given to a country (OECD 2008); a lagged variable measuring the number of \( CIVIL CONFLICT_{S_{it-1}} \) (Gleditsch et al. 2002). \( \tau_{it} \) includes \( TENURE_{it} \) (logged number of years in office up to time \( t \) using the Archigos database), \( TENURE_{it}^2 \), and \( TENURE_{it}^3 \). \( D_{i} \) is country fixed effects, and \( TAX_{it-1} \) is a lagged dependent variable. The second-stage equation is estimated with OLS.

**D.3 Results**

The second-stage results show significant statistical evidence supporting my hypotheses. The coefficient estimates for the likelihood of irregular or unsafe leadership failure are negative and significant, implying that short time horizons in terms of the likelihood of irregular or unsafe leadership failure appear to significantly reduce the level of tax revenue. On the other hand, the

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\(^{107}\) It is measured by constant 1995 US dollars. See the IMF’s GFS data set.

\(^{108}\) See the World Bank’s *World Development Indicators*.

\(^{109}\) The data are drawn from Morrison (2009).

\(^{110}\) The existence of significant non-tax revenues would make autocrats more able to protect themselves against potential domestic threats (See for example Morrison 2009; Bueno de Mesquita and Smith 2010).
coefficient estimates for regular or safe leadership failure are positive and significant, implying that authoritarian leaders with short time horizons in terms of the likelihood of regular or safe leadership failure appear to significantly increase the level of tax revenue. Recall that Olson’s thesis suggests that dictators with short time horizons have an incentive to become as much predatory as possible. However, my empirical findings suggest that not all dictators with short time horizons do so, but only dictators with the high likelihood of regular and safe leadership failure do so.

The empirical tests significantly suffer from missing data, and country fixed effects further reduce the number of observations used in this analysis. Further, the coefficient estimates of many of the control variables are insignificant, implying that other important predictors of tax revenue in authoritarian regimes might be missing in this analysis. The purpose of this analysis is to test the reliability of my theory shown in Chapter 4, and to demonstrate how to apply the theoretical implications to other policy areas. To this end, the empirical finding shows some suggestive evidence that short time horizons do not necessarily exacerbate an autocrat’s domestic predation when the short time horizons are associated with harsh post-tenure punishments.
Table D.1. The First Stage Multinomial Logit Regression on Different Types of Leadership Failure, 1961~1999

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>(1) POSTTENURE FATE</th>
<th></th>
<th>(2) FAILURE MODE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Outcome 1</td>
<td>Outcome 2</td>
<td>Outcome 1</td>
<td>Outcome 2</td>
</tr>
<tr>
<td></td>
<td>SAFE</td>
<td>UNSAFE</td>
<td>REGULAR</td>
<td>IRREGULAR</td>
</tr>
<tr>
<td><strong>UNREST</strong>&lt;sub&gt;it-1&lt;/sub&gt;</td>
<td>0.070***</td>
<td>0.103***</td>
<td>0.093***</td>
<td>0.089***</td>
</tr>
<tr>
<td></td>
<td>(0.021)</td>
<td>(0.021)</td>
<td>(0.026)</td>
<td>(0.020)</td>
</tr>
<tr>
<td><strong>MILITARY</strong>&lt;sub&gt;it&lt;/sub&gt;</td>
<td>0.407**</td>
<td>0.522**</td>
<td>0.495*</td>
<td>0.633**</td>
</tr>
<tr>
<td></td>
<td>(0.204)</td>
<td>(0.253)</td>
<td>(0.261)</td>
<td>(0.255)</td>
</tr>
<tr>
<td><strong>MONARCHY</strong>&lt;sub&gt;it&lt;/sub&gt;</td>
<td>0.507*</td>
<td>-0.542</td>
<td>-0.039</td>
<td>-0.013</td>
</tr>
<tr>
<td></td>
<td>(0.290)</td>
<td>(0.503)</td>
<td>(0.707)</td>
<td>(0.472)</td>
</tr>
<tr>
<td><strong>GDP</strong>&lt;sub&gt;it-1&lt;/sub&gt;</td>
<td>0.091</td>
<td>-0.414***</td>
<td>0.207</td>
<td>-0.362***</td>
</tr>
<tr>
<td></td>
<td>(0.133)</td>
<td>(0.136)</td>
<td>(0.239)</td>
<td>(0.137)</td>
</tr>
<tr>
<td><strong>GROWTH</strong>&lt;sub&gt;it&lt;/sub&gt;</td>
<td>-0.019*</td>
<td>-0.008</td>
<td>-0.022</td>
<td>-0.010</td>
</tr>
<tr>
<td></td>
<td>(0.011)</td>
<td>(0.012)</td>
<td>(0.014)</td>
<td>(0.012)</td>
</tr>
<tr>
<td><strong>POPULATION</strong>&lt;sub&gt;it&lt;/sub&gt;</td>
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<td>-0.146**</td>
<td>0.059</td>
<td>-0.187***</td>
</tr>
<tr>
<td></td>
<td>(0.069)</td>
<td>(0.072)</td>
<td>(0.100)</td>
<td>(0.071)</td>
</tr>
<tr>
<td><strong>OIL&amp;GAS</strong>&lt;sub&gt;it&lt;/sub&gt;</td>
<td>-0.000</td>
<td>0.000</td>
<td>-0.000</td>
<td>-0.000</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td><strong>GRANT</strong>&lt;sub&gt;it-1&lt;/sub&gt;</td>
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<td>-0.000</td>
<td>-0.000</td>
<td>-0.000</td>
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<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td><strong>POLITY</strong>&lt;sub&gt;it-1&lt;/sub&gt;</td>
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<td>0.020</td>
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<td>(0.017)</td>
<td>(0.022)</td>
<td>(0.020)</td>
<td>(0.021)</td>
</tr>
<tr>
<td><strong>CIVIL CONFLICTS</strong>&lt;sub&gt;it&lt;/sub&gt;</td>
<td>0.030</td>
<td>0.294**</td>
<td>-0.041</td>
<td>0.378***</td>
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<tr>
<td></td>
<td>(0.164)</td>
<td>(0.143)</td>
<td>(0.199)</td>
<td>(0.130)</td>
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<tr>
<td><strong>TENURE</strong>&lt;sub&gt;it&lt;/sub&gt;</td>
<td>-0.217</td>
<td>-0.713</td>
<td>-0.756</td>
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<td>(0.564)</td>
<td>(0.625)</td>
<td>(0.621)</td>
<td>(0.628)</td>
</tr>
<tr>
<td><strong>TENURE</strong>&lt;sub&gt;2&lt;/sub&gt;</td>
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<td>0.099</td>
<td>0.284</td>
<td>0.307</td>
</tr>
<tr>
<td></td>
<td>(0.383)</td>
<td>(0.493)</td>
<td>(0.483)</td>
<td>(0.488)</td>
</tr>
<tr>
<td><strong>TENURE</strong>&lt;sub&gt;3&lt;/sub&gt;</td>
<td>0.029</td>
<td>0.030</td>
<td>-0.043</td>
<td>-0.034</td>
</tr>
<tr>
<td></td>
<td>(0.075)</td>
<td>(0.100)</td>
<td>(0.105)</td>
<td>(0.100)</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.831**</td>
<td>2.488**</td>
<td>-3.890*</td>
<td>2.490**</td>
</tr>
<tr>
<td></td>
<td>(1.315)</td>
<td>(1.201)</td>
<td>(2.344)</td>
<td>(1.131)</td>
</tr>
<tr>
<td>Observations</td>
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<td>2,380</td>
<td>2,380</td>
<td>2,380</td>
</tr>
<tr>
<td>Log Likelihood</td>
<td>-927.67</td>
<td>-825.87</td>
<td></td>
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<tr>
<td>Pseudo R²</td>
<td>0.0702</td>
<td>0.0907</td>
<td></td>
<td></td>
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</tbody>
</table>

Note: Cell entries are coefficient estimates; numbers in parentheses are estimated standard errors.
*** p < 0.01; ** p < 0.05; * p < 0.1 (two-tailed).
Table D.2. The Second Stage Fixed Effects OLS on Tax Revenue, 1972–1999

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>(1) POSTTENURE FATE</th>
<th>(2) FAILURE MODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>$SAFE_{xb}$ ($REG_{xb}$)</td>
<td>130.382*</td>
<td>304.254**</td>
</tr>
<tr>
<td></td>
<td>(70.107)</td>
<td>(149.939)</td>
</tr>
<tr>
<td>$SAFE_{se}$ ($REG_{se}$)</td>
<td>413.576</td>
<td>276.815*</td>
</tr>
<tr>
<td></td>
<td>(253.464)</td>
<td>(145.104)</td>
</tr>
<tr>
<td>$UNSAFE_{xb}$ ($IRREG_{xb}$)</td>
<td>-107.817**</td>
<td>-325.824**</td>
</tr>
<tr>
<td></td>
<td>(50.454)</td>
<td>(154.443)</td>
</tr>
<tr>
<td>$UNSAFE_{se}$ ($IRREG_{se}$)</td>
<td>-291.083**</td>
<td>-252.887</td>
</tr>
<tr>
<td></td>
<td>(138.484)</td>
<td>(155.655)</td>
</tr>
<tr>
<td>$TAX_{it-1}$</td>
<td>0.785***</td>
<td>0.782***</td>
</tr>
<tr>
<td></td>
<td>(0.139)</td>
<td>(0.140)</td>
</tr>
<tr>
<td>$MILITARY_{it}$</td>
<td>-35.441</td>
<td>16.380</td>
</tr>
<tr>
<td></td>
<td>(24.749)</td>
<td>(11.321)</td>
</tr>
<tr>
<td>$MONARCHY_{it}$</td>
<td>-29.409</td>
<td>110.065*</td>
</tr>
<tr>
<td></td>
<td>(48.553)</td>
<td>(57.278)</td>
</tr>
<tr>
<td>$GDP_{it-1}$</td>
<td>44.309</td>
<td>-71.809</td>
</tr>
<tr>
<td></td>
<td>(39.464)</td>
<td>(54.992)</td>
</tr>
<tr>
<td>$GROWTH_{it}$</td>
<td>0.725</td>
<td>2.368</td>
</tr>
<tr>
<td></td>
<td>(1.061)</td>
<td>(1.565)</td>
</tr>
<tr>
<td>$POPULATION_{it}$</td>
<td>50.137</td>
<td>-41.585</td>
</tr>
<tr>
<td></td>
<td>(61.961)</td>
<td>(36.605)</td>
</tr>
<tr>
<td>$OIL&amp;GAS_{it}$</td>
<td>0.006</td>
<td>0.012</td>
</tr>
<tr>
<td></td>
<td>(0.022)</td>
<td>(0.026)</td>
</tr>
<tr>
<td>$GRANT_{it-1}$</td>
<td>0.002</td>
<td>-0.007</td>
</tr>
<tr>
<td></td>
<td>(0.035)</td>
<td>(0.048)</td>
</tr>
<tr>
<td>$POLICY_{it-1}$</td>
<td>-6.282</td>
<td>-14.143*</td>
</tr>
<tr>
<td></td>
<td>(4.513)</td>
<td>(8.130)</td>
</tr>
<tr>
<td>$CIVIL\ CONFICTS_{it-1}$</td>
<td>8.337</td>
<td>125.678**</td>
</tr>
<tr>
<td></td>
<td>(11.301)</td>
<td>(61.612)</td>
</tr>
<tr>
<td>Constant</td>
<td>-777.188</td>
<td>830.072*</td>
</tr>
<tr>
<td></td>
<td>(691.326)</td>
<td>(435.366)</td>
</tr>
<tr>
<td>Observations</td>
<td>670</td>
<td>670</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.938</td>
<td>0.939</td>
</tr>
</tbody>
</table>

Note: Cell entries are coefficient estimates; numbers in parentheses are estimated standard errors. 
*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$ (two-tailed).
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