PEACE THROUGH INSECURITY:

Tenure and International Conflict

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Abstract

The literature on diversionary war has long argued that a leader's tenure considerations play an important role in international conflict behavior. However, for the diversionary use of force to be rational, international conflict must in turn affect the leader's tenure. We use a two-stage probit model on a new data set of all leaders between 1919 and 1992 to examine this reciprocal relation between the probability of losing office and the probability of crisis initiation. Against theories of the diversionary use of force, we find that an increase in the risk of losing office makes leaders less likely to initiate a crisis, and that an increase in the risk of an international crisis makes leaders more likely to lose office. Our results also suggest that democracies are overall less likely to initiate a crisis because of the domestic political insecurity of democratic leaders.

The causes of war and the conditions of peace continue to be the fundamental puzzle in the study of International Relations. With the advent of game theoretic modeling, the theoretical literature has begun to pay new attention to the incentives and constraints of leaders in their decisions about international conflict. Systematic empirical studies of when and why leaders initiate or terminate conflict, however, are few and far between. This article attempts to fill in this gap by looking at how leaders' incentives to remain in power influence, and at the same time are influenced by, international conflict behavior, and at how domestic political institutions bear on that reciprocal relationship.

The connection between the office-seeking incentives of leaders and conflict is not new in international relations. In its original form, the diversionary war literature (Levy 1989) argues that leaders become more likely to initiate conflict when they face a higher risk of losing office. The risk of losing office now features prominently in the explanation of several dimensions of conflict beyond diversionary war: in particular, war initiation (Bueno de Mesquita et al. 1995, 1999), war termination (Goemans 2000), war widening (Siverson 1996), war outcome (Reiter and Stam 2002), the relationship between democracy and war (Bueno de Mesquita et al. 1995, 1999) and the effect of trade on war (Gelpi and Grieco 2001b). A second strand in the literature on diversionary war has also argued for a long time that international conflict or the threat of conflict could in turn affect the fate of leaders through the well known "rally around the flag effect." More recently, scholars have extended this conjecture and recognized that international conflict participation in turn also affects the fate of leaders (Bueno de Mesquita et al. 1992, 1995, 2001; Werner 1996; Goemans 2000). Thus, it has now become generally accepted that the probability of losing office depends at least partially on conflict and the probability of conflict initiation.

In sum, therefore, the literature proposes several theoretical arguments for why there should exist a reciprocal relation between the probability of losing office and international conflict. (Sprecher and DeRouen 2002) In this article, we rely on the existing literature and do not offer new theoretical arguments for such a reciprocal relationship. Our goal is to offer the first empirical test of this reciprocal relationship. Thus, we offer an empirical analysis of the central actors and the central causal mechanism(s) – i.e., leaders and the reciprocal relation between tenure and conflict – that lie at the very heart of theories of the diversionary use of force. In addition, our data set and statistical estimator allows us to examine whether and how the potential endogeneity between the risk of losing office and conflict initiation may have led to erroneous conclusions in earlier models of crisis initiation. Our approach also allows us to examine whether and how leaders in different regime types are influenced by their risk of losing office in their decisions to initiate international conflict. Finally, our data set contains all leaders after the First World War up to 1992 with a more than a dozen time-varying explanatory variables, which allows us to go beyond the pioneering work on the tenure of leaders by Bienen and van de Walle (1991).

We proceed as follows. In the first section, we briefly review and discuss the various arguments and empirical results that link the tenure of leaders with international conflict. In the second section, we present the hypotheses to be tested. In the third section, we describe our statistical procedure and the data. Our unit of analysis is the leader-year; the structure of our data is therefore monadic and not dyadic. On the one hand, our monadic data structure obviously imposes a cost, given that some important predictors of conflict, from geographic contiguity, to the balance of military forces, to bilateral trade relations (Russett and Oneal 2001), cannot be measured monadically. On the other hand, this data structure places at the forefront the

mechanism of diversionary conflict, i.e., the incentives of leaders to start conflict as a function of their grasp on power. In the fourth section, finally, we present the results of our analysis.

We find that as the risk of losing office increases, leaders become less likely to initiate a crisis. Second, as the risk of an international crisis increases, leaders become more likely to lose office. Third, our results suggest an explanation for the contradictory findings on the existence of a monadic democratic peace. We find that democracies are overall more peaceful than other regimes and our findings suggest this is due to the fact that democratic leaders are more likely to lose office, and therefore less likely to initiate a crisis. Fourth, we find that increasing levels of economic activity affect the probability of crisis initiation through two pathways. Along the indirect path an increase in the level of economic activity decreases the probability of losing office, which in turn increases the probability of crisis initiation. Along the direct path – controlling for its effect on the probability of losing office – an economic expansion decreases the probability of crisis initiation.

Theories that link the risk of losing office and international conflict

In this section we briefly discuss the previous literature that links the probability of losing office with international conflict. We begin with the literature on diversionary war; next we discuss the new theoretical literature on the reciprocal relation between conflict and the tenure of leaders.

Three basic sets of arguments have been offered to explain why leaders will be likely to use force when they face a high risk of losing office: the scapegoat hypothesis, the in-group/out-group hypothesis and gambling for resurrection. The first two rely on social psychological mechanisms. By the scapegoat hypothesis, international conflict allows leaders a chance to shift the blame for their own failed policies onto the foreign enemy (Morgan and Bickers 1992). The

in-group/out-group hypothesis claims that (the threat of) international conflict makes in-group – in particular national – identities salient. This, in turn, produces in-group bias and greater cohesion among in-group members (Simmel 1898). This process, known as "rallying-around-the-flag" in the literature on diversionary war, supposedly leads people to put aside their differences with their leaders and to support them in times of international crisis (Mueller 1973; Levy 1989). The in-group/out-group hypothesis thus suggests that as people perceive a foreign threat, they become more likely to support their leader, bolstering his time in office, which becomes the reason why a leader might provoke a foreign crisis in the first place. This hypothesis thus describes a fully reciprocal relationship: as a leader becomes more likely to lose office, he becomes more likely to initiate an international conflict while at the same time as an international conflict becomes more likely – and in-group identity becomes salient – the leader becomes less likely to lose office.

The third argument has been developed most fully in the rational choice literature and has become known as gambling for resurrection (Richards et al. 1993; Downs and Rocke 1994; Smith 1996; Bueno de Mesquita et al. 1999). In a nutshell, a leader who expects to lose power soon cannot lose more days in office as a result of war than he expects to enjoy by staying at peace. In other words, his punishment is truncated. For such leaders, therefore, even a small probability of victory with its associated boost in tenure suffices to make war preferable over peace.

From early on, scholars have posited links between the propensity to engage in diversionary war and regime type. Almost every possible regime type has been suggested as particularly prone to engage in diversionary war, including regimes in transition, unstable, autocratic, democratic and oligarchic regimes (Mansfield and Snyder 1995; Wilkenfeld 1968;

Downs and Rocke 1994; Miller 1995, Domke 1988; Smith 1996; Levy 1989; Gelpi 1997; Bueno de Mesquita et al. 1999; Hazelwood 1975; Lebow 1981). None of the hypotheses linking regime type with the diversionary use of force, however, has met with general quantitative empirical support (Zinnes and Wilkenfeld 1971; Leeds and Davis 1997; Miller 1999; Gelpi 1997; Mansfield and Snyder 1995). A possible reason for this lack of empirical support could be that – notwithstanding many references to "leaders" – most quantitative studies did not focus on leaders as the unit of analysis. The studies that do explicitly focus on leaders have not fared much better in demonstrating diversionary behavior (Ostrom and Job 1986; Morgan and Bickers 1992; James and Hristoulas, 1994; DeRouen 1995; Fordham, 1998a, 1998b; Morgan and Anderson 1999: 799; Meernik and Waterman 1996: 573; see also Meernik 1994; Gowa, 1998).

There has thus been a significant amount of empirical research that purports to test the first stage of the reciprocal relation between tenure and international conflict, the stage which posits that the probability of conflict initiation depends on a leader's probability of losing office. There has been much less empirical research on the second stage of the relation between tenure and international conflict, the stage which posits that the probability of losing office depends on international conflict or the risk of international conflict. Several studies have investigated how the popular standing of American presidents increases in time of war and international conflict (Ostrom and Job 1986; Morgan and Bickers 1992; Lian and Oneal 1993). In general, however, the evidence for the "rally around the flag" phenomenon has again been decidedly mixed (Mueller 1973; Brace and Hinckley 1992; Lian and Oneal 1993; Oneal and Bryan 1995; DeRouen 1995, 2000; James and Rioux 1998; Baker and Oneal 2001).

Bueno de Mesquita and Siverson (1995) were the first to examine systematically how conflict participation affects a leader's time in office. In their article, they focus on the leader's

Post-War-Onset political survival, and therefore on leaders who have presumably systematically decided to go to war, thus selecting themselves into the war sample. Based on 191 cases of state war participation between 1823 and 1974, Bueno de Mesquita and Siverson conclude that for leaders who have chosen to go to war, victory increases tenure for all leaders, while high overall battle deaths decrease tenure (Bueno de Mesquita and Siverson 1995:850). In addition, they claim to find support for their hypothesis that democratic leaders select wars with a lower risk of defeat than do their authoritarian counterparts.

Recently, Bueno de Mesquita et al. (2001) have updated this research, focusing on the effects of militarized interstate disputes on tenure in a sample of 588 leaders from thirty-five states in Europe, the United States and Canada, between 1920 and 1992. After recapitulating their earlier research, they posit several new hypotheses. First, they propose that "leaders of democratic states who initiate disputes will do so earlier in their tenure than will the leaders of nondemocratic states." Second, and directly addressing our concerns here, they expect that "dispute and conflict involvement will tend to be associated with subsequent tenures in office that are longer rather than shorter" (Bueno de Mesquita et al. 2001: 188-9).

Their findings, while not always clear-cut, mostly support their hypotheses. In particular, they show that leaders who participate in international disputes improve their chances to remain in office. This is because – they argue – "leaders want to stay in power and will only become involved in disputes if such actions are likely to increase their tenure. From this perspective the results … suggest that leaders are choosing their fights well" (Bueno de Mesquita et al. 2001: 196-197). This pattern holds irrespective of domestic regime type: democratic and non-democratic leaders, that is, benefit to almost the same degree from international conflict participation. Victory – presumably as compared to both defeats and draws – also increases

tenure, an effect that is particularly pronounced for democratic leaders. Distinguishing low-intensity conflict from war, they find that conflict participation short of war is beneficial to the office tenure of both democratic and non-democratic leaders. This is not the case for war, however. Fighting a war generates one of the largest decreases in the risk of office removal for democratic leaders, while it produces a sizeable, but statistically insignificant, increase in the hazard of losing power for non-democratic leaders.

The finding that conflict affects the tenure of leaders, and may affect them differentially, has become a cornerstone in subsequent research on international conflict initiation and participation. Bueno de Mesquita and Siverson (1995: 846) explicitly recognize that "the selection of wars to fight is itself endogenous." Because the outcome of an international conflict can affect a leader's time in office, leaders have incentives to initiate or participate in wars that increase their time in office, and avoid wars that could decrease their time in office. Thus, Siverson argues, "leaders recognize the possibility of ex post punishment in the loss of office, [and therefore] ex ante … select policies they believe will be successful and hence lengthen their tenure" (Siverson 1996:123). Bueno de Mesquita and Siverson posit that democratic leaders select wars with a lower risk of defeat because democratic leaders are significantly less likely to survive in office than authoritarian leaders in the case of a defeat in war (Bueno de Mesquita et al. 1997, 1999; Siverson 1996; Reiter and Stam 2002; Goemans 2000). This argument is then extended to provide an institutional explanation of the democratic peace (Bueno de Mesquita et al. 1999). This new line of theoretical modeling, thus, also theoretically proposes a fully reciprocal relationship between losing office and international conflict participation.

In contrast to the earlier diversionary use-of-force literature, however, this new research argues that leaders become less likely to initiate the use of force as their probability of losing

office increases. Bueno de Mesquita and Siverson (1995) attempt to explain why leaders will tend to initiate war when they enjoy a low risk of losing office: because war can affect time in office, leaders are likely to initiate wars when the associated risk of losing office is lowest, either because they have broad support and expect to win, or because they have enough credit with their constituents to survive a defeat. Leaders that are secure in office, they argue, are more likely to survive a defeat in war (see also Smith 1996). Early on, Ostrom and Job (1986: 549) had offered a similar argument: in their cybernetic decision-making model, American Presidents are deemed more likely to use military force when they can afford to lose or when high levels of domestic approval grant them a "popularity buffer." Along the same lines, Gaubatz (1991) empirically showed that democracies are indeed more likely to become involved in wars early in the electoral cycle, when they face a low risk of losing power.

To summarize, Bueno de Mesquita and Siverson argue that as the risk of losing office increases, the probability of conflict initiation decreases. In other words, and in stark contrast to the literature on diversionary war, there exists a negative relation between the risk of losing office and conflict initiation. What is clearly needed is a statistical test that can model the reciprocal relation that is posited by both literatures, and clarify the empirical relevance of these two contending expectations on leaders, tenure, and international conflict.

Hypotheses

We test three hypotheses central to the literature on the relationship between tenure and international conflict, the diversionary use of force hypothesis, the rally-around-the-flag hypothesis and the gambling for resurrection hypothesis.

H1. Diversionary war hypothesis: As the risk of losing office increases, the probability of conflict initiation increases.

This hypothesis lies at the heart of the psychological and rationalist theories of diversionary war elaborated above.

The "rally around the flag" effect is central to psychological theories of diversionary war. Note that it for this mechanism it is not necessary that a war has already broken out; a foreign threat, or a threat of international conflict should be enough to produce the in-group bias that leads to "rallying-around-the-flag."

H2. Rally-around-the-flag hypothesis: As the risk of international conflict increases, the probability of losing office decreases.

If the psychological theories are correct, both the diversionary war and rally around the flag hypotheses must be empirically supported. However, the gambling for resurrection mechanism can explain why leaders with a high risk of losing office can gain from conflict initiation even without any rallying around the flag. In other words, the gambling for resurrection mechanism is not falsified if there is no rally around the flag effect.

The gambling for resurrection mechanism crucially posits that compared to staying at peace, gambling leaders reduce their chances of being removed from office if they initiate a conflict because conflict introduces a higher variance in the probability of losing office. This implies that compared to staying at peace, victory must decrease the probability of losing office. If victory does not pay, conflict can not introduce the higher variance that can make a gamble for

resurrection a rational strategy. Hence, at minimum, the following two hypotheses must be true to show that leaders rationally gamble for resurrection:

> H3. Gambling for resurrection hypothesis: (I) As the risk of losing office increases, the probability of conflict initiation increases. (II) Victory significantly decreases the probability of losing office.

Research Design

To test our hypotheses, we present a research design that has two major features: 1) we use a data set with political leaders as its unit of analysis; 2) we model a system of equations that allows for the existence of a reciprocal relation between the risk of losing office and the risk of starting a conflict. These features directly address the theoretical specifications offered in the previous literature on tenure and the use of force.

The existing theories propose that the decision to use force is a possible response to a poor chance to remain in office. To model this decision, then, we have to abandon the country-year format of most quantitative analyses in security studies, and adopt a leader-year specification in which the ruler holding office in a given year is the unit of analysis under investigation. This innovation is of particular importance whenever there is a change in leadership in a country: in those circumstances it is important to identify who is holding power, and who decides to use force. An example might be of clarification: our data set records two observations for the United States in 1953, one for President Truman and one for President Eisenhower. In that same year, the United States initiated an international crisis against Guatemala, a decision taken by the newly elected Eisenhower and not by the lame-duck Truman.

Our data set comprises 1505 leaders from 162 countries in the period from January 1, 1919 through December 31, 1992. Each leader's spell in office is split into yearly observations because most of our explanatory variables are measured annually, for a total number of 8855 observations. Missing values on some of the explanatory variables limit the number of observations under investigation to 7776 (88%) for 1364 (91%) leaders.

Our first dependent variable measures whether a leader is removed from office: each observation is coded with a dummy variable that indicates whether a leader was removed from office in a given year. Our second dependent variable measures whether the leader decided to resort to the threat or use of force in the international arena. Thus, each observation is coded with a dummy variable to record whether in a given year a leader initiated an international crisis.

The second main innovative aspect of our research design is the statistical estimator. To model the reciprocal relation between losing office and conflict initiation we need to estimate a simultaneous equation system with two endogenous dichotomous variables. This class of models can be estimated using a two-stage probit model. This procedure, analogous to a two-stage least squares model but for dichotomous variables, yields consistent estimates (see Mallar 1977; Maddala 1983: 246-247; Alvarez and Butterfield 2000; Greene 2002: E17-28-E17-32). Estimation is conducted in two steps. We first estimate the reduced-form equations that is, two probit equations for loss of office and conflict initiation including on the right-hand side all the exogenous variables that are theoretically argued to affect either the probability of conflict initiation or the probability of losing office. Then, from the reduced-form estimates, we compute the linear predictors for the two dependent variables, and substitute these values for the endogenous regressors in the second stage (structural) probit equations. Thus, the reduced-form equations generate an estimate of the unobservable propensity to initiate an international conflict

and the unobservable risk of losing office, which then become our key explanatory variables in the structural equations. The use of the two imputed regressors in the second stage equations biases the estimation of the standard errors. We correct for this bias using the asymptotically correct covariance matrix derived by Maddala (1983: 246-247). We also cluster observations by leader, thus computing Huber-White robust standard errors.

Our model relies upon the imputation of two endogenous regressors from the estimates of the reduced-form equations. If the imputed regressors poorly capture the underlying propensity to initiate a conflict and the underlying risk of losing office then to include them in the second stage regression would be tantamount to using poor, noisy, and unreliable measures for our key explanatory concepts. It is therefore important to evaluate the fit of the reduced-form equations. In linear regression systems R^2 offer a clear guideline to assess the fit of the reduced-form equations: Bollen, Guilkey and Mroz (1995: 119; see also Bound, Jaeger and Baker 1995: 444) argue that an R^2 below .1 for the reduced-from equations suggest weak instruments. In nonlinear models with dichotomous dependent variables, however, there is no obvious equivalent measure. We rely upon McKelvey and Zavoina's measure of fit, since this measure most closely approximates the R^2 of linear regression models (Hagle and Mitchell 1992) and is least vulnerable to changes in the proportion of 1s in the sample (Windmeijer 1995: 112). We also report three alternative measures of goodness-of-fit: Estrella's and McFadden's likelihood-ratio-based measures, and Hosmer and Lemeshow's χ^2 measure, which assesses the match between actual and predicted values.[1]

It is important to notice that our estimation procedure yields two basic sets of results: those of the reduced-form equations, and those of the structural equations. Both are important because both shed empirical light on different aspects of the dynamics modeled. The reduced-

form estimates yield a measure of the long-run effects of the exogenous variables, while the structural coefficients assess the net effects of the explanatory variables controlling for the effect induced by the endogenous regressors. The important thing to note is that single equation regressions that include exogenous variables that may affect a leader's time in office, i.e., the typical regression in the literature on conflict initiation, can only measure the overall effect of an exogenous variable on international conflict. However, an exogenous variable may affect conflict initiation through two pathways: indirectly through its effect on the probability of losing office, as well as directly, e.g. after expunging its effect on the probability of losing office. It is crucial to recognize that an exogenous variable may therefore have differing, even opposite direct and indirect effects on international conflict. Hence, by failing to model endogeneity the typical single equation regressions could present a misleading picture and even fail to find a real and significant relationship between that variable and international conflict.

Model Specification

We devote this section to a brief discussion of our model specification. First, based on the existing literature on crisis initiation, we expect that along with the endogenous regressor measuring the risk of losing office the following exogenous variables will affect the probability of conflict initiation:

- Country's domestic economic and political features: a) regime type, distinguishing between autocracies, mixed regimes, democracies, and regimes in turmoil; b) civil war; c) energy consumption per capita, and its growth; d) levels of trade openness, and their growth; e) overall national capabilities, and f) total population;
- Country's international political context: a) major power status; b) military mobilization;

c) the number of borders; d) participation in an ongoing challenge; e) the number of days since the last crisis initiation.

- Leader's features: a) the number of days in office; b) the number of previous spells in office.

We expect that along with the endogenous regressor measuring the propensity to initiate a conflict the following exogenous variables will affect the probability of losing office:

- Country's domestic economic and political features: a) regime type, distinguishing between autocracies, mixed regimes, democracies, and regimes in turmoil; b) civil war; c) energy consumption per capita, and its growth; d) levels of trade openness, and their growth; e) overall national capabilities; f) total population; and g) the median duration in office in a given country;
- Leader's features: a) the leader's age; b) the number of previous spells in office; c) the number of days in office; d) a leader's permanence in power beyond the country's median duration;
- Country's international political context: a) military mobilization; b) participation in an ongoing challenge; c) the outcomes of international conflict, victory, defeat and draw.

The dependent and explanatory variables are described in detail in the Appendix.

As explained above, our model comprises two sets of equations: the structural equations that define the theoretical link between explanatory and dependent variables, and the reduced-form equations that generate the indicators for the endogenous variables. Our discussion of the reduced-form equations can be brief: all variables that are theoretically argued to affect either the probability of war initiation or the probability of losing office must be included.

However, it is important to ensure that our structural equations are properly identified

(Mallar 1977: 1719; Gujarati 1995: 664-665). The rules for identification require that we specify at least one exogenous variable that predicts the probability of conflict initiation that is not included in the structural equation that predicts the probability of losing office, and vice versa. In other words, in our structural equations we must have at least one variable that predicts the probability of conflict initiation that does not predict losing office, and at least one variable that predicts the probability of losing office that does not predict the probability of conflict initiation. We argue that the leader's age, the median duration in power of all leaders of a given country and the three indicators for conflict outcomes do not affect the probability of conflict initiation. We also argue that major power status, the number of borders, and the number of days since the last challenge do not affect the probability of losing office.

Some of these exclusions are straightforward. On the one hand, it seems implausible that major power status, the number of borders and the number of days since the last international crisis would affect a leader's probability of losing office. We do not know of any theory that links these variables with the probability of losing office. On the other hand, there exists a large literature that links these variables with the probability of conflict initiation (Geller and Singer 1998; Midlarsky 1974; Diehl 1985; Beck, Katz and Tucker 1998). Similarly, while Bueno de Mesquita and Siverson (1995) have argued that a leader's experience in power may affect conflict initiation, we know of no theory that argues a leader's age or the median duration in power of all leaders of a given country would affect conflict initiation. On the other hand, both these variables should predict the probability of losing office (Bienen and van de Walle 1991).

We exclude the outcome of conflict from the structural equation predicting conflict initiation for three basic reasons. First, many conflicts in our sample end the same year they started. Since the outcome of these conflicts is temporally subsequent to their initiation, they are

by definition eliminated as a possible cause. Second, it might be argued that the outcome of one conflict affects the probability of subsequent conflict initiation. However, the rationalist bargaining perspective on conflict excludes the outcome of one conflict as the cause of a subsequent conflict. Rather, private information and incentives to misrepresent this private information are a fundamental cause of war and one conflict can affect subsequent conflict by the revelation of private information (Fearon 1995; Gartzke 1999). Thus, from a bargaining perspective, it is not the outcome of a war, but the revelation or accumulation of private information that affects the probability of subsequent conflict initiation. On the one hand, private information is revealed during conflict (Goemans 2000); on the other hand, peace allows for the accumulation of (new) private information. To capture the revelation and accumulation of private information, we include two variables in our structural equation predicting conflict initiation: participation in an ongoing conflict—an indicator for the revelation of private information—and the number of days since the last crisis initiation—an indicator for the accumulation of private information. Third, it might be argued that a loss in one conflict makes a leader more likely to gamble for resurrection and initiate a subsequent conflict. However, this effect should then be captured by the endogenous variable risk of losing office in the structural equation, and not by the outcome of a conflict.[2]

Data Analysis

Table 1 reports the results for the 4 equations, with two reduced-form and two structural equations. To interpret the results of our two-stage probit model, we must consider the whole system of equations. As noted above, the reduced form equations give the overall effect of each of the variables, while the structural equations report the direct effects. Before we delve into a

discussion of the results and their implications for our hypotheses, we notice that the reduced-form equations show an adequate fit: McKelvey and Zavoina's measure is about .33 for the conflict equation (Model 1) and about .47 for the loss of office equation (Model 3).The other three measures of fit also indicate we have sufficient leverage to assess how the risk of losing office and the propensity to initiate an international conflict affect the choices and political fate of leaders. (We note in passing that the reduced-form and structural equations for the probability of crisis initiation correctly classify about 96.5% of cases, while the reduced-form and structural equations for the probability of losing office correctly classify about 82.3% of cases.)

Table 1 approximately here

Table 1 delivers a striking result at the very outset. The endogenous variable measuring the risk of losing office – generated from Model 3 and reported in Model 2 – has a statistically highly significant negative effect on the probability of crisis initiation. Thus, contrary to the diversionary war and gambling for resurrection arguments, but in support of the arguments by Bueno de Mesquita et. alii, (1995, 1997, 1999) leaders become less likely to initiate a crisis as their risk of losing office increases. As a result, both the Diversionary War hypothesis (H 1) and the Gambling for Resurrection hypothesis (H 3) must be rejected. International crises are rarely used to divert attention; on the contrary, they are more likely when leaders are secure in power.

A careful examination of the effects of the regime type variables shows how the leaders of all four regime types are affected by tenure considerations in their decisions to initiate international conflict. To begin with, recall that we examine four regime types: autocratic, mixed, democratic and regimes in turmoil, where autocratic regimes serve as the excluded

baseline category. In the reduced-form equation (Model 1), we find that leaders of mixed regimes and leaders of regimes in turmoil are not significantly different from leaders of autocratic regimes when it comes to the decision to initiate a conflict. However, democratic leaders are overall less likely to initiate conflict than autocrats. In the structural equation (Model 2), however, we find that while leaders of mixed regimes still exhibit the same propensity to initiate conflict as autocrats, democratic leaders are now also indistinguishable from autocrats, while leaders of regimes in turmoil now are more likely to initiate a crisis than autocrats. These differences between the results in Model 1 and Model 2 must be attributed to the effect of controlling for the endogenous risk of losing office.

In the reduced-form equation (Model 1), leaders of democracies are significantly less likely to initiate a crisis than are leaders of autocratic regimes. In the structural equation (Model 2), however, we find that democratic leaders are as likely to initiate a crisis as autocrats. To understand this apparent discrepancy we must turn to the finding in the equations predicting the probability of losing office: there, we see that democratic leaders are significantly more likely to lose office than autocrats. Thus, democratic leaders have a higher probability of losing office, and the higher the probability of losing office, the lower the probability of conflict initiation. Together, these findings suggest that the overall relative peacefulness of democratic leaders should be attributed to their (relatively higher) probability of losing office. Thus, the main mechanism through which democratic institutions constrain leaders' propensity to start a crisis is the risk of being removed from office. The public's ability to control their officials through repeated elections creates strong incentives for democratic leaders to avoid military engagements in the international arena and complements the informational advantages attributed to democracy (Schultz 2001). Our results furthermore suggest that the contradictory findings on the possible

existence of a monadic democratic peace might be the result of the extent to which different researchers included or omitted control variables that affect the leader's probability of losing office.

Compared to autocrats, their relatively higher probability of losing office also constrains leaders of regimes in turmoil – but not leaders of mixed regimes – in their decisions to initiate a conflict. In the reduced-form equation on conflict initiation (Model 1) we saw that leaders of regimes in turmoil are as likely to initiate conflict as autocrats. In the structural equation (Model 2), however, we found that controlling for the effect of the probability of losing office, leaders of regimes in turmoil are more likely to initiate a conflict. These results must again be read in conjunction with the equations predicting the probability of losing office (Models 3 and 4). There we see that leaders of regimes in turmoil have a higher probability of losing office. Taken together, these findings imply that compared to autocrats leaders of regimes in turmoil are indeed restrained in their decisions to initiate conflict by their higher probability of losing office.

Table 2 summarizes the estimated probabilities for conflict initiation (in the upper half) and loss of office (in the lower half) under various configurations of the explanatory variables. Thus, in Table 2, we create a set of hypothetical types of leaders and measure how likely they are to start conflict and lose office. We compute the overall effects from the reduced-form equations and the partial effects from the structural equation at three levels of each respective endogenous regressor.

Table 2 approximately here

The overall probabilities of starting a crisis (Model 1) show that on average, a leader has

about a 1% chance of initiating a crisis in any given year. For democratic leaders this drops to about .7%, not only a tiny probability per se, but also about half the size of an autocrat's probability of initiating a crisis. The table shows that leaders with a low probability of losing office are roughly three times more likely to initiate a crisis as are leaders with a high probability of losing office. Leaders of regimes in turmoil are about 70% more likely to initiate a conflict when they have the median risk of losing office than when they have a high probability of losing office. Under this scenario, the probability of initiating conflict increases for leaders of mixed regime by about 77%; for democrats by about 80% while for autocrats it increases about 82%. Thus, a change in the probability of losing office has not just a statistically significant but also a substantively significant effect on the probability of crisis initiation.

We next shift our attention to the impact of the remaining variables measuring a country's domestic economic and political features. With a few exceptions, most of these variables are not statistically significant. In the reduced form equation (Model 1) both the levels of energy consumption per capita – our proxy for levels of development – and, confirming Russett and Oneal's (2001) findings, trade openness significantly reduce the probability of crisis initiation. In the structural equation (Model 2), these variables no longer significantly affect the probability of crisis initiation, but yearly changes in the levels of energy consumption per capita – our indicator for economic growth – now significantly reduce the probability of crisis initiation. However, we can not conclude that the overall effect of energy consumption per capita and trade openness on the probability of crisis initiation is the indirect result of their effect on the probability of losing office (Gelpi and Grieco 2001b), since in Models 3 and 4 we see that neither significantly affects the probability of losing office. On the other hand, we see in Models 3 and 4 that an increase in the annual growth rate in energy consumption per capita significantly

reduces the probability of losing office. Thus, the rate of growth in energy consumption per capita affects the probability of crisis initiation through two pathways. Along the first, indirect pathway, it decreases the probability of losing office which in turn increases the probability of crisis initiation. In this pathway, more rapid economic growth increases the probability of crisis initiation. Along the second, direct pathway, controlling for its effect on the probability of losing office, more rapid economic growth decreases the probability of crisis initiation. The reduced-form coefficient in Model 1 tells us that these causal pathways more or less cancel each other out.[3] Finally, population size, national capabilities and civil war do not significantly affect crisis initiation.[4]

The variables measuring the international political context turn out to be strong predictors of crisis initiation, and our results are consistent with previous results reported in the literature (Bremer 1992; Diehl 1985; Beck, Katz and Tucker 1998; but see Ireland and Gartner 2001). The effect of participation in an ongoing crisis, however, merits further discussion. In the reduced form equation (Model 1) we find that participation in an ongoing crisis overall significantly reduces the probability of crisis initiation. This effect however disappears in the structural equation (Model 2). In Model 4 we see that, controlling for the risk of crisis initiation, participation in an ongoing crisis significantly increases the probability of losing office. The overall pacifying effect of participation in an ongoing crisis must therefore be traced along the indirect pathway: participation in an ongoing crisis increases the probability of losing office, but an increase in the probability of losing office in turn reduces the probability of crisis initiation.

Finally, a leader's experience in office significantly affects the probability of crisis initiation. More time in office increases the probability of crisis initiation (Model 2), and more spells in office decreases the probability of crisis initiation (Models 1 and 2).

Turning our attention to the probability of losing office (Models 3 and 4), the first thing to notice is that the coefficient on the variable measuring the (endogenous) risk of initiating a crisis is positive and statistically significant. This means that as the conditions associated with the initiation of a crisis get more and more pressing, the chances of losing office increase. This finding contradicts the "rally around the flag" argument: apparently leaders do not benefit from a boost in popularity if there exists a high risk of an international crisis, or if the people perceive the leader as likely to initiate such a crisis. The Rallying around the Flag hypothesis (H 2) must thus also be rejected (See James and Rioux 1998: 800-801). Our empirical results, thus, reject both parts of the psychological theories of conflict initiation.

We first assess how the risk, use and outcome of force affect the probability of losing office. First, the positive coefficient on the endogenous risk of crisis initiation suggests that leaders pay a penalty for crisis initiation and for putting their state in a situation where crisis initiation is very likely. Second, military mobilization does not affect the probability of losing office. Third, the reduced-form equation (Model 3) reveals that participation in an ongoing crisis does not affect the overall probability of losing office for leaders. This result obtains because the participation in an ongoing conflict again affects the probability of losing office through two pathways. Along the first pathway, we saw in Model 1 that participation in an ongoing crisis significantly reduces the probability of crisis initiation and Model 4 shows that with a lower risk of crisis initiation, leaders are less likely to lose office. But, controlling for the endogenous risk of losing office, participation in an ongoing crisis increases the probability of losing office along the second pathway. As shown in the reduced form equation (Model 3), these two pathways more or less cancel each other out. Fourth, our results on the outcome variables indicate there might be significant benefits and few drawbacks from international conflict. Both the reduced-

form and structural equations (Models 3 and 4) indicate that leaders are rewarded with a lower probability of losing office if they end the war with a victory – supporting the second part of the Gambling for Resurrections hypothesis (H 3) – or a draw. In the reduced-form equation (Model 3) we see that defeat does not affect the overall probability of losing office, while in the structural equation (Model 4) defeat even has a significant negative coefficient. In general, our results suggest that international conflict may not be costly for leaders, at least if we limit our focus on its effect on office tenure. (Bueno de Mesquita et alli, 2001; Chiozza and Goemans 2003)

The lower half of Table 2 presents the probabilities of losing office for leaders of each regime type under five different scenarios: leaders who stay at peace, leaders who are involved in an ongoing crisis, and leaders who terminate a crisis with either a victory, a defeat, or a draw. Focusing first on the overall effects, Table 2 suggests that conflict pays for leaders. Compared to staying at peace, leaders who obtain a victory or a draw roughly reduce their probability of losing office by 44-50%, while leaders who lose do not worsen their tenure prospects. Involvement in an ongoing conflict also does not worsen their prospects. Turning to the probabilities generated from the structural equation, we see that peacetime leaders with a high probability of crisis initiation are between 3.6 (for democrats) and 6.2 (for autocrats) times more likely to lose office than leaders with a low probability of crisis initiation. When we move from a low to a high probability of crisis initiation the probability of losing office increases most for autocrats and least for democrats under all five scenarios. Once we control for the risk of crisis initiation, participation in an ongoing conflict seems to significantly increase the probability of losing office. Leaders involved in an ongoing conflict should, however, be unlikely to initiate a new crisis since this would put their tenure in office in jeopardy. This conjecture is supported by

the results in Model 1 in Table 1 where we found that participation in an ongoing conflict significantly reduces the probability of crisis initiation.

Turning to the set of variables that measure a country's domestic political and economic features, we first notice that in both the reduced-form and structural equation leaders of democratic regimes, mixed regimes and regimes in turmoil all are significantly more likely to lose office than autocrats. The coefficient on civil war is positive and significant in the reduced form (Model 3) but not in the structural equation (Model 4). Unsurprisingly, the domestic instability associated with civil war significantly increases the leader's overall probability of losing office, even though this effect dissipates when we control for the endogenous risk of initiating a crisis in Model 4. As we noted earlier, the rate of growth of energy consumption per capita – our indicator for economic growth – has a negative and significant effect on the probability of losing office in both the reduced-form and the structural equation. Leaders that are able to promote growth, or lucky enough to govern during periods of growth, are rewarded with a reduced probability of losing office. National capabilities are also associated with lower chances of office removal (Models 3 and 4), indicating how a large pool of economic and social resources gives leaders the wherewithal to stay in power for longer periods of time. Contrary to the findings by Bienen and van de Walle (1991: 66), we find that population size is associated with lower chances of removal from office (Models 3 and 4). Larger countries seem to be more stable and governable than smaller countries, making it easier for leaders to stay in office (Models 3 and 4). As expected, we find that the longer the median duration in office for a country's leaders, the less likely that country's leaders are to lose power (Models 3 and 4). This is an intuitive result, but insofar as this variable captures the long-term country trend in leadership stability, as Bienen and van de Walle (1991: 33) argue, it might be seen as catch-all

proxy for the social, economic, and institutional factors underlying leaders' tenure and not directly measured in our specification. Not surprisingly, leaders become more likely to lose office as they stay in power longer than the median time in office for leaders of their country (Models 3 and 4).

The personal traits and characteristics of leaders significantly affect their time in office. The coefficients on leaders' age and the number of days in office are statistically significant in both the reduced form and structural equations (Models 3 and 4). Substantively, older leaders are more likely to lose office. At the same time, however, leaders face higher risks of office removal in the early phases of their tenure, but get more comfortably ensconced in office as time goes by, a finding in line with earlier results obtained by Bienen and van de Walle (1991) and Bueno de Mesquita and Siverson (1995). Thus, while biological time is a liability for the office seeking politician, the mere exercise of power in office over time enables leaders to acquire the political skills necessary to fend off domestic opposition and endure in office. The number of times a leader has previously been in office apparently affects the probability of losing office only indirectly, through its effect on the probability of crisis initiation. In the reduced-from equation (Model 3) we see that the number of times a leaders has previously been in office decreases the probability of losing office, but this effect disappears in the structural equation (Model 4) once we control for the endogenous risk of crisis initiation. In Model 1 we found that the number of times a leader has previously been in office significantly decreases the probability of crisis initiation, and from Model 4 we know that the lower the endogenous risk of crisis initiation, the lower the probability of losing office. Taken together these results suggest that the number of times a leader has previously been in office therefore <u>indirectly</u> reduces the probability of losing office.

We performed a robustness check on the results presented in Table 1 to assess how our decision to include the conflict outcome variables in the structural equation for the loss of office, while excluding them from the structural equation for conflict initiation, affects our results on the two endogenous regressors. To that end, we estimated a model in which the conflict outcome variables are included in both structural equations. Even under this specification, our results on the endogenous regressors remain stable: in particular, in the new structural equation for the probability of crisis initiation the coefficient on the endogenous risk of losing office equals -.165 (p-value=.002), while the structural equation for the probability of losing office obviously remains unchanged.

Conclusion

In the theoretical literature on conflict, scholars have long recognized that a leader's expectations about his time in office can fundamentally affect his decision to participate in international conflict while international conflict at the same time affects a leader's time in office. This insight is particularly promising from a theoretical perspective, since it provides a clear causal mechanism that links domestic political institutions and the use of force via their effects on leaders' tenure. In a literature where there exists a marked lack of a consensus on what makes democracies particularly unlikely to fight each other, the endogeneity mechanism is a giant step forward from the usually underspecified models linking regime type and international conflict. While promising, however, the endogeneity mechanism has not been empirically examined (for exceptions, see DeRouen 2000 and Sprecher and DeRouen 2002). In this article, we have shown that international conflict initiation is indeed endogenous to the tenure expectations of leaders. We found that as the risk of crisis increases, a leader's probability of losing office also increases

and as a leader's risk of losing office increases, the leader becomes less likely to initiate international conflict. Our empirical support for the endogeneity mechanism therefore suggests that researchers should not privilege private information and incentives to misrepresent, commitment problems and issue indivisibility (Fearon 1995) as causes of international conflict, but should pay more attention to the incentives of leaders. Our results thus provide further impetus for a subtle but ongoing shift in the study of international relations, away from states-as-unitary actors to leaders as the proper focus and unit of analysis.

Perhaps even more important is our finding that regime type and economic growth affect international conflict initiation through two pathways, indirectly through their effect on the probability of losing office, and directly. This finding suggests that some of the conclusions from the literature on conflict initiation may have been misleading. Many of the variables included in empirical analyses of conflict may affect conflict directly but also indirectly, through their effect on the tenure of leaders. The typical single equation models only report the overall effect of these variables. Scholars should henceforth explicitly consider how a particular variable might affect conflict, both through its effect on a leader's tenure and separate from its effect on the tenure of leaders. We therefore urge not only further exploration of this endogeneity mechanism but also more research into the factors that affect the tenure of leaders.

Appendix: Data and Variables

Dependent variables

Leader's removal from office: this is a dummy variable that takes on the value of 1 when the leader is removed from office, and 0 otherwise. Leaders still in power as of the 31st December 1992 when we stop collecting data, leaders who died a natural death, and second-term American Presidents after Franklin Roosevelt are coded as 0 in their last year in office, i.e. these observations are considered censored (Bienen and van de Walle 1991: 43; Bueno de Mesquita et al. 2001: 191).

The data set on leaders updates Gelpi and Grieco's (2001a) revised version of Bueno de Mesquita and Siverson's (1995) data set. Our compilation lists all the leaders in office – be they Presidents, Prime Ministers, or other rulers holding executive power – from 1919 through 1992. Several previous inconsistencies are solved by using either Encyclopaedia Britannica or Lentz's (1994, 1999) compilation of state rulers. In particular, we corrected all the instances in which two leaders were deemed to rule a country at the same time, and we integrated the sequences of leaders in power in a country whenever unwarranted gaps were encountered. For each leader, the date on which he entered into power and the date on which he was removed from office are recorded, and all missing dates are filled. Our data set also excludes from the sample leaders that were governing countries not yet formally independent as this concept is defined in the Polity IV (2000), and it starts measuring time in office from the day of state independence.

Crisis initiation: this variable measures whether the leader decided to resort to military action in the international arena. To this end, each observation is coded with a dummy variable indicating whether a leader initiated an international crisis in a given year. All observations in

which a country is still involved in an ongoing crisis are coded as 0. This specification allows us to model the decision to start a conflict, and avoids conflating in a single framework decision processes that are likely to be distinct. While leaders select their conflict strategies considering their chances to maintain power at the end of the conflict, the decision to continue to fight in a crisis is conceptually different from that of initiating one in the first place (Bennett and Stam 2000; Goemans 2000). Data for this variable are obtained from Grieco's (2001) and Gelpi and Grieco's (2001a) revised version of the ICB (Brecher and Wilkenfeld 1997) data set.

Explanatory variables

Regime type: we measure this variable using the Polity IV's (2000) 21-point indicator of regime type characteristics. We break this scale into three regime types and identify each type of polity with a dummy indicator. Countries scoring +7 or higher are coded as democracies, regimes scoring between -6 and +6 are coded as mixed regimes, while the countries that are experiencing periods of interruption, interregnum, or transition – the Polity IV's (2000) scores of –66/-77/-88 – are coded as polities in turmoil. The residual category, then, includes the regimes scoring -7 or less, which can be labeled as autocracies (see Jaggers and Gurr 1995: 474).

Particular care was used to identify the appropriate regime score for all the leaders in the data set. Given the structure of our data set, we could not rely on codings that summarize the overall institutional characteristics of a country every year, but we had to make sure that leadership changes and regime changes were correctly matched. To that end, we relied upon the Polity IV's dates of regime change. We coded all the leaders who experienced – or enacted – a regime change during their spells in power by attributing them the regime score they had for a longer period of time.

Civil war involvement: this is a dummy variable that takes on the value of 1 whenever a leader is in office during a civil war, and 0 otherwise. Data were taken from Singer and Small's (1994) civil war data set.

Energy consumption per capita (logged): we code this variable by measuring the amount of energy consumption per capita on a yearly basis. We take the log of this quantity (see Bollen 1979; Burkhart and Lewis-Beck 1994 for a similar approach). Energy consumption per capita (logged) is used as a proxy for the level of economic activity. Data are taken from the COW capability data set available in Bennett and Stam's (2001) EUGene program.

Change in energy consumption per capita: this variable measures the yearly change in the levels of energy consumption. Data are taken from the COW capability data set available in Bennett and Stam's (2001) EUGene program.

Levels of trade openness: we measure this variable using the level of total annual trade, and we standardize it by using the level of energy consumption in a country, where energy consumption serves as a proxy for a country's GDP. Total trade is measured as the sum of the state's total imports plus total exports. Data are taken from Barbieri's (1998) and Gleditsch's (2002) data sets.

Change in levels of trade openness: this variable measures the yearly change in the levels of trade openness. Data are taken from Barbieri's (1998) and Gleditsch's (2002) data sets.

National capabilities (CINC): this overall indicator of national capabilities is measured using the CINC (Composite Indicator of National Capability) measure developed by the Correlates of War project (Geller and Singer 1998: 148-150). Data are taken from Bennett and Stam's (2000) EUGene program.

Total population: this variable measures log of the total population in each country in any

given year. Data are taken from Bennett and Stam's (2000) EUGene program and from Mitchell's (1998a; 1998b; 1998c) International Historical Statistics.

Median duration in office: this variable measures the median duration in power for all leaders in a given country (Bienen and Van de Walle 1991: 33).

Leader's age: this variable measures leaders' age. Data were obtained from Bienen and Van de Walle's (1991) data set, Lentz's (1994, 1999) encyclopedias, the www.rulers.org webpage, and Encyclopedia Britannica.

Time in office: this is a count variable that counts the number of days that have elapsed since a leader got into power. This variable measures the impact of the flow of time on the risk of being removed from power. We take a log transformation because we assume that any additional day in power has a declining impact on the risk of removal from office (see Box-Steffensmeier and Jones 2000 132-133).

Number of previous times in office: this is a count variable that measures the number of times a leader has previously ruled a country. It is equal to 0 in the first spell in office.

Beyond median duration in office: this is a dummy indicator coded as 1 for the years in which a given leader has been in power for a period longer than the median duration in office for that country, and 0 otherwise.

Major power: this is a dummy indicator that takes on the value of 1 for all the leaders of a major power (as defined in the COW project), and 0 otherwise. Data are taken from the Bennett and Stam's (2001) EUGene computer program.

Number of borders: this variable counts the number of land borders each nation shares with other independent nations. Data are taken from Stinnett et al. (2002).

Time since last crisis: this is a count variable that counts the number of days that have elapsed since a leader initiated an international crisis. This variable measures the impact of the flow of time on the probability of crisis initiation. We take a log transformation because we assume that any additional day has a declining impact on the risk of crisis initiation (see Box-Steffensmeier and Jones 2000 132-133).

Military mobilization: we measure this variable using a procedure developed by Alesina and Rosenthal (1995). First, we take the difference between the number of soldiers in a given year and the number of soldiers the previous year. Then, we divide this difference by the population in that given year. The variable is rescaled by multiplying it by 100.

Ongoing challenge: this is a dummy variable that takes on the value of 1 if a leader is involved in an ongoing crisis, and 0 otherwise. Data are taken from Grieco's (2001) and Gelpi and Grieco's (2001a) revised version of the ICB (Brecher and Wilkenfeld 1997) data set.

Conflict outcomes: outcomes are identified by three dummy indicators that measure whether a given international confrontation ended in victory, defeat, or draw. The outcome of the conflict is measured in the last year it was waged and one year after, if there is no change in leadership in the immediate aftermath of the conflict. Data are taken from Grieco's (2001) and Gelpi and Grieco's (2001a) revised version of the ICB (Brecher and Wilkenfeld 1997) data set.

Table 1. Two-Stage Probit Model Measuring the Probability of Initiating an International Crisis and the Probability of Losing Office

	Initiation of an international crisis						Risk of losing office					
	Reduced-form equation Model 1			Structural equation Model 2			Reduced-form equation Model 3			Structural equation Model 4		
Variables	b	se(b)	p-value	b	se(b)	p-value	b	se(b)	p-value	b	se(b)	p-value
Risk of losing office	---	---	---	-0.330	0.088	0.000	---	---	---	---	---	---
Risk of initiating a crisis	---	---	---	---	---	---	---	---	---	0.747	0.291	0.010
Mixed regime	-0.118	0.079	0.138	0.121	0.094	0.197	0.450	0.054	0.000	0.540	0.100	0.000
Democratic regime	-0.243	0.110	0.027	0.060	0.120	0.618	0.528	0.060	0.000	0.713	0.138	0.000
Regime in turmoil	-0.008	0.160	0.960	0.339	0.177	0.055	0.534	0.101	0.000	0.542	0.198	0.006
Civil war	0.033	0.129	0.801	0.185	0.116	0.113	0.194	0.067	0.004	0.168	0.117	0.154
Energy cons. per cap. (log)	-0.046	0.021	0.033	-0.026	0.025	0.292	-0.006	0.014	0.650	0.027	0.033	0.409
Change in energy cons. per cap.	-0.065	0.106	0.541	-0.125	0.071	0.077	-0.365	0.108	0.001	-0.316	0.162	0.052
Trade openness	-0.031	0.018	0.083	-0.012	0.014	0.387	0.004	0.011	0.750	0.026	0.063	0.675
Change in trade openness	-0.008	0.051	0.880	-3.E-05	0.025	0.999	-0.053	0.053	0.312	-0.048	0.100	0.635
National capabilities (CINC)	0.784	1.135	0.489	-0.615	0.978	0.530	-1.875	0.914	0.040	-2.396	1.207	0.047
Total population (log)	0.010	0.028	0.729	0.031	0.028	0.262	-0.033	0.015	0.032	-0.041	0.024	0.092
Median duration in office	0.005	0.005	0.319	---	---	---	-0.058	0.008	0.000	-0.061	0.012	0.000
Major power	0.244	0.151	0.107	0.508	0.137	0.000	0.191	0.110	0.082	---	---	---
Number of borders	0.033	0.017	0.043	0.056	0.015	0.000	0.023	0.009	0.011	---	---	---
Days since last challenge (log)	-0.082	0.033	0.013	-0.286	0.036	0.000	-0.064	0.019	0.001	---	---	---
Military mobilization	0.059	0.051	0.246	0.079	0.048	0.100	0.044	0.030	0.145	-0.001	0.051	0.991
Ongoing crisis	-0.625	0.136	0.000	0.060	0.121	0.623	-0.056	0.094	0.548	0.413	0.231	0.074
Victory	0.829	0.100	0.000	---	---	---	-0.350	0.105	0.001	-0.967	0.275	0.000
Defeat	1.349	0.114	0.000	---	---	---	-0.024	0.108	0.824	-1.030	0.465	0.027
Draw	1.297	0.097	0.000	---	---	---	-0.311	0.085	0.000	-1.279	0.408	0.002
Age	-0.005	0.003	0.090	---	---	---	0.010	0.002	0.000	0.014	0.004	0.001
Days in office (log)	0.042	0.032	0.187	0.064	0.025	0.010	-0.187	0.018	0.000	-0.219	0.032	0.000
Previous times in office	-0.288	0.117	0.014	-0.230	0.096	0.017	-0.089	0.035	0.011	0.126	0.115	0.271
Beyond median duration	-0.069	0.088	0.433	---	---	---	0.425	0.051	0.000	0.476	0.097	0.000
Constant	-1.726	0.362	0.000	-1.004	0.379	0.008	0.235	0.239	0.324	1.501	0.756	0.047
Number of observations	7776			7776			7776			7776		
Log-likelihood	-798.25			-991.9			-3186.5			-3186.6		
McKelvey-Zavoina	0.326			0.294			0.466			0.466		
McFadden	0.325			0.161			0.122			0.122		
Estrella	0.113			0.052			0.114			0.114		
Hosmer-Lemeshow	4.739	p-value=.785		3.367	p-value=.909		14.552	p-value=.068		14.129	value=.078	

Standard errors are corrected to account for the two-step estimation (Maddala, 1983: 246-247), and are clustered by leader

Table 2. Estimated Probabilities of Crisis Initiation and Loss of Office (%)

Probability of Initiating a Crisis	Overall Effects	Controlling for the risk of losing office Low	Median	High
Autocratic regime	1.398	2.422	1.393	0.765
Mixed regime	1.029	3.199	1.885	1.062
Democratic regime	0.732	2.783	1.620	0.901
Regime in turmoil	1.369	5.105	3.141	1.848
Probability of Losing Office	Overall Effects	Controlling for the risk of initiating a crisis Low	Median	High
Autocratic regime at peace	6.826	2.101	5.720	13.052
Autocratic regime in onging conflict	6.114	5.257	12.186	23.853
Autocratic regime after a victory	2.906	0.483	1.647	4.666
Autocratic regime after a defeat	5.830	0.402	1.405	4.082
Autocratic regime after a draw	3.168	0.187	0.725	2.329
Mixed regime at peace	14.945	6.762	14.939	27.950
Mixed regime in ongoing conflict	13.670	13.989	26.562	43.196
Mixed regime after a victory	7.426	2.028	5.556	12.747
Mixed regime after a defeat	13.154	1.738	4.883	11.476
Mixed regime after a draw	7.976	0.914	2.838	7.348
Democratic regime at peace	16.840	9.339	19.339	34.063
Democratic regime in ongoing conflict	15.459	18.213	32.544	50.087
Democratic regime after a victory	8.590	3.044	7.786	16.730
Democratic regime after a defeat	14.898	2.634	6.907	15.196
Democratic regime after a draw	9.203	1.440	4.168	10.084
Regime in turmoil at peace	16.974	6.787	14.984	28.015
Regime in turmoil in ongoing conflict	15.585	14.031	26.625	43.271
Regime in turmoil after a victory	8.673	2.038	5.578	12.787
Regime in turmoil after a defeat	15.021	1.747	4.902	11.513
Regime in turmoil after a draw	9.290	0.919	2.851	7.374

Overall effects are computed from the reduced-form equations. The counterfactual scenarios are defined as follows: 1) the peace scenario: both the ongoing crisis and the conflict outcome dummies are set at 0; 2) the ongoing conflict scenario: ongoing crisis is shifted to 1, and the conflict outcome dummies remain at 0; 3) the victory/defeat/draw scenarios: each conflict outcome dummy is set to 1 in turn, while ongoing crisis remains at 1. All remaining explanatory variables are set at their median values.

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ENDNOTES

[1] Estrella's, McFadden's, and Hosmer and Lemeshow's measures are directly implemented in Limdep 8. To compute McKelvey and Zavoina's we use Limdep 8's routine in Greene (2002: E15-30). Hosmer and Lemeshow's measure performs a χ^2 test against a null hypothesis of no discrepancy between actual and predicted values. A low χ^2 statistic, and a corresponding high p-value, indicates a good fit.

[2] Inevitably, the outcome of conflict will be positively associated with conflict initiation in the reduced form equation because many international crises end in the same year they started.

[3] We treat economic performance as an entirely exogenous factor. We should acknowledge, however, that theoretical and empirical work has shown long-term economic performance is endogenous to regime type and that tenure in office is endogenous to economic performance given regime type (Bueno de Mesquita et al. 2003). This reciprocal relation between regime type, leaders' tenure, and the economy, however, is not central for the short-term decisions made about conflict and about leadership tenure because the economy's endogenous components move slower, while exogenous shocks are more consequential in the short-term.

[4] We checked whether the social and economic variables, energy consumption and its yearly change, trade openness and its yearly change, national capabilities, and total population, might fail to reach statistical significance because of multicollinearity. We regressed these variables on all the remaining variables included in the reduced-form models. The R^2 values from these auxiliary regressions range from .61 (for national capabilities), to .42 (energy consumption per capita and total population), to .16 (trade openness), to .05 (change in energy consumption per capita and in trade openness), indicating that multicollinearity at most mildly affects our results.