

# War! Who is it Good For? The Relationship between Regime Type, the Fate of Leaders and War\*

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## Abstract

We propose and test a formal model of war and domestic politics, consistent with recent evidence on the relationship between regime type, the outcome of war and the probability and consequences of losing office. Our model builds on two fundamental and hitherto neglected differences between regime types: the cost of replacing leaders and the post-tenure fate of leaders. We show that war is less likely as 1) the cost of replacement depends less on the outcome of war and 2) the consequences of losing office are less punitive for leaders. Compared to non-democratic leaders, the cost of replacing a democratic leader depends relatively little on the war outcome and democratic leaders fare relatively well after losing office. Our model therefore offers an intuitive explanation for the democratic peace. To examine the scope of our theory, we test and find support for it within the sample of non-democratic regimes.

Keywords: war, democratic peace, two-level game

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# 1 Introduction

The democratic peace, a proposition that democracies do not fight one another in wars, is a well established empirical finding. It is so broadly accepted that Levy (1988) called it the closest thing to an empirical law in international relations. However well-documented it may be, it is fair to say that no explanation for the democratic peace has reached a consensus among scholars.<sup>1</sup>

We offer a new theory to explain the conflict propensity of a very broad array of potential regime types which generates an intuitive explanation for the democratic peace. We focus on two fundamental and hitherto neglected differences between regime types. First, we can usefully distinguish regime types by the effect of the outcome of war on the costs of replacing the leader. Second, we can usefully distinguish regime types by the post-tenure fate of their leaders; e.g., how leaders fare after they lose office. These two features systematically differ between democracies and non-democracies.

In democracies, leaders are typically replaced by elections or term limits, whereas leaders in non-democratic regimes are replaced through violent means and face additional punishment. (See Table 2 in section 4.1.2 below.) Since the costs of voting are low and do not depend on the outcome of a war, for democratic leaders the probability of losing office should depend little on the outcome of the war. In contrast, the costs of removing an autocrat can be quite high and depend on the outcome of war. For example, it would be relatively costly to replace an autocrat who wins a war, since he is likely to be surrounded by well-armed cronies, willing to fight to ensure his survival. On the other hand, if the autocrat loses the war, his military resources are likely to be depleted or demoralized, and it should be easier to overthrow him. Consistent with our theory, the survival rate of autocrats is affected significantly more by the war outcome than is the survival rate of democrats. (See Chiozza and Goemans (2004, 610) and Table 1 in section 4.1.2 below.) Current theories of the democratic peace fit poorly with this finding, as they start from the assumption that democrats are more sensitive to the war outcome, or appeal to un-modeled selection effects.

We develop a formal model which exploits these fundamental distinctions between regime types. The model predicts that peace should occur when the cost of replacing the leader—and therefore his survival probability—depends relatively little on the outcome of the war and when the net gain of staying in office is relatively small. In those circumstances, rulers are likely to accept an international settlement that avoids the destruction of war, since their survival is not at risk and since the consequences of losing office are relatively benign. The model yields predictions consistent with the recent literature on the democratic peace (Russett and Starr, 2000; Bueno de Mesquita and Ray, 2004), in that it predicts that war

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<sup>1</sup>For a review of the evidence on the democratic peace, see, among others, Ray (1998) and Russett and Oneal (2001). Critics of the finding include Gowa (1998) and Rosato (2003).

is least likely when both countries are democratic, slightly more likely when only one of the countries is a democracy, and finally most likely when both countries are autocratic.

Moreover, since the theory is built on two observable regime characteristics (the effect of the war outcome on the survival rate of leaders and the consequences of losing office), we can use the model to predict the war-proneness of a broader array of regime types. To that end, we examine the sample of non-democratic countries in the post World-War II period, using the classification introduced in Cheibub and Gandhi (2004) and Gandhi and Przeworski (2006). We show that while dictators do not systematically differ in their sensitivity to the war outcome, civilian dictators fare significantly better after they leave office than do military dictators and monarchs. The theory therefore predicts that civilian leaders should be least war-prone, a pattern which is confirmed in the data.

We proceed as follows. Section 2 presents the set-up of the model that guides our analysis and section 3 solves the baseline model. Proofs of the formal results are relegated to the appendix. Section 4 situates the model in the relevant literature and highlights where and why our approach differs from previous models that link regime type and war. Section 5 develops and tests a novel prediction about the war proneness of different types of non-democracies. Section 6 concludes.

## 2 Set-Up of the Model

We develop and analyze a one-shot game with two countries and four players, i.e. a leader  $L(i)$  and a population  $P(i)$  for each country  $i \in \{A, B\}$ . Leaders divide an international pie of size 1. They can either agree on a division of the pie or decide to launch a war. Let  $I^w \in \{0, 1\}$  designate whether war occurs (where  $I^w = 1$  designate that countries go to war,  $I^w = 0$  otherwise). We allow for a general bargaining mechanism, where the leader of country  $i$  picks an action  $a_i$  within an action set  $A_i$ . We assume that a war can be declared unilaterally by any leader (i.e. there is an element  $a_i^w$  in action set  $A_i$  that triggers a war). An international war produces a cost  $c_j$  for any actor  $j$ . It is won by country  $A$  with probability  $p$  (and by country  $B$  with probability  $1 - p$ ). After a country wins a war, it gets the whole international pie.

Let  $z_A$  characterize the allocation of the international pie after resolution of the international conflict (either through peaceful bargaining or war), with  $z_i$  going to country  $i$  ( $z_B = 1 - z_A$ ). The utility of any actor  $j$  is linear in its country's share of the international pie, valued at rate  $v_j \geq 0$  by  $j$ .<sup>2</sup> After resolution of the international conflict, the population of each country decides whether to replace

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<sup>2</sup>Note that we do not impose any restriction on whether the international pie is a public or a private good. It could be a private good, where  $L(i)$  and  $P(i)$  get a share  $v_{L(i)}$  and  $v_{P(i)}$  of  $z_i$ , respectively (where  $v_{L(i)} + v_{P(i)} = 1$ ). Or it could be a public good, valued by actor  $j$  at rate  $v_j$ .

its leader. Replacing a leader imposes a (domestic) cost  $d$  for the population of country  $i$  and brings a benefit  $b_i$ . For reasons which we explain in section 4, we focus our attention on the *costs* of replacing rulers, abstracting from the effect of war on the benefit of keeping the incumbent.

The cost  $d$  represents any effort expended and any personal risk incurred by the population in removing the ruler, as well as any economic loss produced in the transition from one ruler to the next. We assume that  $d$  is a function of the share of the international pie going to country  $i$ , its regime type  $t_i \in \{D, N\}$  (where  $D$  stands for democracy and  $N$  for non-democracy) and the way in which the payoff  $z_i$  was obtained (peacefully or through war).

First, we assume that it is more costly to replace a ruler who obtains a better outcome on the international scene (either because he has more resources to buy off supporters, or because he benefits from increased legitimacy). Second, we emphasize that the process of replacing a ruler differs significantly by regime type. In a democratic regime, a ruler is replaced through an election, which is a relatively costless process. Moreover, democracies are generally buttressed by strong bureaucracies, which minimize any loss associated with a transition. In a non-democratic regime, a ruler is replaced through violent means. This process is relatively costly, since insurgents risk losing their life in a revolt against the ruler. Also, transition losses should also be larger in non-democracies, with less developed bureaucracies. Third, given that a dictator relies on his armed forces to remain in power, while a democrat is replaced non-violently, the war outcome should have a greater effect on the cost of replacing non-democratic rulers. (We justify this assumption in greater detail in section 4.) In addition, we assume leaders are easier to replace if they have expended resources in a war.

Summarizing the discussion, the function  $d(z_i, t_i, I^w)$  satisfies the following properties:

$$\frac{\partial d(z_i, t_i, I^w)}{\partial z_i} \geq 0 \quad \forall t_i, I^w \quad (1)$$

$$d(z_i, N, I^w) > d(z_i, D, I^w) \quad \forall z_i, I^w \quad (2)$$

$$d(1, N, 1) - d(0, N, 1) > d(1, D, 1) - d(0, D, 1) \quad (3)$$

$$d(z_i, t_i, 1) \leq d(z_i, t_i, 0) \quad \forall z_i \in \{0, 1\} \quad (4)$$

The benefit  $b_i$  represents a (net) preference shock for a domestic challenger. It can be a function of the performance of the ruler on dimensions which are outside the current model (for example, the domestic economy). It is unknown at the start of the game and follows a uniform distribution  $U[l, h]$ , where  $l \leq 0$  and  $h > 0$  is arbitrarily large. Write  $F$  as the cdf of  $b_i$ . The uncertainty about  $b_i$  is lifted just before the population decides whether to replace the ruler.<sup>3</sup>

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<sup>3</sup>Note, again, that the benefits of replacing the leader do not depend on the outcome of the war. We explain this choice in more detail below.

Rulers strictly prefer to remain in power. Let an incumbent ruler receive a payoff  $O_i$  if he is ousted and  $I_i$  if he is kept in office. We assume that  $I_i$  and  $O_i$  depend on the regime type of country  $i$ . As mentioned above, the replacement processes differ in democracies and non-democracies. Democrats can expect successful careers in the private sector and give speeches for exorbitant fees. Autocrats, in stark contrast, can be much less sanguine about their prospects after they lose office as over a third is exiled, jailed or killed in their first year out of power. Moreover, the amount of rents that leaders can accrue while in office is generally more limited in a democracy than in a non-democracy. Summing up, we assume that  $I_i(t_i)$  and  $O_i(t_i)$  are such that

$$I_i(N) - O_i(N) > I_i(D) - O_i(D) > 0 \quad (5)$$

We can now make the timing of the game and the solution concept more explicit.

## 2.1 Timing of the Game

1. Leaders ( $L(A)$  and  $L(B)$ ) pick their actions ( $a_A$  and  $a_B$ ).
2. Countries get their share of the international pie ( $z_A$  and  $z_B$ )
3. Uncertainty over  $b_i$  is lifted in each country  $i$
4. Population ( $P(A)$  and  $P(B)$ ) decide whether to replace its leader (they pick  $r_A$  and  $r_B$ , respectively).

## 2.2 Payoffs and Solution Concept

Players are risk-neutral and we can write the value of the game to the leader and the population in country  $i$ ,  $V_{L(i)}$  and  $V_{P(i)}$ , as follows:

$$\begin{aligned} V_{L(i)} &= v_{L(i)}z_i - I^w c_{L(i)} + r_i O_i(t_i) + (1 - r_i)I_i(t_i) \\ V_{P(i)} &= v_{P(i)}z_i - I^w c_{P(i)} + r_i[b_i - d(z_i, t_i, I^w)] \end{aligned}$$

We solve for a subgame-perfect equilibrium. We assume that a war obtains if and only if there is no division of the international pie ( $z_A, z_B$ ) that both leaders prefer to going to war.

## 3 Solution of the Model

We can solve the game by backward induction. The solution is fairly simple. The population does not replace its ruler if and only if the cost of replacement exceeds the preference shock for the domestic challenger, i.e.  $r_i = 0$  if and only if

$$b_i < d(z_i, t_i, I^w) \quad (6)$$

Therefore, a ruler stays in power with probability  $F(d(z_i, t_i, I^w))$ . Assumption (2) therefore rationalizes the evidence on the average (unconditional) survival rate of leaders. More precisely, it implies that democrats are in general ‘more accountable’ than autocrats, i.e. they lose power at a faster rate, for example if they commit blunders on the domestic scene which enter into the determination of  $b_i$ . Moreover, assumption (3) rationalizes the evidence that autocrats are more sensitive to the war outcome, since it implies that

$$F(d(1, N, 1)) - F(d(0, N, 1)) > F(d(1, D, 1)) - F(d(0, D, 1))$$

Keeping the crucial distinction between the unconditional rate of survival and the conditional rate of survival (i.e. conditional on the war outcome) in mind, we continue to solve the game by backward induction. Moving up, the leader of any country selects his action  $a_i$ , anticipating the probability with which he would be replaced. We can then show one of our main results:

**Proposition 1.**  $I^w = 0$  if, for  $i \in \{A, B\}$ ,

$$[F(d(1, t_i, 1)) - F(d(0, t_i, 1))] [I_i(t_i) - O_i(t_i)] < c_{L(i)} \quad (7)$$

*Proof.* See the appendix □

This proposition states that if the survival function is not too sensitive to the outcome of the international conflict and the gain to remain in office is not too large, then rulers can always avoid war. In particular, rulers strictly prefer to get their expected share of the pie ( $(z_A, z_B) = (p, 1 - p)$ ) and avoid the cost of going to war. As we argue above, democracies are more likely to satisfy condition (7), since the process of replacing leaders depends relatively little on the war outcome.

In some sense, such regimes are closer to the ideal case of a unitary state. Indeed, models of war which assume that states are unitary players implicitly impose condition (7), by assuming that there are no private benefits of war for the leader. (In the language of our model, this would correspond to the case where the utility of being in office is equal to the utility of being out of office,  $I_i(t_i) = O_i(t_i)$ , or where the outcome of international conflict does not affect the leader’s survival probability,  $F(d(z_i, t_i, I^w)) = \alpha(t_i) \forall z_i, I^w$ ). As we know, we should not expect war to happen in such a model, if there is no commitment problem, asymmetric information or issue indivisibility (Fearon, 1995).<sup>4</sup> To illustrate, Figure 1 offers a numerical example, plotting the net benefit of peaceful settlement at  $z_i$  (net of the expected value of going to war) for certain parameter values that satisfy condition (7). We see that in such cases, there is a peaceful settlement that both countries prefer to war.

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<sup>4</sup>For a convincing argument that issue indivisibility does not constitute a separate rationalist explanation for war, see Powell (2006).

Figure 1 here

While proposition 1 is useful, it only offers a sufficient condition for peace. We would like to make a stronger statement and find necessary and sufficient conditions for peace. First, we parametrize  $F(d(z_i, t_i, I^w))$  so that we can make meaningful comparative statics. We assume:

$$F(d(z_i, t_i, I^w)) = \alpha(t_i) + \beta(t_i)G(z_i, I^w) \quad (8)$$

where  $\alpha(t_i) \in (0, 1)$ ,  $\beta(t_i) > 0$ ,  $G_1(z_i, I^w) > 0$  (where  $G_1(z_i, I^w)$  denotes the derivative with respect to the first argument of the function  $G(z_i, I^w)$ ). In this framework,  $\alpha(t_i)$  parametrizes the leader's *unconditional* likelihood of losing office (or the level of the survival function). Everything else being equal, a higher  $\alpha(t_i)$  describes a regime where leaders are in general less accountable, since they lose power for a given vector  $(z_i, I^w)$  at a slower rate. On the other hand,  $\beta(t_i)$  parametrizes the *conditional* likelihood of losing office (as a function of the war outcome). Everything else being equal, a greater  $\beta(t_i)$  describes a regime where the war outcome has a greater effect on the leader's survival.

Second, we want to focus on cases which do not produce a trivial prediction for war and peace. The following conditions suffice, while imposing a minimum level of symmetry between the two countries:

$$F(d(p, t_A, 0)) < pF(d(1, t_A, 1)) + (1 - p)F(d(0, t_A, 1)) \quad (9)$$

$$F(d(1 - p, t_B, 0)) < pF(d(0, t_B, 1)) + (1 - p)F(d(1, t_B, 1)) \quad (10)$$

To understand these conditions, note that if neither hold, then a peaceful division of the pie where each ruler gets his expected share of the pie ( $(z_A, z_B) = (p, 1 - p)$ ) is necessarily preferred to war. In other words, peace would obtain for any value of  $\alpha(t_i), \beta(t_i), I_i(t_i) - O_i(t_i)$  and we could not explain which critical regime characteristics affect the decision to go to war. We want to rule out such an obvious solution, and see whether leaders can arrive at a peaceful settlement. Note also that this set of conditions is relatively mild (and is weaker than imposing that  $F(d(z_i, t_i, I^w))$  is convex in  $z_i \forall t_i$ ).<sup>5</sup> Then we can show:

**Proposition 2.** *Let  $F(d(z_i, t_i, I^w))$  be as given in (8) and satisfy (9) and (10). Then  $\forall i \in \{A, B\}$ , and everything else being equal,*

(a)  $I^w$  is independent of  $\alpha(t_i)$ .

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<sup>5</sup>It is easy to show that if we restrict attention to a general set of functions  $F(d(z_i, t_i, I^w))$ , which are either strictly concave, strictly convex or linear in  $z_i$ , then we obtain non-trivial comparative statics with respect to  $\alpha(t_i), \beta(t_i), I_i(t_i) - O_i(t_i)$  only if  $F(d(z_i, t_i, I^w))$  is strictly convex in  $z_i$ , and the results of proposition 2 still hold.

(b) *There is a cut-off  $\gamma \in \mathbb{R}_+ \cup \{\infty\}$  such that*

$$I^w = 0 \Leftrightarrow \beta(t_i)[I_i(t_i) - O_i(t_i)] \leq \gamma$$

*Proof.* See the appendix. □

This proposition characterizes necessary and sufficient conditions for war under a very general functional form for  $F$  and minimum degree of symmetry between countries  $A$  and  $B$ .<sup>6</sup> First, it states that the unconditional likelihood of losing office does not affect the decision to go to war. This is straightforward. Only the marginal impact of the war outcome and the cost of peaceful concessions should matter. Previous research, which has assumed that the general level of ‘accountability’ of leaders influences their decision to go to war, is therefore misguided. Second, it states that war happens if and only if the private stakes for the leader are sufficiently salient (either because the conditional likelihood of losing office,  $\beta(t_i)$ , or the difference in utility between being in and out of office,  $I_i(t_i) - O_i(t_i)$ , is sufficiently large). This result is slightly more subtle. Note that conditions (9) and (10) imply that there is a conflict between leaders as concerns their private benefit of going to war. More precisely, both leaders want more than their expected share of the pie in war to equate their private benefit in peace to the level of their private benefit in war. This conflict in private benefits is more likely to lead to war as private benefits become more salient.

It may be easier to sharpen our intuition with the help of numerical examples. Figures 2 and 3 generate numerical examples with  $G(z_i) = z_i^2 - \frac{1}{100}I^w$ , drawing the benefit of peaceful settlement at  $z_i$  (net of the expected value of going to war) for certain parameter values.<sup>7</sup>

Figure 2 here

Figure 3 here

In Figure 2, the private benefit for war for the leader of country  $A$  is small. Therefore, this leader accepts a large range of peaceful settlements to avoid the cost of war ( $c_{L(A)}$ ), and peace is possible. In Figure 3, the private benefit for war for the leader of country  $A$  is large and, by the reverse logic, war is inevitable.

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<sup>6</sup>It also provides conditions for which  $\gamma < \infty$ .

<sup>7</sup>A ‘micro-foundation’ for this functional form would be to assume that the preference shock for the domestic challenger,  $F$ , follows a uniform distribution in  $[0, h]$ , with  $h \geq 1$ , and that the cost of replacing the ruler is quadratic in the share of the international pie ( $d(z_i, t_i, I^w) = a(t_i) + b(t_i)[z_i^2 - \frac{1}{100}I^w]$ ; where  $a(t_i) = h\alpha(t_i)$ ,  $b(t_i) = h\beta(t_i)$ ). In other words, there are increasing marginal costs in replacing the ruler as he gets more of the international pie.

As we argue above, we consider that democracies are those regimes with smaller private benefits for war and greater willingness to make peaceful concessions.<sup>8</sup>

To further understand this result, it is important to note that victory and defeat in war correspond to two, extreme, peaceful divisions of the pie, minus the resources spent in war. We assume that the leader's sensitivity to war outcomes is indicative of the leader's sensitivity to peaceful divisions of the pie. In other words, the more victory improves the leader's survival relative to defeat, the more a good peaceful settlement should improve the leader's survival relative to a bad peaceful settlement.<sup>9</sup> As the difference between victory and defeat has a greater impact on the leader's survival ( $\beta(t_i)$  is larger), concessions in peaceful bargaining become more costly. Therefore, leaders become more difficult partners in international bargaining and they are less likely to find a peaceful compromise. By the same logic, leaders who 'care more' about remaining in power ( $I_i(t_i) - O_i(t_i)$  is larger) insist on getting a larger share of the pie in peaceful bargaining and hence are more likely to generate war.

Thus, our model differs in significant ways from the existing rationalist literature on the democratic peace. In the next section, we extensively discuss this literature and, where appropriate, examine the empirical validity of our approach.

## 4 Our Model Situated in the Literature

The democratic peace proposition goes as far back as Kant (2006). According to Kant, democracies spread a culture of 'liberal peace' and are unlikely to fight, since citizens, who bear the cost of war, will be careful to avoid war if possible. Following his lead, explanations of the democratic peace typically fall into two camps: cultural/normative and institutional/structural explanations (Maoz and Russett, 1993). Cultural/normative explanations stress that leaders should apply the same norm of peaceful conflict resolution they employ domestically to other states. Democracies tolerate internal opposition peacefully, and so should attempt to solve conflict with other democracies similarly peacefully (Doyle, 1983; Russett, 1993; Dixon, 1994; Weart, 1994). Structural explanations argue that democratic leaders should be constrained in their use of force, since they must obtain the consent of legislators and, eventually, the electorate (Russett, 1993). Put differently,

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<sup>8</sup>In that regard, it is striking to note that the leaders who made truly significant concessions to avoid war, such as Thorvald Stauning of Denmark, Seyss-Inquart of Austria, and Emil Hacha of Czechoslovakia all led democracies. Stauning (until he died in office) and Hacha remained the nominal heads of their countries. Seyss-Inquart stayed in office as governor of the new Austrian provincial administration until April 30, 1939 and later became governor in Poland and eventually Commissioner of the occupied Netherlands.

<sup>9</sup>It is empirically impossible to estimate the marginal impact of a better peaceful division of the pie on the leader's survival. Thus, we must empirically anchor our model on our estimates of the effects of the war outcome on the leader's survival.

in a democracy, the interests of the population (who bears the cost of war) are aligned with those of the decision-maker (Kant, 2006; Babst, 1964).

Rational choice theorists have recently begun to formalize some of these institutional/structural explanations of the democratic peace. For example, Jackson and Morelli (2007) modeled the intuition that the bias between leader and population may be lower in democracy which then explains their lower likelihood to wage war. Other rational choice explanations of the democratic peace emphasize how different regime types generate and process information (Levy and Razin, 2004; Patty and Weber, 2006).

While insightful, these institutional explanations do not fully specify the differences in institutional constraints between regime types, leaving open two very important questions. First, why should rational (forward-looking) voters condition their decision to retain or replace a leader on the outcome of war? Second, why should the same outcome produce different decisions of voters in different regime types? Answers to these questions are by no means obvious.

One set of answers might revolve around the potential benefits of replacing the leader. It could be argued that the outcome of war reveals the competence of leaders; victory reveals competence, defeat incompetence. Voters might then decide to replace the defeated leader, in the expectation his replacement will be more competent. Smith (1998)'s model of crisis bargaining follows that logic. His model, however, does not address our concerns. Smith (1998) does not answer the question why should voters care about the foreign policy competence of the leader after the (last) conflict has ended? Nor does his model address the question why voters in different regimes should care differentially about the competence of their leaders. (To be fair, this question is not really relevant for his purposes in that paper because, by implication, he focuses on audience costs in democracies.) The model proposed by Jackson and Morelli (2007) exhibits this same drawbacks. In an extension to their baseline model, they propose that the domestic audience chooses the bias of its leader, reflecting his cost/benefit calculus for going to war. But since this decision is taken *before* leaders negotiate and fight a war, the model does not flesh out why rational audiences should carry out these plans nor why their decision systematically differs across regime types.<sup>10</sup>

In their seminal paper, Bueno de Mesquita et al. (1999) propose an answer to the question of why the benefits of replacing a leader differ systematically by regime type. In their set-up, regimes differ by the relative size of their winning coalition (i.e., the set of people who must support a ruler so that he remains in power) as a fraction of the selectorate (i.e., the set of people with political power). Leaders offer a mix of private and public goods to their supporters and must thwart

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<sup>10</sup>To name another reference, Baliga, Lucca and Sjoström (2007) present an insightful contribution on the effect of limited democratization on war. In their model, however, dictators always stay in power (by assumption) and citizens in a democracy use retrospective voting rules.

the threat of a challenger. Members of the current winning coalition run the risk of losing their access to private goods by supporting the challenger. The bigger is the winning coalition, the more likely they are to be included in the challenger's winning coalition. Therefore, rulers with a larger winning coalition enjoy a smaller incumbency advantage in the provision of private goods and they must survive through the provision of public goods. Assuming that the war outcome is a public good, such leaders are reluctant to enter into conflict unless they are certain to win. Moreover, they are unlikely to be chosen as targets, since they expend a lot of effort in war. Taken together, Bueno de Mesquita et al. (1999) claim, these factors explain the democratic peace.

Let us explore this argument in more detail, to assess how it addresses the questions we raised above. The timing of their game is very similar to ours: 1) leader of nation  $A$  chooses between war and peace and, if war is selected, picks a war effort  $g_A$ ; 2) leader of nation  $B$  observes the leader of nation  $A$ 's action and chooses how hard to fight (picks  $g_B$ ); 3) nature determines the outcome of war; 4) domestic audiences in each country decide whether to retain their leader or defect to a political rival. Then, Bueno de Mesquita et al. (1999) claim that members of the winning coalition support the incumbent if and only if

$$(1 - g_i) \frac{R_i}{W_i} + \mu_i + V_i(z) \geq c_i + \frac{R_i}{S_i} \quad (11)$$

where  $g_i$  is the war effort,  $R_i$  is the amount of resources in country  $i$ , redistributed among the winning coalition (of size  $W_i$ ) if the leader stays in power and redistributed randomly among the whole selectorate (of size  $S_i$ ) if the challenger comes to power,  $c_i$  is the expected quality of the challenger,  $\mu_i$  is the performance of the leader on all policy dimensions and  $V_i(z)$  is the utility from the war outcome  $z$ . We see that if  $W_i/S_i$  is relatively large, then the incumbency advantage in the provision of private goods is relatively small, and the survival of the leader depends to a greater extent on the war outcome  $z$ .

This approach raises some difficulties. First, it is debatable whether the war outcome is a public good, and it would be much preferable to rely on an explanation that does not assume the war outcome is a public good.<sup>11</sup> Second, it does not explain why rational (forward-looking) citizens should condition their replacement decision on the war outcome. By the time members of the selectorate make their decision, the war effort has already been expended and the war outcome has already been realized. Therefore, there is no reason that the war effort and outcome should affect the decision to support the ruler (particularly given that the war outcome is a public good, by definition non-excludable). Hence, their model does not fully address our two central questions: why should rational (forward-looking) voters condition their decision to retain or replace a leader on the outcome of

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<sup>11</sup>Note that we provide such an explanation. What we call the public benefit could be interpreted either as a public or a private good.

war? And, why should the same outcome produce different decisions of voters in different regime types?

## 4.1 Regime Type and the Costs of Replacement

We present an alternative set of answers to the two questions we raised above. While the literature has focused on the different benefits, we focus on the different *costs* of replacing rulers in different regimes. This approach has both theoretical and empirical advantages. First, a focus on costs allows for a simpler model: a one-shot game of complete information. Focusing on benefits would require an infinitely-repeated game of incomplete information. Second, the costliness of replacing leaders is a useful, and, indeed, traditional, way to distinguish regime types. Third, we can intuitively explain why the outcome of war fundamentally and differentially affects the costs of replacing leaders in different regimes. Our approach has the distinct advantage that we can anchor it in observable characteristics of regimes. This allows us to explain the war experience of different regime types, looking at the sample of non-democratic countries, as we do in section 5.

### 4.1.1 A Defining Feature of Democracy

The idea that the costliness of replacing rulers is a significant, if not the most significant difference, between dictatorship and democracy is certainly not new. For example, Popper (1963, 124) states:

For we may distinguish two main types of government. The first type consists of governments of which we can get rid without bloodshed – for example, by way of general elections; that is to say, the social institutions provide means by which the rulers may be dismissed by the ruled, and the social traditions ensure that these institutions will not easily be destroyed by those who are in power. The second type consists of governments which the ruled cannot get rid of except by way of a successful revolution—that is to say, in most cases, not at all. I suggest the term ‘democracy’ as a short-hand label for a government of the first type, and the term ‘tyranny’ or ‘dictatorship’ for the second.

It is clear that the ‘competitive struggle for the people’s votes’, as emphasized in the traditional Schumpeterian definition of democracy, would be meaningless if candidates were not protected against the arbitrary power of the state (Schumpeter, 1950). Riker (1982, 6, 7) argues:

Almost everything [...] that we think of as civil liberties (the rights of a speedy trial, habeas corpus, and security against unreasonable search and seizure, for example) originated to protect politicians who feared

prosecution if and when they lost office. Thus the historic purpose of these fundamental democratic liberties has been not to provide freedom as an end in itself, but to render effective both political participation and the process of choice in voting.

In the same spirit, in their seminal contribution, Przeworski et al. (2000, 15) adopt a Schumpeterian definition of democracy, and emphasize that regimes with no regularized competition among conflicting views enjoy a monopoly of power ‘buttressed by the threat or actual use of force.’

This defining feature of democracy, central in our model, was also emphasized by the early students of the democratic peace. Weart (1994) states: ‘If required to reduce it all to a single statement, we could isolate anocratic and authoritarian regimes as those where demands for loyalty are so concentrated on a leader (or family or clique) that any citizen who works to have the leader replaced is risking severe punishment.’ (Weart, 1994, 308). Maoz and Russett (1993) argue that, empirically, the treatment of political opponents (i.e. the annual number of violent political deaths and the number of political executions) is the single most important factor to explain the democratic peace, along with the ‘stability’ of a regime (i.e. the length of that a political system or regime existed without fundamental change). This leads them to favor normative accounts of the democratic peace.<sup>12</sup> No rational choice theory of the democratic peace, however, has taken this distinctive feature seriously.

#### 4.1.2 Sensitivity of Replacement Costs to the War Outcome

We next explain why the outcome of war fundamentally and differentially affects the costs of replacing leaders in different regimes. Specifically, we suggest a causal mechanism by which the survival of an autocrat leader is *more* sensitive to the outcome of a war. We argue that the fundamental processes whereby democratic leaders lose office are well-institutionalized and do not fundamentally depend on the outcome of conflict. Typically, democratic leaders lose office through elections and term limits. The length of a term of office and the timing of election are by and large exogenously determined and do not depend on the outcome of war.<sup>13</sup> Moreover, a wide range of factors other than the outcome of war typically play an important role in democratic elections. Thus, even after Turkish Prime Minister Ecevit (Cyprus), British Prime Minister Churchill (WW II) and U.S. President George H.W. Bush (Gulf War I) led their countries to victory and signalled their

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<sup>12</sup>See also Ray (1995), who takes the historical precedent of a peaceful transfer of power as one of two criteria for a state to be democratic, along with suffrage for more than half the population.

<sup>13</sup>A handful of democracies allows for the endogenous timing of elections. Even among those, only Thatcher’s calling of elections after Britain’s victory against Argentina in the Falklands/Malvinas War would suggest that Thatcher called the election early because of her victory. Even in that case, however, Thatcher would have had to call elections soon, no matter the outcome.

foreign policy competence, both lost the following elections because of the electorate's doubts about their economic competence.

In sharp contrast, non-democratic leaders often lose office through violent means (rebellions, civil wars and coups (see author)). In such cases, the outcome of conflict can fundamentally affect the process whereby non-democratic leaders are removed from office by several paths. First, defeat in war affects the efficacy of the leader's repressive apparatus, and thereby diminishes his or her grip on power, making any attempt to overthrow the leader more likely to succeed. Second, defeat in war can affect attempts to coordinate the opposition. In case of (major) defeat, opponents of the current leader may expect that others will support them in an attempt to overthrow the leader, not just because of demonstrated incompetence, but because of a widespread belief that sufficient numbers will rise and protest will not be punished. The outcome of conflict can thus 'tip' a largely passive populace into a mass uprising or coup attempt (Kuran, 1991). Similarly, victory makes such coordination less likely and thereby diminishes the non-democratic leader's probability of losing office. Third, autocrats typically rely more on their foreign policy—in particular war-fighting—competence to shore up their domestic legitimacy. Success in war bolsters their legitimacy, whereas defeat undermines any claims to hold power to protect the nation. In contrast to democratic leaders, thus, autocratic leaders depend on the outcome of war for their legitimacy.

In summary, we assume that the costs of replacing and, therefore, the tenure of democrats is *less* sensitive to the outcome of war. We should note, though, that the conventional wisdom in the literature assumes the very opposite: e.g., that the tenure of democratic leaders is more sensitive to the outcome of war (see, among others, Rousseau et al. (1996); Bueno de Mesquita et al. (1999); Bueno de Mesquita and Ray (2004); Bueno de Mesquita (2006*a,b*); Filson and Werner (2004, 2007); Peceny and Beer (2003); Ray (2003); Reiter and Stam (2002); Russett and Starr (2000)). Since our assumption is a key component of our model, and fundamentally contradicts what seems to amount to a consensus in the field, we discuss our disagreement in more detail below.

## 4.2 The Empirical Record

The fundamental question whether leaders of democracies or non-democracies are more sensitive to the war outcome is, of course, ultimately an empirical question. Previous research has addressed this question and claims to have found that democrats are more sensitive. However, this previous research suffers from some fundamental flaws.

First, the previous literature fails to distinguish between the unconditional likelihood of losing office and the probability of losing office *conditional on the outcome of a war*. While it is plausible—and indeed empirically supported (Chiozza and

Goemans, 2004)—that democratic rulers are more likely to lose office in any year, it does not follow they are more vulnerable to the outcome of a war.

Second, the current consensus is based on shaky empirical foundations. Scholars who argue that democratic leaders are more sensitive to the outcome of war invariably cite the seminal papers by Bueno de Mesquita, Siverson and Woller (1992) and particularly Bueno de Mesquita and Siverson (1995). The results in those articles, however, do not warrant that inference. For example, the baseline equation estimated by Bueno de Mesquita and Siverson (1995) is

$$\begin{aligned} & \text{Leader's Post-War-Onset Political Survival} \\ = & a + b_1 \text{TenureL} - b_2 \text{TenureL} * \text{Demo} - b_3 (\text{Battle Deaths}/10\text{K})\text{L} \\ & + b_4 \text{Win} - \epsilon_i \end{aligned}$$

where TenureL is the logarithm of a leader's total time in office prior to the war (plus 1), Demo is a dummy variable for democracy.<sup>14</sup>

From this approach Bueno de Mesquita and Siverson (1995) cannot conclude that democrats are more sensitive to the war *outcome*. Indeed, they impose by assumption that the war outcome has the same impact on the leader of any regime, by including a single variable ('win') which does not interact the war outcome with the regime type. Second, they do not show that democrats are more sensitive to *war*. Indeed, they analyze a sample including only leaders who have gone to war (with no leader who stayed at peace). By interacting regime type and prior tenure in office they show only that democrats lose power at a faster rate. This is the unconditional likelihood of losing office, which is independent of the sensitivity to war and, we claim, irrelevant for the decision to go to war.

In more recent research on a sample of all leaders 1919–2003, including both leaders who fought wars and leaders who stayed at peace, Chiozza and Goemans (2004) came to a fundamentally different conclusion, contradicting the earlier claims of Bueno de Mesquita and Siverson (1995). Chiozza and Goemans (2004) provide evidence that war affects the tenure of autocratic leaders—in particular, defeat in war increases the hazard of losing office—but war, no matter whether victory, defeat or a draw, does not significantly affect a democratic leader's hazard of losing office.<sup>15</sup>

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<sup>14</sup>In a second estimation, they also control for 'Nonconstitutional Overthrow.'

<sup>15</sup>The implications of this recent research have not been fully appreciated. For example, Bueno de Mesquita (2006b, 640), re-asserts that "defeat in war is often less costly politically for autocrats than it is for democrats (Chiozza and Goemans, 2003, 2004), making them more willing to fight with relatively poorer prospects of victory than are democrats." To be fair to Bueno de Mesquita (2006b) and others, Chiozza and Goemans (2003) are partly responsible for the confusion. They state: "We find that democracies are overall more peaceful than other regimes. Our findings suggest this is because democratic leaders are more likely to lose office and therefore less likely to initiate a crisis" ((Chiozza and Goemans, 2003, 445). The idea that the *unconditional* probability of losing office affects the decision to go to war was no more than a conjecture. In fact, proposition 2 shows that it is wrong.

Rather than rely on competing claims in the earlier literature, we provide our own test of whether and how war affects the hazards of losing office for leaders of different regimes. Table 1 reports the results from tests to empirically examine whether the tenure of leaders of democracies or autocracies is more sensitive to the outcome of war. This table replicates the findings of Chiozza and Goemans (2004), but adds an additional independent variable (the manner of entry—omitted for brevity) and combines the different types of democratic and non-democratic regimes into a single category (parliamentary and presidential democracies are combined into a single ‘democratic’ category; non-democratic and mixed regimes are combined into a single ‘non-democratic’ category).<sup>16</sup> The results show that compared to peace (the excluded category, since we include all conflict variables in the model), war significantly affects the survival probability of non-democratic rulers but *not* of democratic rulers.

Table 1 about here

Table 1 reveals that Victory in war decreases the hazard of losing office while Defeat in war increases the hazard of losing office for non-democratic leaders. However, neither Victory nor Defeat in war significantly affects the tenure of democratic leaders. Point estimates corroborate our central point, that autocrats are more sensitive to the outcome of war than democrats. Moreover, Wald tests show that the difference between victory and defeat is statistically significant for autocratic leaders ( $p < 0.013$ ), but not for democratic leaders ( $p < .58$ ).

To counter our conclusion that the tenure of autocrats, rather than democrats, is more sensitive to the war outcome, scholars may appeal to the logic of selection effects. However, as Signorino (2002) has shown, while the presence of strategic interaction introduces selection, it does not necessarily introduce selection *bias*.<sup>17</sup> While there exist many different scenarios in which strategic selection could affect our sample (such as diversionary war), strategic selection could strengthen, rather than weaken our conclusion. Assume one set of potential wars, which are ‘attractive’ for the democratic leaders: these are the wars which democratic leaders are almost certain to win and for which the democratic leader will be rewarded, win or lose. Autocrats will then select themselves out of these wars. Then posit a second set of potential wars, which are ‘unattractive’ for democratic leaders: these

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<sup>16</sup>The data on leaders comes from *Archigos* version 2.8 (Goemans, Gleditsch and Chiozza, 2005); its temporal domain is January 1, 1919–December 31, 2003. Tests revealed that only the Democracy variable violated the proportional hazard assumption of the Cox model. As recommended by Box-Steffensmeier, Reiter and Zorn (2003) we therefore include a variable that interacts Democracy with time: Democracy  $\times$   $\ln(t)$ . Tests revealed that multicollinearity is not a problem.

<sup>17</sup>As long as the error term in the war equation is not correlated with the error term in the tenure equation. Note moreover, the conclusion of Signorino (2002, 112) that “the typical selection model is most appropriate when the “process” essentially does not matter.”

are the wars democratic leaders are almost certain to lose and as a result lose office or democratic leaders will be punished no matter the outcome. Democratic leaders will then select out of these. As a result, the wars we would actually observe should be those that are ‘neutral’ for democratic leaders, i.e. those in which the outcome is uncertain, and for which the fate of the leader depends on that outcome. If such strategic selection determines the sample we observe, and the fate of the leader depends on the outcome, we should expect to see this dependence in the sample of wars that are actually fought. Since the tenure of democratic leaders does not appear to depend on the outcomes of the wars that are fought—recall, even Victory does not pay—there is reason to think there exists no relationship between the tenure rewards and punishment and the war outcome for democratic leaders.<sup>18</sup>

#### 4.2.1 Consequences of a Loss of Office

The second property of our model is generally accepted: the consequences of losing office are much worse for autocrats than for democrats. While this has been shown to hold for the sample of leaders who selected themselves into war (Goemans, 2000), to date no study has examined the consequences of losing office for the whole sample of all leaders (both those who stayed at peace and those who engaged in conflict) or included this information in their explanation of the democratic peace. Intuitively, democratic leaders, especially in modern times, can look forward to a profitable retirement. As President Bush put it when asked about his plans after he leaves the White House, “I’ll give some speeches, just to replenish the ol’ coffers.” “In Book, Bush Peeks Ahead To His Legacy,” *The New York Times*, September 2, 2007, p.1).<sup>19</sup> In contrast, non-democratic leaders such as Saddam Hussein, can and indeed do anticipate significant punishment in case they lose office.

Table 2 about here

Table 2 reveals the post-tenure fate of democratic and non-democratic leaders from 1919 to 2004. We see that the great majority of democratic leaders (93%) suffered no significant punishment in the year after they lost office. In contrast, about 41% of non-democratic leaders faced significant additional punishment.<sup>20</sup> Thus, the net gain of staying in office surely is lower for democrats than for autocrats.

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<sup>18</sup>We thank Kenneth Schultz for his advice and insight on this issue.

<sup>19</sup>Bush added: “I don’t know what my dad gets – it’s more than 50-75” thousand dollars a speech, and “Clinton’s making a lot of money.” In their tax filings for the 2008 presidential campaign, the Clintons revealed they had made over \$109 million since 2000. *The New York Times*, April 5, 2008, “Clinton’s Made \$109 Million in Last 8 Years.” For a broader discussion of the prospect of retiring leaders, see “Into the sunset. How ex-leaders adjust to life with less power.” *Financial Times*, Thursday, December 27, 2007, p. 7.

<sup>20</sup>Data on the manner of losing office and the post-exit fate of leaders comes from the *Archigos* data (Goemans, Gleditsch and Chiozza, 2005).

## 5 Disaggregating Non-Democracies

One attractive feature of the model is that it explains not just a known finding—the democratic peace—but also suggests new, previously unlooked for, patterns of war participation. Proposition 2 states that war is more likely when the leader’s survival function is more sensitive to the outcome of international conflict and when the net gain of staying in office is larger.

In this section, we expand on the logic of proposition 2 to propose additional, and novel, predictions about the likelihood of war as a function of the type of non-democratic regime. While the comparative politics literature has long discussed the structural differences among non-democratic regimes, the consequence of these theories for the war involvement of non-democratic regimes has been relatively neglected.

The study of non-democratic regimes in the post-war period has generally followed Huntington (1991)’s typology, distinguishing between military dictatorships, one-party states and personal dictatorships (see, for example, Geddes (1999, 2003)). According to this literature, the democratization experience of these regimes differed significantly. Ruling cliques in military dictatorships and one-party states were able to control the process of democratization, securing guarantees for themselves after the regime change, while personalist dictatorships crumbled or were overthrown. But the implications for the fate of the leader after any turnover (whether it leads to democratization or not) are unclear. Moreover, the theory is silent as to whether the tenure of certain leaders should be more sensitive to the outcome of the war.<sup>21</sup>

Peceny, Beer and Sanchez-Terry (2002), Lai and Slater (2006) and Weeks (2007) present a first step in studying the war experience of non-democratic regimes. Peceny, Beer and Sanchez-Terry (2002) ask whether the empirical findings of the democratic peace translates to dictatorial sub-types, i.e. whether certain sub-types of dictatorial states are less likely to engage into conflict with one another than with other states. They find weak support for an overall dictatorial peace. They do find, however, that single-party states are significantly less likely to engage into conflict with one another, although these comprise the only homogeneous dyad to have produced war. They also conjecture that there is no systematic difference in the institutional constraint of leaders by dictatorial sub-type and argue that such a variable is unlikely to account for their war experience. Weeks (2007) contends that certain criteria used by Geddes (1999) give us good proxies about the degree of, again, the unconditional accountability of leaders. She argues that the leaders who are most accountable should be least likely to

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<sup>21</sup>For recent advances in the formal study of non-democratic regimes, see among others, Acemoglu and Robinson (2006); Acemoglu, Ticchi and Vindigni (2007); Besley and Kudamatsu (2007); Debs (2007*a,b,c*); Egorov and Sonin (2006); Gandhi and Przeworski (2006); Myerson (2008); Padro i Miquel (2007); Svobik (2006).

initiate military conflict, and presents evidence in support of her claim. Lai and Slater (2006) build on their own typology of non-democratic regimes and suggest that the leaders who are least secure in power should be most likely to initiate conflict. They test this hypothesis and find empirical support for it.

While enlightening, these explanations have some shortcomings and leave room for significant improvements. First, the logic of Lai and Slater (2006) is contradicted by the democratic peace literature: democrats are least secure in power and they are least likely to initiate conflict. Second, as we show above, the unconditional safety of the rulers in power should have no effect on the likelihood of engaging in military conflict. Instead, we should examine the sensitivity of the leader's survival to the outcome of the war. Neither of these studies present convincing evidence that the war outcome affects the tenure of leaders as their theory suggests (Peceny, Beer and Sanchez-Terry (2002) and Lai and Slater (2006) do not present this statistics, and although Weeks (2007)'s point estimates are consistent with her story, the differences are not statistically significant). Third, none of these studies examines the fate of the leaders after they are removed from office; the consequences of losing office are assumed to be the same for all regime types.

We seek to address these shortcoming by disaggregating autocracies into different sub-types, according to the classification suggested by Gandhi and Przeworski (2006). To that end, we merge their data with *Archigos*, taking care to attribute regime type to the appropriate leader. This produces a data set of non-democracies with monarchs, military, or civilian leaders, from 1946 to 1996. We assess these leaders on the two fundamental factors driving our model: their sensitivity to war outcomes and their post-tenure fate.

We first examine whether the different types of autocracies were sensitive to the outcome of war. Table 3 reports the results. For brevity, we omit the coefficients of Age at entry (positive and significant at the 1% level), manner of Entry (negative and not significant), Civil War (positive and significant at the 1% level), GDP per capita (negative and not significant), Growth in GDP per capita (negative and significant at the 1% level) and Population (negative and significant at the 10% level).<sup>22</sup>

Table 3 about here

Table 3 shows that among the Autocratic leaders who remained at peace, Civilians as well as Monarchs face significantly lowers hazards of a removal from office than did Military Autocrats. The longer they stay in office, however, the more Monarchs become like Military Autocrats. Turning to the effect of war, we

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<sup>22</sup>Note that an interaction between Monarch and time is included since the Monarch variable violated the proportional hazard assumption of the Cox model.

notice that while the effect of Victory is to increase the tenure of leaders in all three Autocratic regimes, in each case this effect is associated with high degrees of uncertainty, resulting in insignificant overall effects. Defeat, on the other hand, significantly increases the hazard of losing office for leaders of all three Autocratic regime types. Comparing the coefficients on Victory and Defeat for each of the regime types allows us to examine the sensitivity of the different regimes to the outcome of war. Wald-test show that both Military and Civilian autocrats are sensitive to the outcome of war. The difference between Defeat and Victory is statistically significant at the 10% level for both Military ( $p < .083$ ) and Civilian ( $p < .053$ ) Autocrats. For Monarchs, however, the difference between Victory and Defeat does not reach statistical significance ( $p < .243$ ). Notably, the effects of Victory and Defeat are not significantly different *between* the regime types. Hence, with the potential exception of Monarchs, the sensitivity to the outcome of war does little to distinguish the incentives of these Autocrats.

We therefore turn to the post-tenure fate of these leaders. Table 4 reports a simple cross-tabulation of the three types of Autocratic leaders and their post-tenure fate.

Table 4 about here

Table 4 shows that Civilian Autocratic leaders are by far most likely to enjoy a safe retirement. We also see that only 23 Monarch lost office.<sup>23</sup>

Letting a regime type  $t_i \in \{Mo, C, Mi\}$ , where  $Mo$  stands for Monarchical dictatorship  $C$  for a military dictatorship and  $Mi$  for military dictatorship, we therefore assume:

$$\max\{I_i(Mo) - O_i(Mo), I_i(Mi) - O_i(Mi)\} > I_i(C) - O_i(C) > 0$$

In line with proposition 2, we expect that the regime types with the biggest contrast in their leader's post-exit fate should face significantly different incentives for war.

**Conjecture 1.** *Everything else equal, Military and Monarchical Dictatorships should be significantly more war-prone than Civilian dictatorships.*

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<sup>23</sup>To deal with the low number of Monarchs who lost office, we also estimated models where we combined Monarchs with Civilian leaders, and Monarchs with Military leaders. In both these combinations, Non-Military and Non-Civilian Autocratic leaders faced significantly different hazards of losing office as a result of the outcome of war. Crucially, and affirming our predictions, in the probit model on War reported below, the Non-military and the Civilian leaders were significantly less likely to become involved in war.

We test this prediction in Table 5 on the Archigos data merged with the data from Gandhi and Przeworski (2006).<sup>24</sup>

Table 5 about here

The results from Table 5 show that Civilian Autocrats are indeed significantly *less* likely to become involved in war than Military Autocrats. Moreover, while Monarchs are not significantly different from Military Autocrats, Civilian Autocrats are significantly different from Monarchs (Wald test:  $p < .031$ ).

We marshaled our theory to investigate the incentives to go to war of different types of non-democratic regimes. As demonstrated by the empirical results, our theory allows us to exploit two dimensions of the calculations of leaders: the probability as well as the consequences of losing office. When leaders are both more sensitive to the outcome of conflict and face worse consequences of losing office, our theory unambiguously predicts they will be *less* inclined to accept peaceful settlements short of war. Our empirical differentiation of non-democratic regimes allows us to conclude that leaders who face a similar probability of losing office, but a significantly worse fate after losing office take their post-tenure fate into account in their decisions whether or not to get involved in war. Thus, while the previous literature focused exclusively on the relationship between regime type, war and the probability of losing office, our empirical evidence allows us to conclude with confidence that the *consequences* of losing office also play a significant a role in structuring the incentives of leaders.

## 6 Conclusion

Starting from the intuitive assumption that leaders at least partially base their decisions for or against war on how war in turn affects their fate, we introduced a new model that captures the relationship between regime type, the fate of leaders and war. Our model explains several known empirical patterns such as the democratic peace and the tendency of democracies to be generally more peaceful. In addition, our model suggests new avenues of research and new, heretofore unexplored, empirical patterns. In particular, we explored how war affects the fate of three types of non-democratic leaders, and in an extension of our model, used this finding to predict their relative peacefulness. We found that Civilian autocrats are significantly better off after losing office than either Monarchs or Military

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<sup>24</sup>We adjust the standard errors for within country correlation. We also examined the sensitivity, post-exit fate and war proneness of different non-democratic regimes using the typology and data suggested by Geddes (1999, 2003). Mirroring our findings here, we found that Single Party Autocratic regimes had the least to fear post-exit punishment and were, therefore, significantly less war-prone than Military and Personalist Autocratic regimes.

Autocrats. Our model predicts that Civilian autocrats should therefore be more peaceful, and empirical tests corroborated this prediction. We believe that similar extensions of our model have the potential to identify and explain significant new patterns about war.

## 7 Appendix

*Proof.* (Proposition 1) The net benefit of peace at  $z_A$  for  $L(A)$  is  $N_A(z_A)$

$$N_A(z_A) = v_{L(A)}(z_A - p) + c_{L(A)} \tag{12}$$

$$+ [F(d(z_A, t_A, 0)) - \{pF(d(1, t_A, 1)) + (1 - p)F(d(0, t_A, 1))\}] [I_A(t_A) - O_A(t_A)]$$

The net benefit of peace at  $z_A$  for  $L(B)$  is  $N_B(z_A)$

$$N_B(z_A) = -v_{L(B)}(z_A - p) + c_{L(B)} \tag{13}$$

$$+ [F(d(1 - z_A, t_B, 0)) - \{pF(d(0, t_B, 1)) + (1 - p)F(d(1, t_B, 1))\}] [I_B(t_B) - O_B(t_B)]$$

By assumption,

$$I^w = 1 \Leftrightarrow \nexists z'_A | N_A(z'_A) \geq 0, N_B(z'_A) \geq 0 \tag{14}$$

Now note that

$$F(d(p, t_A, 0)) - \{pF(d(1, t_A, 1)) + (1 - p)F(d(0, t_A, 1))\} \geq F(d(0, t_A, 1)) - F(d(1, t_A, 1))$$

and

$$F(d(1 - p, t_B, 0)) - \{pF(d(0, t_B, 1)) + (1 - p)F(d(1, t_B, 1))\} \geq F(d(0, t_B, 1)) - F(d(1, t_B, 1))$$

so that  $N_A(p) \geq 0, N_B(p) \geq 0$  if (7) holds.  $\square$

*Proof.* (Proposition 2). Use the functional form for  $F$  to rewrite (12) and (13) as follows:

$$N_A(z_A) = v_{L(A)}(z_A - p) + c_{L(A)} \tag{15}$$

$$+ \beta(t_A)[I_A(t_A) - O_A(t_A)] [G(z_A, 0) - [pG(1, 1) + (1 - p)G(0, 1)]]$$

$$N_B(z_A) = -v_{L(B)}(z_A - p) + c_{L(B)} \tag{16}$$

$$+ \beta(t_B)[I_B(t_B) - O_B(t_B)] [G(1 - z_A, 0) - [pG(0, 1) + (1 - p)G(1, 1)]]$$

Recall (14), then (a) clearly follows.

Now let us show (b) for  $i = A$  (the proof for  $i = B$  follows the same steps). Define  $(z_A^A, z_A^B)$  such that

$$G(z_A^A, 0) = pG(1, 1) + (1 - p)G(0, 1)$$

$$G(1 - z_A^B, 0) = pG(0, 1) + (1 - p)G(1, 1)$$

By (9) and (10),  $z_A^B < p < z_A^A$ . Consequently, if

$$c_{L(B)} - c_{L(A)} \geq [v_{L(A)} + v_{L(B)}](z_A^A - p) \tag{17}$$

$$+ \beta(t_B)[I_B(t_B) - O_B(t_B)] [pG(0, 1) + (1 - p)G(1, 1) - G(1 - z_A^A, 0)]$$

then  $N_B(z_A^A) \geq N_A(z_A^A) > 0$  and  $I^w = 0 \forall \beta(t_A)[I_A(t_A) - O_A(t_A)]$ .

Now assume that (17) does not hold. If

$$c_{L(A)} - c_{L(B)} \geq [v_{L(A)} + v_{L(B)}]p + \beta(t_B)[I_B(t_B) - O_B(t_B)] [G(1,0) - [pG(0,1) + (1-p)G(1,1)]] \quad (18)$$

then there is a cut-off  $\underline{\gamma}$  s.t.  $N_A(0) \geq N_B(0) \Leftrightarrow \beta(t_A)[I_A(t_A) - O_A(t_A)] \leq \underline{\gamma}$ . Since  $N_B(0) > 0$ , then we have  $I^w = 0 \forall \beta(t_A)[I_A(t_A) - O_A(t_A)] \leq \underline{\gamma}$ . Now assume that  $N_A(0) < N_B(0)$  (either because (i) (18) holds and  $\beta(t_A)[I_A(t_A) - O_A(t_A)] > \underline{\gamma}$  or (ii) (18) does not hold). It is clear from (15) and (16) that  $N'_A(z_A) > 0 > N'_B(z_A)$ . Therefore  $N_A(z_A^A) > N_B(z_A^A)$  and  $N_A(0) < N_B(0)$  imply that  $\exists \bar{z}_A \in (0, z_A^A)$  such that  $N_A(\bar{z}_A) = N_B(\bar{z}_A)$ . By (14),

$$I^w = 1 \Leftrightarrow N_A(\bar{z}_A) = N_B(\bar{z}_A) < 0$$

Note that

$$\frac{dN_A(\bar{z}_A)}{d\beta(t_A)[I_A(t_A) - O_A(t_A)]} = \frac{\partial N_A(\bar{z}_A)}{\partial \bar{z}_A} \frac{\partial \bar{z}_A}{\partial \beta(t_A)[I_A(t_A) - O_A(t_A)]} + \frac{\partial N_A(\bar{z}_A)}{\partial \beta(t_A)[I_A(t_A) - O_A(t_A)]}$$

We calculate  $\frac{\partial \bar{z}_A}{\partial \beta(t_A)[I_A(t_A) - O_A(t_A)]}$  by the implicit function theorem:

$$\begin{aligned} \frac{\partial \bar{z}_A}{\partial \beta(t_A)[I_A(t_A) - O_A(t_A)]} &= - \left[ \frac{\partial(N_A(\bar{z}_A) - N_B(\bar{z}_A))/\partial \beta(t_A)[I_A(t_A) - O_A(t_A)]}{\partial(N_A(\bar{z}_A) - N_B(\bar{z}_A))/\partial \bar{z}_A} \right] \\ &= - \left[ \frac{G(\bar{z}_A, 0) - [pG(1,1) + (1-p)G(0,1)]}{(v_{L(A)} + v_{L(B)}) + \beta(t_A)[I_A(t_A) - O_A(t_A)]G_1(\bar{z}_A, 0) + \beta(t_B)[I_B(t_B) - O_B(t_B)]G_1(1 - \bar{z}_A, 0)} \right] \end{aligned}$$

so that, using  $G_1(z_A, 0) > 0$  and  $N'_A(z_A) > N'_B(z_A)$ ,

$$\begin{aligned} \frac{dN_A(\bar{z}_A)}{d\beta(t_A)[I_A(t_A) - O_A(t_A)]} < 0 &\Leftrightarrow G(\bar{z}_A, 0) - [pG(1,1) + (1-p)G(0,1)] < 0 \\ &\Leftrightarrow z_A^A > \bar{z}_A \Leftrightarrow N_A(z_A^A) > N_B(z_A^A) \end{aligned}$$

which clearly holds, since (17) does not hold.  $\square$

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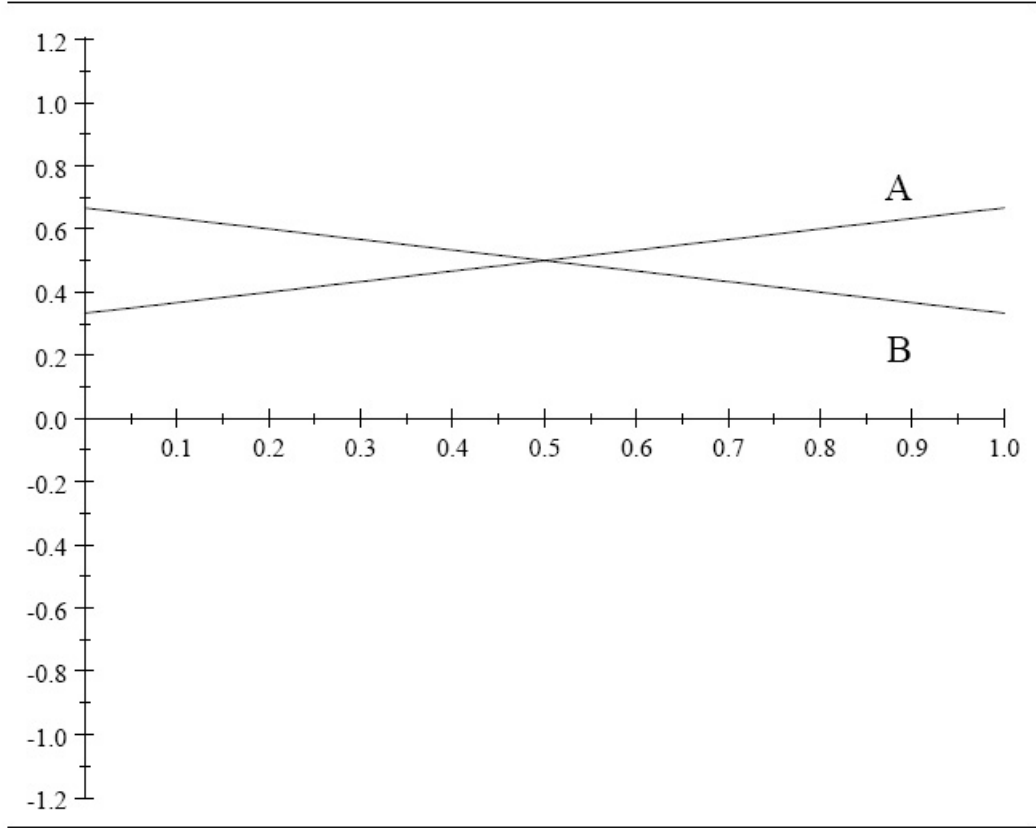


Figure 1: Net Benefit of Settlement as a Function of  $A$ 's Share of the Pie: Peace Between Unitary States

$$I_i(t_i) - O_i(t_i) = 0$$

$$v_{l(A)} = v_{l(B)} = \frac{1}{3}, p = \frac{1}{2}, c_{L(A)} = c_{L(B)} = \frac{1}{2}.$$

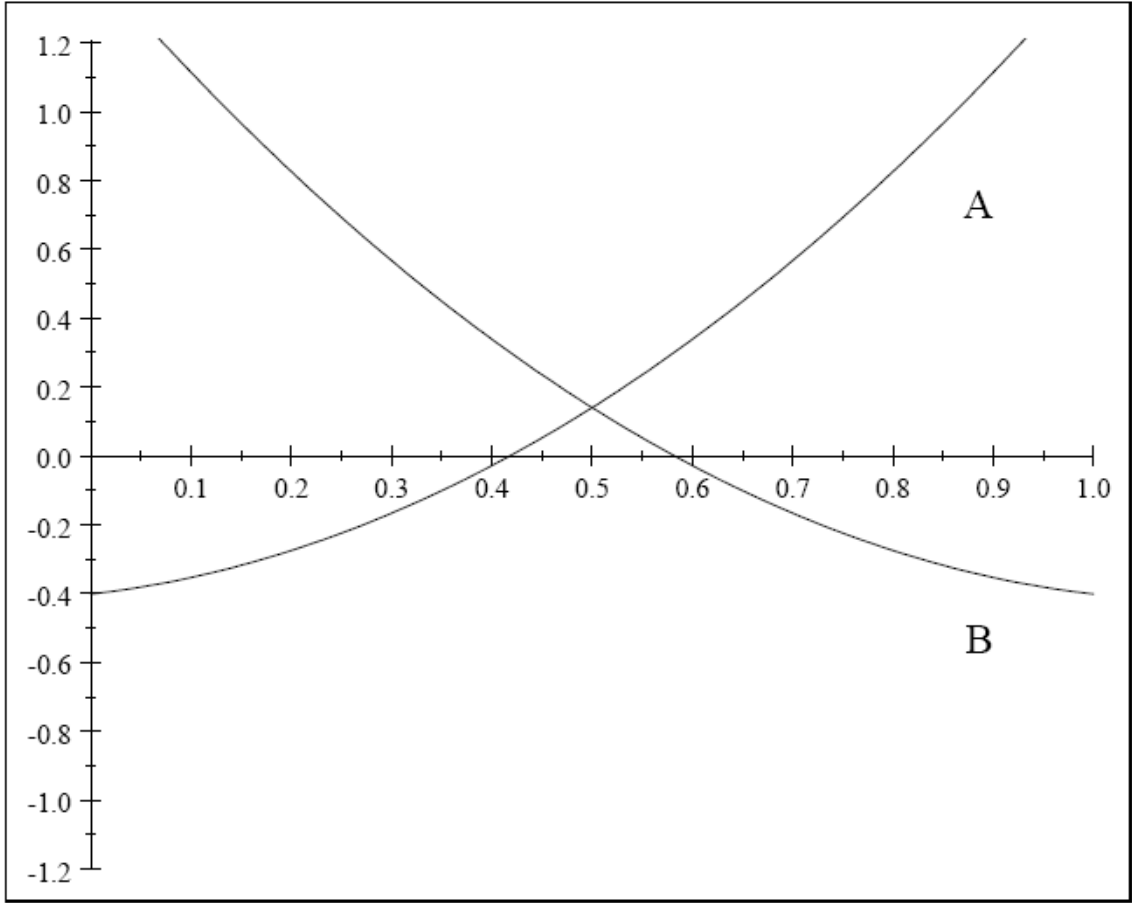


Figure 2: Net Benefit of Settlement as a Function of  $A$ 's Share of the Pie: Peace Between Democracies

$$G(z_i, I^w) = z_i^2 - \frac{1}{100}I^w, \beta(t_i) = \frac{1}{10}, [I_i(t_i) - O_i(t_i)] = 15$$

$$v_{L(A)} = v_{L(B)} = \frac{1}{3}, p = \frac{1}{2}, c_{L(A)} = c_{L(B)} = \frac{1}{2}$$

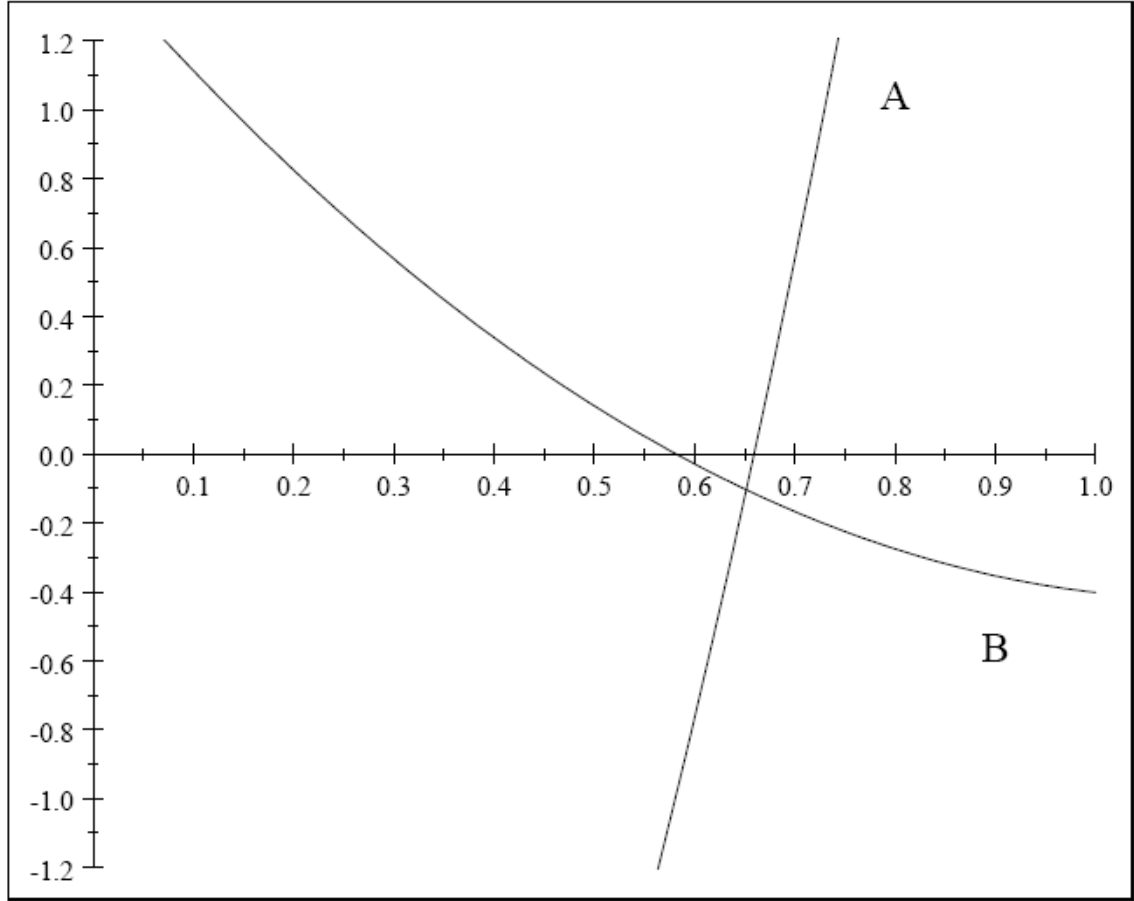


Figure 3: Net Benefit of Settlement as a Function of  $A$ 's Share of the Pie: War Between a Democracy and an Autocracy

$$G(z_i, I^w) = z_i^2 - \frac{1}{100}I^w, \beta(t_A) = \frac{1}{5}, [I_A(t_A) - O_A(t_A)] = 50 \beta(t_B) = \frac{1}{10},$$

$$[I_B(t_B) - O_B(t_B)] = 15 \quad v_{L(A)} = v_{L(B)} = \frac{1}{3}, p = \frac{1}{2}, c_{L(A)} = c_{L(B)} = \frac{1}{2}$$

Table 1: Conflict Outcomes, Regime Types and the Loss of Office

Variables	Tenure	
	b	Std.Err
Democracy	0.248	.276
Democracy $\times$ $\ln(t)$	0.006	.042
$\vdots$	$\vdots$	$\vdots$
Challenger	-0.755**	.226
Target	0.008	.144
Inheritor	-0.233	.267
Democracy Crisis Victory	-0.216	.265
Democracy Crisis Defeat	0.191	.361
Democracy Crisis Draw	-0.018	.272
Non-Dem. Crisis Victory	-0.893*	.356
Non-Dem. Crisis Defeat	0.379	.932
Non-Dem. C. Defeat $\times$ $\ln(t)$	-0.030	.132
Democracy Crisis Draw	-0.626	2.03
Democracy C. Draw $\times$ $\ln(t)$	-0.002	.273
Democracy War Victory	-0.524	.560
Democracy War Defeat	0.244	.560
Democracy War Draw	0.663	.538
Non-Democracy War Victory	-2.407*	1.15
Non-Democracy War Defeat	0.839*	.361
Non-Democracy War Draw	-0.622	.634
No. Obs	9336	
No. Subjects	1831	
No. Failures	1667	
Log-likelihood	-9684.5	
Wald-test	497.8	$p < 0.001$
$\Theta$	0.419**	

\*\* $p < .01$ , \* $p < .05$ , † $p < .1$ . The frailty parameter  $\theta$  measures the variance of a Gamma distribution with mean equal to 1. Co-variables for Civil war, GDP per capita, GDP growth, Trade Openness, the Change in Trade Openness, Population, Age at entry, number of Times in Office, and Entry have been omitted for convenience. A full table is available on the authors' website.

Table 2: Regime Type and The Fate of Leaders

	<b>OK</b>	<b>Exile</b>	<b>Jail</b>	<b>Killed</b>	<b>TOTAL</b>
Non-Democracy	610 (59%)	237 (23%)	118 (11%)	74 (7%)	1,039 (58%)
Democracy	711 (93%)	22 (3%)	20 (3%)	10 (1%)	763 (42%)
Total	1,321 (73%)	259 (14%)	138 (8%)	84 (5%)	1,802 (100%)

Pearson  $\chi^2(3) = 268.6$   $p < 0.001$

Table 3: Conflict Outcomes, Autocratic Types and the Loss of Office

Variables	Tenure	
	b	Std.Err
Civilian	-0.405**	.132
Monarch	-1.890	1.538
Monarch $\times \ln(t)$	0.147	.194
$\vdots$	$\vdots$	$\vdots$
Initiator	-1.552**	.438
Defender	-0.030	.270
Inheritor	0.012	.447
Military Crisis Victory	-0.506	.551
Military Crisis Defeat	0.824	.594
Military Crisis Draw	-0.842	.599
Military War Victory	-8.190	5.824
Military War Defeat	2.059**	.781
Military War Draw	-0.219	.895
Civilian Crisis Victory	-0.616	.657
Civilian Crisis Defeat	0.826 <sup>†</sup>	.484
Civilian Crisis Draw	-1.003 <sup>†</sup>	.559
Civilian War Victory	-2.583	2.252
Civilian War Defeat	2.463**	.748
Civilian War Draw	-1.585	1.884
Monarch Crisis Victory	-2.413	2.315
Monarch Crisis Defeat	0.991	1.445
Monarch Crisis Draw	0.186	1.472
Monarch War Victory	-1.233	3.372
Monarch War Defeat	2.871**	1.038
Monarch War Draw	0.326	1.535
No. Obs	4120	
No. Subjects	637	
No. res	488	
Log-likelihood	-2541.96	
Wald-test	147.8	$p < 0.001$
$\Theta$	0.247**	.085

\*\* $p < .01$ , \* $p < .05$ , <sup>†</sup> $p < .1$ . The frailty parameter  $\theta$  measures the variance of a Gamma distribution with mean equal to 1. Co-variables for Civil war, GDP per capita, GDP growth, Population, Age at entry, and Entry have been omitted for convenience. A full table is available on the authors' website.

Table 4: The Fate of 3 Types of Non-Democratic Leaders

	<b>OK</b>	<b>Exile</b>	<b>Jail</b>	<b>Killed</b>	<b>TOTAL</b>
Monarch	6 (26%)	13 (57%)	1 (4%)	3 (13%)	23 (5%)
Military	88 (38%)	71 (31%)	47 (20%)	27 (12%)	234 (51%)
Civilian	112 (55%)	45 (22%)	33 (16%)	15 (7%)	205 (44%)
Total	206 (45%)	130 (28%)	81 (18%)	45 (10%)	462 (100%)

Pearson  $\text{Chi}^2(6) = 24.57$   $p < 0.001$

Table 5: Non-Democratic Regime Types and War

Variables	War	
	b	Std.Err
Civilian	-0.503**	.176
Monarch	0.148	.271
Entry	0.021	.135
Civil War	-0.232	.192
GDP per capita	-0.006	.018
GDP Growth	-2.415*	1.129
Population	0.171*	.067
CINC	-5.038	3.083
Military Mobilization	0.572**	.132
Number of Borders	0.065†	.038
Time since Previous Onset	-0.677**	.187
Time since Previous Onset - squared	1.261**	.400
Time since Previous Onset - cubed	-0.656**	.227
Constant	-2.392**	.291
No. Obs.	3992	
Log-likelihood	-141.34	
Pseudo R-square	0.153	
Wald-test	104.7	$p < 0.001$

Coefficients of each regime type must be interpreted relative to the excluded category, Military Autocrats. Standard errors are clustered on country-code.