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2017

STANCE

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Solving the Decider's Dilemma: Scapegoats, Foreign Affairs, and the Duration of Interstate War

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Abstract

The prospects of domestic punishment might compel leaders responsible for the initiation of the war to continue fighting until they achieve favorable war outcomes (Croco 2011, 2015). As applied to war duration, this logic implies that 'culpable' leaders do not have incentives to end a war that will bring defeat. This paper argues that leaders can escape this dilemma by blaming and replacing their cabinet ministers for poor war results. Under a framework of war as a bargaining process, and using a database of the tenure of thousands of ministers of foreign affairs, this paper shows that the replacement of these cabinet ministers reduces the duration of interstate wars that end in defeat. These findings suggest that leaders do not necessarily need to continue fighting wars in order to avoid domestic punishment.

Introduction

Wars would end quickly if political leaders were willing to concede defeat. Unfortunately, this is seldom the case because leaders are punished politically for doing so. Croco (2011, 2015) has identified this problem as the Decider's Dilemma: leaders responsible for the initiation of the war might want to bring it to an end, but their decision to start it in the first place makes them liable to domestic punishment, which in turn forces them to achieve favorable war outcomes. As applied to war termination, this means that 'culpable' leaders do not have incentives to end a war that will bring defeat. In spite of the strong incentives generated by war initiation, this paper argues that culpable leaders can escape this dilemma by blaming —and replacing— their cabinet ministers for poor war results. This provides culpable leaders with the opportunity to concede defeat while diluting the punishment inflicted on them by their political supporters.

In order to test this argument, the paper approaches war as a bargaining process (e.g. Wagner 2000; Filson and Werner 2002, 2004). In this framework, leaders can blame their top diplomats, that is, their ministers of foreign affairs, for poor war results, and use these individuals as 'scapegoats'. This provides them with the opportunity to concede defeat without incurring in catastrophic political losses. Clearly, the argument has two parts. First, leaders can replace their ministers to end a losing war. Second, this should come with reduced political consequences for leaders relative to a case where they assume full responsibility for accepting defeat. This paper focuses on the first part of the argument and tests the effect of the replacement of ministers of foreign affairs on interstate war termination.

The paper relies on data on war, as well as ministerial and leader tenure in office, to estimate bivariate discrete survival models. Estimation results consistently show that the replacement of ministers of foreign affairs reduces the duration of interstate wars that end in defeat. This strongly suggests that leaders do not necessarily need to continue fighting wars in order to avoid domestic punishment.

The paper is organized as follows. The first section discusses the literature on the link between interstate war and domestic politics. The second section develops the argument about scapegoats, leaders, and war. This is followed by a brief introduction to the method of estimation, the variables considered, and empirical results. The paper closes with a discussion on the utility of focusing on politicians beyond the traditional emphasis on heads of government.

War Duration and Domestic Politics

War duration has occupied a prominent place in international relations. The classic article of Bennett and Stam (1996) first shed light on the subject by exploring the effect of both *realpolitik* variables —such as strategy, doctrine, and terrain— and domestic factors, including political institutions and repression. Further theoretical and empirical work on war and political institutions contributed to this research agenda by showing that regime type clearly determined war initiation, termination, and potential outcomes (e.g. Bennett and Stam 1998; Goemans 2000a; Reiter and Stam 2002; Filson and Werner 2004).

Political institutions, however, play an additional role in terms of war duration by shaping political leaders' incentives to manipulate policy and maximize tenure in office. For instance, Downs and Rocke's (1994) classic work on the 'gamble for resurrection' first highlighted that the fear of losing office could force leaders to continue fighting a war that could not be won. In this light, holding on to office is the primary motivation for starting and ending a war (e.g. Bueno de Mesquita and Siverson 1995; Bueno de Mesquita et al. 2003, 2004; Chiozza and Goemans 2003, 2004; Mattes and Morgan 2004).

Bueno de Mesquita et al.'s *Logic of Political Survival* (2003) has provided a theory that encompasses political institutions, tenure in office, and war duration. Succinctly, the authors argue that political leaders aim to maximize tenure in office and that they do so by providing a mix of public and private goods to political supporters. The particular mix depends on the number of political supporters, which is determined by political institutions. In systems where a large number of supporters are necessary for holding on to power, such as democracies, leaders provide a larger mix of public goods. In autocratic systems where leaders depend on a small number of supporters, they provide a larger mix of private goods. As applied to war, Bueno de Mesquita et al. (2004) assume that victory can be interpreted as a public good and hence argue that countries that resemble democracies exert greater selectivity in their decision to fight wars and that, conditional on fighting, they make a greater effort and spend more resources in the conflict than autocratic nations. Simply put, and all else equal, democrats fight longer wars than autocrats.

This argument, however, does not take into consideration that the incentives to start or terminate a conflict, are dependent on post-tenure fate (Chiozza and Goemans 2003, 2004; Goemans 2008; Debs and Goemans 2010), as well as on leaders' sensitivity to defeat (Filson and Werner 2007; Croco 2011). Specifically, if leaders anticipate that they will be replaced in an irregular —perhaps even violent— manner, they might engage in diversionary war (Goemans 2008). Yet, as argued by Filson and Werner (2007), not all politicians are equally sensitive to defeat in war—

some leaders might be particularly sensitive to war casualties and therefore they might feel obligated to end a conflict and accept defeat. This type of case is likely to be associated with democrats who can be held accountable by their constituents, thus bringing back the effect of institutions, at least indirectly, to war duration.

This is precisely where the works of Stanley (2009a,b), Stanley and Sawyer (2009), and Croco (2011, 2015) play a key role.[1] These authors agree on the fact that there is an important proportion of the variance of war duration that is unaccounted for when political institutions are held constant: political institutions seldom change during the course of war and therefore war termination cannot be fully determined by institutional variation. Instead, war termination is brought about by transitions in domestic political coalitions (Stanley 2009a,b; Stanley and Sawyer 2009), or by changes from culpable to non-culpable leaders (Croco 2011, 2015).

This discussion suggests that war continuation and leader change are endogenous, as war is driven by motivations of political survival in the first place. Quiroz Flores (2012) models this endogeneity and finds that leader transition in autocracies is more likely to bring war to an end than leader transition in democracies. Yet, the argument on culpability still stands. Croco argues (2011: 457) "that leaders' perceived responsibility for wars—or, hereafter, their culpability for the decision to involve their states in the conflicts—will directly affect both their wartime behavior and the domestic audiences' willingness to punish them should they lose." In other words, culpable leaders (who have initiated a war) might want to end the war, but their decision to start it in the first place ties them down and limits their ability to do so. For this reason, culpable leaders tend to achieve more favorable war outcomes than non-culpable leaders, as the latter face more forgiving domestic audiences.

For the purposes of this paper, there is at least one important implication of this argument. As argued by Croco (2011), culpable leaders will continue fighting as long as victory is a possibility. Nevertheless, the outcome of war is very often uncertain and therefore we should expect culpability to increase war duration in general, regardless of the potential outcome. This trend is illustrated by Figure 1, which presents the Kaplan-Meier estimate of the survivor function of 271 country-wars by type of leader from 1849 to 2003.

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[1] Tiernay (2015) adapts this argument to civil conflict.

Figure 1. Interstate War Duration and Leader Culpability
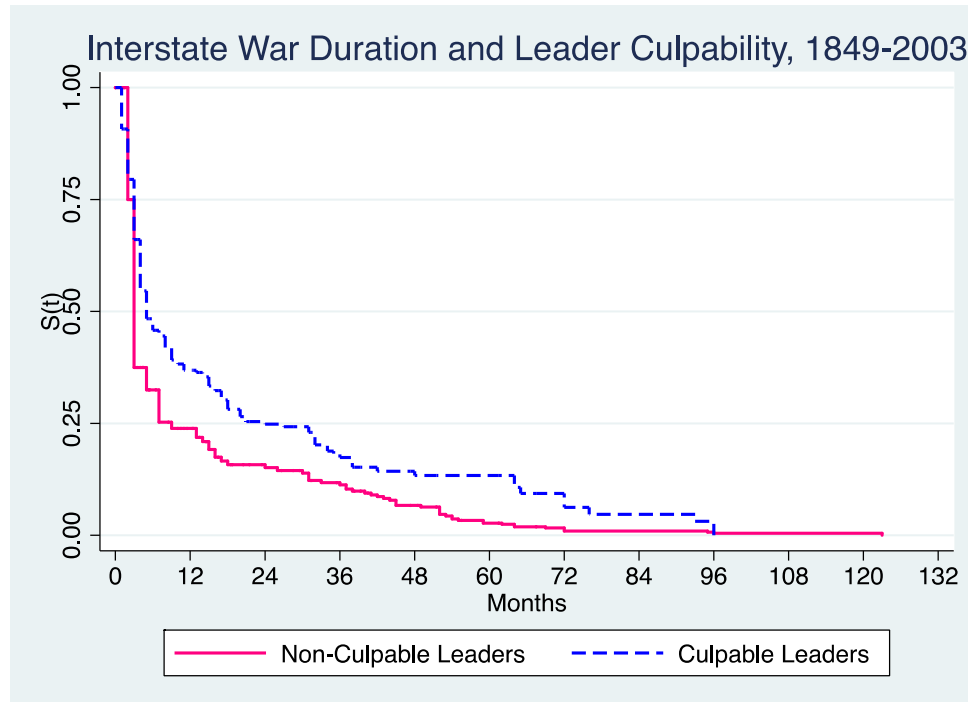
Figure 1 indicates that culpable leaders seem to fight longer wars. For instance, after two years of fighting, approximately 25 per cent of wars are still active for culpable leaders while only 15 per cent are active for non-culpable leaders. The question that this paper explores is whether culpable leaders can escape this logic, concede defeat, and bring war to an end. This argument is developed in the next section.

Scapegoats, Foreign Affairs, and Interstate War

The War is not really a black box where participants win or lose probabilistically. Instead, war consists of an alternating sequence of negotiations and battles that provides information used to update beliefs and help participants to find a settlement (Wittman 1979; Smith 1998; Werner 1998; Goemans 2000b; Wagner 2000; Filson and Werner 2002, 2004; Slantchev 2003; Mattes and Morgan 2004; Goemans and Fey 2009; Slantchev and Tarar 2011). It is in this context of war as a bargaining process that leaders can find space to end a conflict without incurring in the large political costs of admitting defeat.

The outcome of war is often uncertain, but as parties fight and negotiate, the results of the conflict may be more evident. The likely victor has strong incentives to terminate the war but its opponent might continue to fight. This means that even

when one party is prepared to end the war —because it will bring victory— the conflict might endure because the leader on the side facing defeat will continue to fight to escape domestic punishment. This Decider's Dilemma is clearly more acute for culpable leaders than for non-culpable ones (Croco 2011, 2015), but also more intense for culpable leaders facing defeat that for culpable leaders under strong prospects of victory.

This paper argues that the Decider's Dilemma for culpable leaders can be solved if they can transfer the political costs of defeat to an alternative domestic political actor. If this transfer is successfully accomplished —which in this paper is anecdotally interpreted as 'finding a scapegoat'— then the leader has the space to end the war without incurring in large political costs.

Of course, leaders have many candidates for the scapegoat position, from field marshals and chiefs of staff to envoys and special representatives. Nonetheless, in war as a bargaining process, a more likely candidate emerges—the minister of foreign affairs. *The main argument of this paper is that culpable leaders can use the replacement of their minister of foreign affairs as a tool to transfer responsibility for the war effort, thus allowing them to concede defeat and end the war while reducing negative political consequences.*

War as a bargaining process entails both military force and diplomacy. For example, as Iran negotiated the downgrade of its nuclear activities in exchange for the lifting of international sanctions, Robin Wright from *The New Yorker* noted: "Throughout the diplomacy, the Defense Department continued contingency planning."[2] This included support for Iran's enemies in Yemen and Syria, and the development of bunker-buster bombs adequate to penetrate the type of facilities that safeguarded Iran's nuclear facilities. According to Mares (2001), this type of diplomacy with 'teeth,' or militarized interstate bargaining as he labels it, is ubiquitous in Latin America and is best illustrated by the competition between Brazil and Argentina, which was marked by the diplomatic settlement of small disputes, but also by an arms buildup undertaken in case diplomacy failed.

In the literature on war as a bargaining process mentioned above, diplomacy is crucial because wars end when participants find a negotiated settlement that is preferable to the continuation of war. In this light, the paper argues that ministers of foreign affairs, as their country's top diplomats, play a key role in finding a negotiated settlement that will bring hostilities to an end. Foreign affairs ministers often take the lead in wartime negotiations because peace talks can be long and time consuming; this is partly why leaders delegate to their ministers. In addition, leaders

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[2] Robin Wright. Letter from Iran. Tehran's promise. www.newyorker.com/magazine/2015/07/28/tehrans-promise

delegate to these ministers because, unlike other cabinet members or military leaders, they are often members of the foreign service, and are trained in diplomacy and negotiation. Evidently, ministers of foreign affairs are also the gatekeepers to the ultimate executive decision makers in their country (Modelski 1970), which gives them room to operate and credibility to argue that they lack the power to accept the terms of a settlement, which serves as a technique for further negotiation.

In this context, ministers of foreign affairs are the perfect scapegoats for a poor war effort for two reasons. First, they could have participated in wartime negotiations and failed to find a negotiated settlement—in this case, actual poor performance might lead to replacement. Second, even if they did not take part in wartime negotiations, as their country's top diplomats they are responsible for any and all diplomatic efforts, including bargaining during war. For any of these two reasons, culpable leaders facing defeat can blame a foreign minister for failing to find a negotiated settlement that is superior to the continuation of war. Once this has been done and culpability has been diluted by ministerial change, a leader can concede defeat and terminate the war while minimizing political costs. In short, cabinet change can help culpable leaders solve their Decider's Dilemma (Croco 2011, 2015).

Of course, a leader's effort to avoid the political repercussions of accepting defeat is not the only cause of ministerial replacement. The large comparative literature on ministerial careers has provided several alternative hypotheses of cabinet reshuffles and ministerial 'de-selection' that are consistent with the argument in this paper. As mentioned above, a negotiated settlement may elude the efforts of a minister that participates in war negotiations due to forms of agency loss and principal-agent problems; in this case, the literature indicates that leaders implement cabinet reshuffles to solve principal-agent problems (e.g. Huber and Martinez Gallardo 2008; Indridason and Kam 2008; Berlinski, Dewan, and Dowding 2010, 2014; Dowding and Dumont 2015). Dewan and Dowding (2005: 47) present an argument that is closely related to the 'scapegoat' argument made here, suggesting that ministerial resignations are designed to "provide a corrective device against falls in popularity due to the government's perceived failings". Using data from the UK, they show that ministerial resignations work as a 'corrective' to falls in government popularity.

Moreover, Quiroz Flores and Smith (2011), and Quiroz Flores (2016), argue that democratic presidents dismiss their cabinet secretaries due to poor performance represented by a poor provision of public goods, which leads to an increased likelihood of external deposition through elections. Autocrats are not concerned about elections, so they keep poor performers to eliminate internal threats arising from competent, popular ministers in their same political coalition. Democratic prime ministers face external electoral threats from challengers and internal competition from senior party members and cabinet ministers, which forces them to dismiss very competent and highly incompetent ministers, thus keeping mediocre

ones in office. This suggests that, at least in democracies, cabinet change as solution to the Decider's Dilemma should be more effective.

It is important to consider that firing a minister is not without its costs. For instance, replacing a minister will trigger a new search and an appointment process, which can be far from trivial, particularly in parliamentary systems where coalitions are crucial —as in Israel (Kenig and Barnea 2015)— or where factionalized politics are particularly restrictive —as in Australia (Dowding and Lewis 2015). Cabinet turnover can also drain the talent pool of potential cabinet ministers (Dewan and Myatt 2010), and can reduce the quality of policymaking processes since it "can impede the accumulation of experience necessary for effective governance" (Huber and Martinez-Gallardo 2008: 169). High turnover of ministers may even trigger the end of a government (King et al. 1990; Warwick 1994; Laver and Shepsle 1994; Diermeier and Stevenson 1999; Martin and Vanberg 2004). This notwithstanding, the paper argues that the costs of losing a minister should be lower than the costs of conceding defeat in war, which suggests that leaders are likely to use foreign ministers as 'scapegoats,' thus allowing them to end wars that they are seen as culpable for.

Methods and data

Modeling interdependence
In essence, the paper argues that, all else equal, ministerial change should increase the probability of war termination for conflicts that end in defeat. The challenge for estimation resides on the fact that ministerial change and war termination are endogenous and therefore estimation requires of a model of interdependence. In spite of the efforts of numerous methodologists, continuous event history models for endogenous durations are not always available (e.g. Boehmke, Morey and Shannon 2006; Fukumoto 2015). Nevertheless, bivariate models for discrete choice can be helpful in modeling interdependent duration processes.

Consider two different survival times t_1 and t_2. Here t_1 can be interpreted as war duration while t_2 can be interpreted as a minister's tenure in office. It is important to note that we can turn these continuous duration processes T_1 and T_2 into discrete ones (Beck, Katz, and Tucker 1998) where the occurrence of two events, war termination and ministerial change, is conditional on time. Hence, the issue resides in estimating the joint probability of these two interdependent events. In order to do so, the paper uses the well-known bivariate probit model (Van de Ven and Van Pragg 1981; Maddala 1983; Petersen 1995; Greene 2012). Specifically, the paper uses the version developed by Greene (2012).

Consider two potential interdependent processes 1 and 2. Then:

$$y_1^* = x_1\,\beta_1 + \varepsilon_1,\ y_1 = 1\ \text{if}\ y_1^* > 0,\ 0\ \text{otherwise};$$

$$y_2^* = x_2\,\beta_2 + \varepsilon_2,\ y_2 = 1\ \text{if}\ y_2^* > 0,\ 0\ \text{otherwise};$$

$$\left(\begin{matrix}\varepsilon_1 \\ \varepsilon_2\end{matrix} \mid x_1, x_2\right) \sim N\left[\begin{pmatrix}0 \\ 0\end{pmatrix},\ \begin{pmatrix}1 & \rho \\ \rho & 1\end{pmatrix}\right]$$

This is essentially a latent seemingly unrelated regressions model (SUR), where y_1 and y_2 are two interdependent binary processes. The interdependence is determined by the association parameter ρ; under the null hypothesis of $\rho = 0$, the equations can be estimated separately. In this paper, y_1 represents war termination while y_2 accounts for ministerial change. Time dependence for the war and ministerial processes is included in the covariates, which makes this model a discrete duration model (Beck, Katz, and Tucker 1998; Carter and Signorino 2010).

Data on country-wars
The model above is set up as a system of two equations, one for war termination and one for ministerial change. Before the paper discusses the specification for each equation, a note on data organization is in order. The paper organizes data according to a monadic approach (Stanley and Sawyer 2009; Quiroz Flores 2012): war termination is explored for each participant in an interstate war in order to explore the effect of ministerial change by country. For instance, the Mexican-American war is a single interstate war but is here organized in two country-wars, one for the US and one for Mexico. In this framework, the database of interstate wars covers the years 1849 to 2003. The sample for estimation covers 84 interstate wars. These 84 interstate wars are equivalent to 271 country-wars, which have a median duration of five months and a standard error of .48 months. The unit of analysis, however, is the country-war-year-month-leader-minister, for reasons that will be described below.

For the war equation, it is important to recall that the paper explores the probability that a war will end in defeat—only in this case is a scapegoat necessary. Hence, the dependent variable in the war equation is labeled (*War End Defeat*), which is equal to one at the year in which a war terminates for the country and if it terminates in defeat, and equal to zero otherwise. This coding is based on the logic of competing risks (e.g. Box-Steffensmeier and Jones 2006), that is, wars that end in defeat are coded as having experienced the event —termination in defeat— while all other types of war termination are coded as right-censored. This variable was constructed from the database on Inter-State War Participants from the Correlates of

War Project version 3.0 (Sarkees 2000).[3] Of the 271 country-wars covered in the paper, 89 ended in defeat.

Variables

In the war equation, the paper controls for the variable (*Culpable*), which is equal to one if the leader that initiated the war is in office, and zero otherwise.[4] In addition, the paper controls for basic covariates of war termination (Bennett and Stam 1996; Goemans 2000a,b; Stanley 2009a; Stanley and Sawyer 2009): an indicator of the openness of institutions, in this case measured by the size of the winning coalition as (*W*) as developed by Bueno de Mesquita et al. (2003), the COW's composite indicator of national capabilities (*Capabilities*), the number of participants in a specific war (*Participants*), and the natural logarithm of total population (*ln(Population)*).[5] The paper includes the natural logarithm plus one of war duration as a measure of time dependence. Although there are other functional forms for time dependence (Beck, Katz, and Tucker 1998; Carter and Signorino 2010), this particular specification gives a larger weight to early periods of war.

In the equation for minister change, the dependent variable is labeled (*Minister Change*) and is equal to zero if a minister of foreign affairs is in office and equal to one at the time she loses office. This equation controls for the natural logarithm of the number of months a foreign minister holds office plus one (*ln(Minister's Tenure)*). In the sample for estimation, median duration time for ministers is 18 months with a standard deviation of 36.7 months. Out of a total of 271 wars, there is non-missing information about ministerial change for 201 country-wars; for this smaller set of country-wars, 88 experienced ministerial change while 113 did not.

The specification for the equation on ministerial change includes the size of the winning coalition (*W*) and leader change. As mentioned above, there are multiple determinants of cabinet ministers' tenure in office, including political scandals and ministerial performance, among many others. However, there are very few empirical

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[3] The coding follows COW's well-known definition of an interstate war: "at least two participants in sustained combat should qualify as members of the interstate system and there should be at least 1,000 battle related fatalities among all of the system members involved. A state involved is regarded as a participant if it incurs a minimum of 100 fatalities or has 1,000 armed personnel engaged in fighting."

[4] This variable is highly correlated with war initiation, which indicates whether a country initiated a war and that is included in many specifications of war termination. Given the emphasis on culpability, war initiation is omitted here.

[5] The estimate of the winning coalition is an index that reflects the openness of a political system. More specifically, it is a composite index of POLITY IV data that includes information on the competitiveness of executive recruitment, openness of executive recruitment, and competitiveness of participation regime. It also includes regime type as defined by Arthur Bank's cross-national time-series data. The size of the winning has a minimum normalized value of zero, and a maximum of one, and it is organized in intervals of .25 points (Bueno de Mesquita et al. 2003, 2004).

studies of the tenure in office of ministers of foreign affairs. One example is Quiroz Flores (2009; 2016), who argues that the replacement of foreign affairs ministers is strongly determined by their leader's likelihood of deposition. This presents the paper with an interesting challenge: not including a leader's deposition in the minister equation would lead to omitted variable bias, but including it could lead to endogeneity problems because leaders replace their ministers in order to increases their prospects of holding to political office (e.g. Quiroz Flores and Smith 2011). In order to address this additional complication, the specification for the ministerial change equation controls for the variable *Leader Natural Death*, which is equal to one at the time a leader dies in office for natural reasons and equal to zero otherwise.[6] This 'instrument' has been used elsewhere (e.g. Jones and Olken 2005; Hirano 2011) and, imperfect as it is, it avoids the problem of omitted variable bias in the minister equation while accounting for leader change in the minister equation.

All variables related to interstate war, including war duration, population size, country capabilities, and the number of war participants were obtained from the database on Inter-State War Participants from the Correlates of War Project version 3.0 (Sarkees 2000). Information on the tenure of ministers of foreign affairs were obtained from a database of 7,311 foreign ministers in 181 countries, spanning the years 1696-2004 (Quiroz Flores 2009, 2016). All variables related to leaders' tenure in office, including type of exit, were obtained from *Archigos* (Goemans, Gleditsch, and Chiozza 2009). The measure of the size of the winning coalition was obtained from the database of Bueno de Mesquita et al. (2003). Summary statistics of all variables in the estimation sample are presented in Table 1.

Table 1. Summary Statistics

Variable	Mean	Std. Dev.	Min	Max
War End Defeat	.014	.12	0	1
Minister Change	.055	.22	0	1
Culpable Leader	.710	.45	0	1
Leader Natural Death	.002	.05	0	1
Winning Coalition	.569	.33	0	1
Capabilities	.052	.07	.0001	.3838
Participants	11.6	8.4	2	25
Ln(Population)	10.03	1.4	6.23	13.43
Observations	2992			

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[6] For example, in Model 2 discussed below, of a total of 73 leader changes during war, eight of them represent death by natural causes.

Given the importance of ministers and their connection to the replacement of leaders, the unit of analysis is the country-war-year-month-leader-minister in a multiple-record form: there is one observation per country per war per month per leader per cabinet minister.

Estimation results

To reiterate, the paper uses a bivariate probit model based on a latent seemingly unrelated regressions model (SUR) with two interdependent binary processes y_1 and y_2. In this paper, these processes represent war termination for wars that end in defeat and ministerial change. The model is flexible enough to accommodate a recursive system of equations where one of the endogenous variables can be included in the equation for the other endogenous variable (Greene 2012).[7] Thus, the bivariate probit models presented in Table 2 include the variable *Minister Change* in the equation for war duration, as the paper focuses on the effect of replacing a minister of foreign affairs on the likelihood of ending a war in defeat.

Table 2 presents estimation results for five models. Model 1 is a naïve probit model of war termination that includes ministerial change in its specification without addressing endogeneity. In other words, this is an incorrectly specified model included to illustrate the biased effect of endogenous ministerial change. Models 2 to 5 address endogeneity by estimating bivariate probit models. Model 2 is a baseline model. Model 3 includes an interaction of the size of the winning coalition with war duration, as leaders in large winning coalitions may have incentives to fight longer wars (Bueno de Mesquita et al. 2003; Quiroz Flores 2011). Model 4 restricts the estimation sample to the time of war duration in which the culpable leader is in office, thus eliminating observations corresponding to non-culpable leaders that took over after the war started. For this reason, Model 4 omits the variable for culpability from the specification.[8] Lastly, Model 5 abandons the emphasis on wars that end on defeat and explores the probability of war termination in general without paying any attention to whether wars end in victory, defeat, or a tie.

Table 2 presents standard errors below coefficients. The errors are clustered on the country-war to address lack of independence across observations; results hold when standards errors are clusters at the minister level as well. Estimation results also present an estimate for the association parameter ρ, which measures the degree of

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[7] The model cannot accommodate the full system of equations. For details see Greene (2012).

[8] It is also important to note that, since there are no leader depositions in this specification, the equation for minister change cannot rely on leader change. As an alternative, the model uses a leader's age and its interaction with the size of the winning coalition to measure a leader's risk of deposition (Bueno de Mesquita et al. 2003; Quiroz Flores and Smith 2013). Median age for leaders in the estimation sample is 58 years with a standard deviation of 10.43 years.

interdependence between the war termination and the ministerial change equations. This estimate is distributed Chi-square and the p-value for the null hypothesis of $\rho = 0$ is also presented in the table of results.

Table 2. Estimation Results for the War and Minister Change Equations

	Model 1	Model 2	Model 3	Model 4	Model 5
	War Equation				
Minister Change	-0.089	2.793***	1.645**	2.504***	2.120***
	(0.21)	(0.31)	(0.82)	(0.31)	(0.43)
Culpable Leader	-0.152	-0.190	-0.059		-0.099
	(0.19)	(0.13)	(0.20)		(0.10)
Winning Coalition	-0.414**	-0.333	-1.577***	-0.411**	0.242*
	(0.20)	(0.21)	(0.58)	(0.20)	(0.12)
Capabilities	-0.152	-0.585	-0.549	-1.402	-0.646
	(1.49)	(1.35)	(1.36)	(2.16)	(0.88)
Participants	-0.044***	-0.044***	-0.045***	-0.058***	-0.031***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
Ln(Population)	-0.107	-0.097*	-0.102	-0.133*	-0.009
	(0.07)	(0.05)	(0.07)	(0.08)	(0.04)
Ln(War Duration)	-0.279***	-0.223**	-0.543***	-0.318***	-0.203***
	(0.08)	(0.10)	(0.16)	(0.10)	(0.04)
(W) Ln(War Duration)			0.560**		
			(0.24)		
Constant	0.204	-0.032	0.588	0.462	-0.776*
	(0.67)	(0.62)	(0.71)	(0.68)	(0.40)
	Minister Change Equation				
Leader Natural Death		0.459	0.458		0.409
		(0.58)	(0.58)		(0.53)
Winning Coalition		-0.373	-0.410	0.903	-0.422
		(0.29)	(0.33)	(0.86)	(0.32)
Ln(Minister Tenure)		-0.213***	-0.215***	-0.114*	-0.211***
		(0.07)	(0.08)	(0.07)	(0.08)
(W) Ln(Minister Tenure)		0.049	0.060	-0.093	0.070
		(0.11)	(0.12)	(0.11)	(0.12)
Leader Age				-0.003	
				(0.01)	
(W) (Leader Age)				-0.012	
				(0.01)	
Constant		-0.904***	-0.894***	-1.083**	-0.913***
		(0.20)	(0.22)	(0.47)	(0.22)
athrho		-2.427**	-0.818*	-7.656	-1.364***
		(1.22)	(0.45)	(53.70)	(0.43)
Observations	2,992	2,992	2,992	2,126	2,992
Log-Likelihood	-193.4	-811.2	-808.2	-564.7	-1184.7
Clusters	173	173	173	170	173
Rho		-0.985	-0.674	-0.99	-0.877
Test Rho		3.936	3.309	0.02	9.965
p>Chi2		0.04	0.06	0.88	0.001
Model 1 is a naïve probit model of war termination with endogenous ministerial change. All other models are bivariate probit models using a recursive system of equations. *** p<0.01, ** p<0.05, * p<0.1					

The bivariate probit model is relatively complicated and its marginal effects are no exception. Assume that $x = x_1 \cup x_2$ and that $x_1 = x' \gamma_1$ where γ_1 contains all the non-zero elements of β_1 after estimation and zeros in the positions of the variables in the second equation (Greene 2012). The same is true for γ_2. Therefore, the joint probability of leader and minister failure is given by $p[y_1=1, y_2=1|x] = \Phi_2[x'\gamma_1, x'\gamma_2, \rho]$, where Φ_2 is the bivariate normal cumulative density function. The marginal effects are a complex derivative of Φ_2 in respect to x. This derivative includes components from both equations in an additive form, as well as marginal probabilities (Greene 2012). In the additive component, if same variable appears in both equations but has opposite signs, and if the correlation coefficient between both equations is significant, it might make the usual interpretation of probit coefficient signs incorrect. The complexity of interpretation increases when calculating the corresponding probabilities $p[y_1=1, y_2=0|x]$, $p[y_1=0, y_2=1|x]$, and $p[y_1=0, y_2=0|x]$.

In spite of these difficulties, the variable *Minister Change* has a more straightforward interpretation because it appears only in the equation for war termination. Consequently, we can calculate the marginal probability of war termination as a function of ministerial change. This probability is presented in Figure 2, which uses the estimation results of Model 2.[9]

Figure 2. Marginal Probability of War Termination (Defeat)

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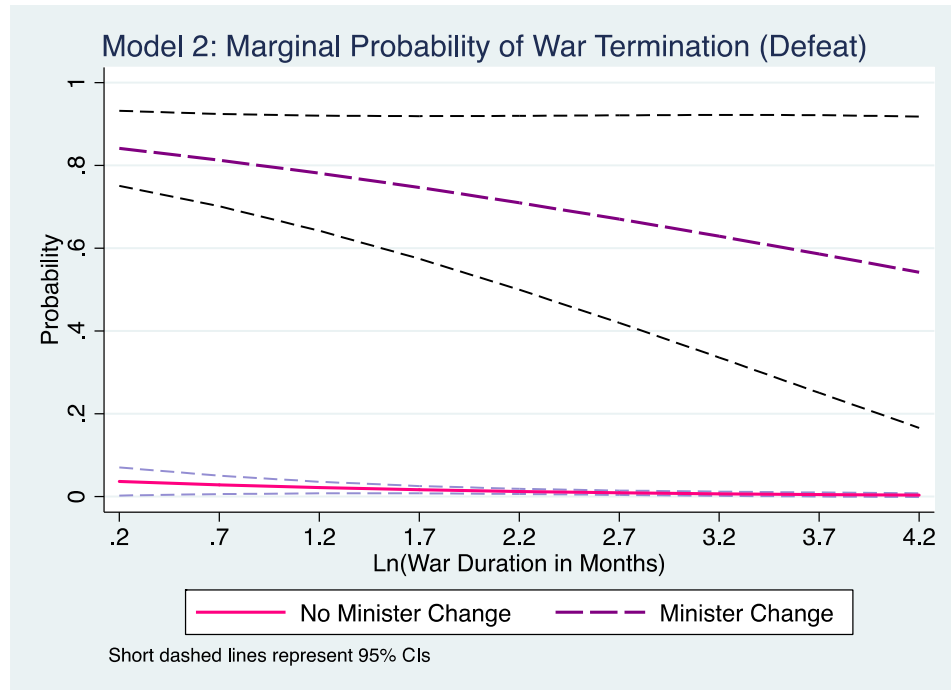
[9] *The calculations for all figures of marginal probabilities use the median values of the winning coalition, capabilities, participants, the natural logarithm of population, and a culpable leader.*

17

Figure 1 clearly shows that minister change greatly increases the probability that a war will end in defeat: at any time during the course of a war, the probability of war termination is larger when the minister of foreign affairs is dismissed than when there is minister continuation. In this case, by blaming the minister for a poor war effort, a leader can dissipate the political costs of ending a war under these conditions. In other words, finding a scapegoat can help a leader to cut her losses, concede defeat, and reduce the duration of war. Under the alternative, the leader would need to continue fighting the war in order to avoid the punishment that is at the center of the Decider's Dilemma (Croco 2011, 2015). Quite interestingly, Figure 1 also shows that this 'scapegoat' effect diminishes over time, as the difference between the probabilities of war termination under minister change and under minister continuation shrinks over time, although the probability of war termination is always larger in the former than in the latter.

This positive and highly significant effect for ministerial change is present in all bivariate probit models, including cases in which the war effort depends on political institutions (Model 3), cases where war duration is restricted to the time in which the culpable leader is still in office (Model 4), and in cases that explore general war termination (Model 5). The corresponding graphs for the marginal probabilities of war termination for the models do not use an interaction of war duration with political institutions, are presented in Figures 3 and 4.

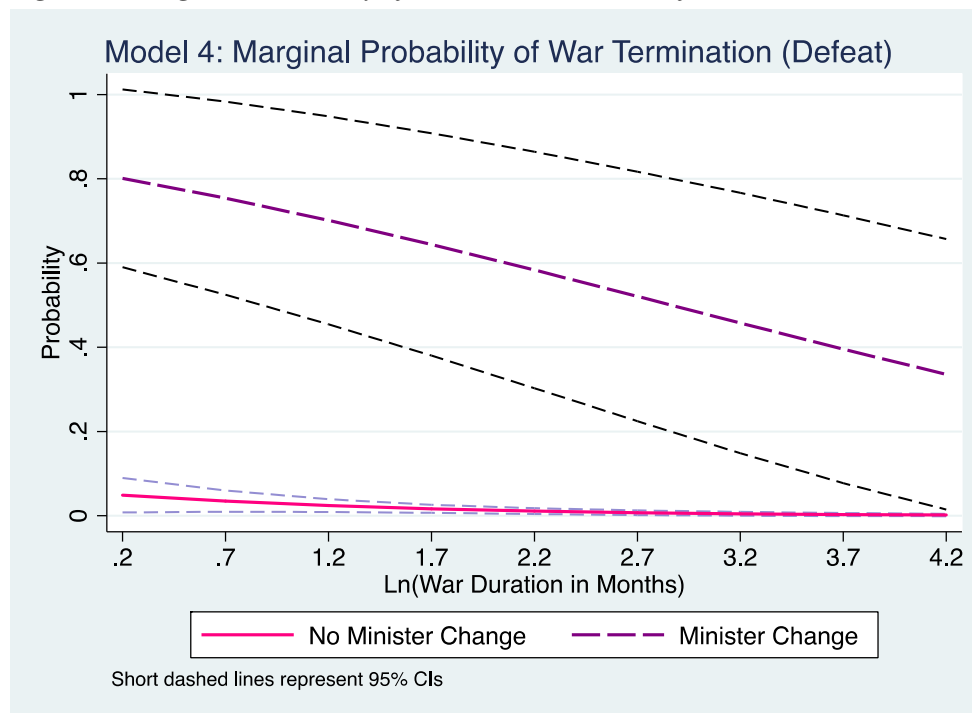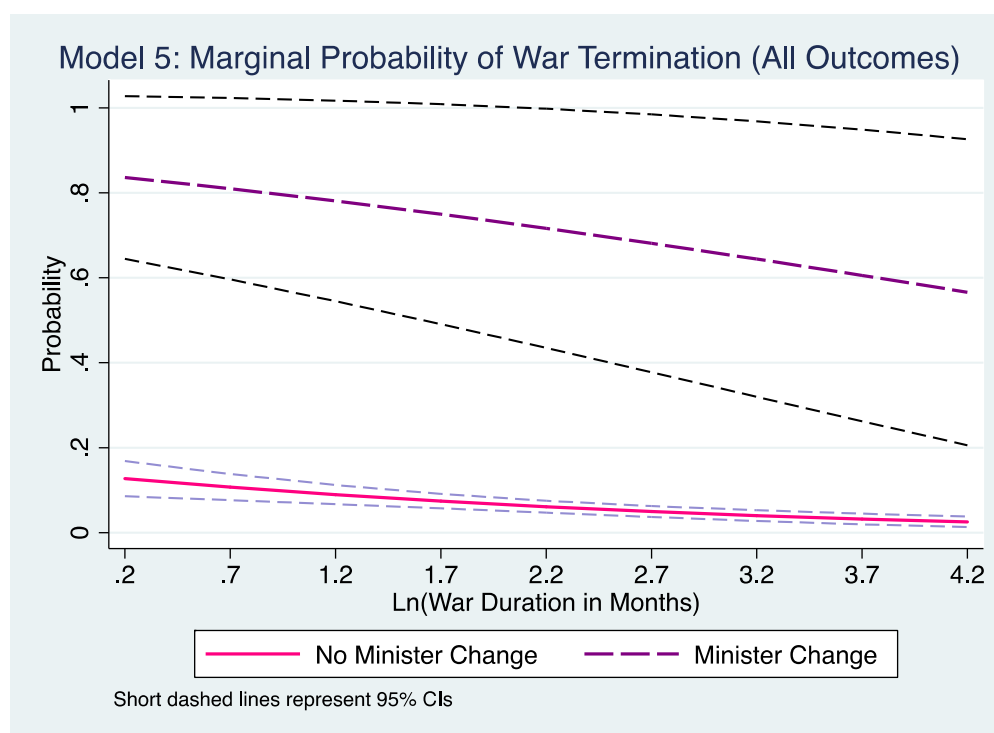*Figure 3. Marginal Probability of War Termination (Defeat)*

Short dashed lines represent 95% CIs

Figure 4. Marginal Probability of War Termination (All Outcomes)

Model 5: Marginal Probability of War Termination (All Outcomes)

This result is partly caused by the interdependence between war termination and ministerial change. This is indicated by the highly significant estimates of the ρ parameter presented at the bottom of Table 2, with the exception of the model that restricts the sample to periods when the culpable leader is in office. Altogether, this confirms the inappropriate specification of Model 1, which assumed that ministerial change is exogenous to war duration—unlike the coefficient for ministerial change in Model 1, the coefficients for ministerial change in the war equation in the bivariate models are positive, relatively large, and highly significant.

It is also important to note that culpability does not seem to have an effect on the probability of war termination; across models, the coefficient for culpability is not statistically significant. However, this is precisely what was expected because blaming a minister for a disastrous war is supposed to dilute the negative effects on culpable leaders for conceding defeat. In other words, as long as the minister of foreign affairs is dismissed, culpable leaders or not more or less likely to accept defeat and end a war than a non-culpable leader.

The effect of the winning coalition is also consistent with theoretical expectations about the political effect of losing a war. As argued by Bueno de Mesquita et al. (2004), leaders in large coalition systems fight longer and make a bigger effort in war in order to secure a victory that will bring more public goods to political supporters. In this logic, if democrats knew they would lose a war they would not have started it in the first place. Hence, *ex-ante*, countries with democratic institutions are expected to fight longer wars that end up in defeat. The negative and

significant coefficients for the winning coalition in Models 3 and 4 provide evidence in favor of this argument. The positive coefficient for the size of the winning coalition in Model 5 reflects the fact that estimation results are for war termination in general without considering whether the war ended in victory or defeat.

Lastly, it is worth pointing out that estimation results confirm that war, even when it ends in defeat, has negative duration dependence. This is demonstrated by the falling probability of war termination under cases of minister change and minister continuation in Figure 1, although this is hardly noticeable in the latter case. Previous empirical initial results on this were relatively mixed (Bennett and Stam 1996, 1998; Goemans 2000a; Filson and Werner 2002), but more recent work continues to point at the evidence that suggests that wars are less likely to end over time (Stanley 2009a; Stanley and Sawyer 2009; Quiroz Flores 2012).

Conclusion

As highlighted by Stanley (2009a,b), Stanley and Sawyer (2009), and Croco (2011, 2015), war termination cannot be fully determined by institutional variation because domestic political institutions seldom change during the course of war. Therefore, the key to the link between domestic politics and interstate war duration must lie elsewhere. Recent research has made great contributions to our understanding of war duration and its connection to domestic politics by exploring transitions in domestic political coalitions (Stanley 2009a,b; Stanley and Sawyer 2009) or by changes from culpable to non-culpable leaders (Croco 2011, 2015). This paper contributes to this research by exploring the effect of ministerial change on war termination.

As it stands, the story is quite straightforward. As suggested by (Croco 2011, 2015), leaders responsible for the initiation of the war might want to bring it to an end, but their decision to start it in the first place makes them liable to domestic punishment, which in turn forces them to achieve favorable war outcomes. As applied to war termination, this means that 'culpable' leaders do not have incentives to end a war that will bring defeat. However, if leaders could transfer the responsibility for a poor war effort to an alternative domestic political actor, this would give them the political space to concede defeat and even keep political office under these circumstances. This paper argues that, if war is approached as a bargaining process, leaders could blame and dismiss their ministers of foreign affairs for the war, which should increase the probability of war termination under conditions of defeat. The empirical results presented in this paper provide evidence in favor of this argument: using ministers as 'scapegoats' facilitates war termination.

What this strand of research suggests is that there are unexplored causes of war termination connected to domestic politics that do not depend, at least directly, on political institutions. In this light, other considerations may be important. This paper places an emphasis on cabinet change, which falls under the umbrella of changes in political coalitions (Stanley 2009a,b; Stanley and Sawyer 2009). However, we are yet to look at other pressures arising from cabinet politics, including the role of other cabinet members and the dynamics of parties and coalitions, particularly in parliamentary systems. Thus, projects that continue to collect data on the composition of cabinets and the tenure of ministers will be particularly useful for our understanding of war termination as well as other foreign policy outcomes.

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