

Civil War Settlements, Size of Governing Coalition and Durability of Peace in the Post-Civil War States

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Abstract

We examine the ways in which the size of the governing coalition in a post-civil war state affects the durability of the peace. Previous studies relate the durability of the peace to the outcome of the civil war, the extent and forms of power-sharing arrangements, and the role of third-party security guarantors. We argue that the way conflict terminates and the power-sharing agreements between former protagonists structure the composition of governing coalition in the post-civil war state. Any settlement to civil war that broadens the size of governing coalition should increase actors' incentives to sustain the peace rather than renew the armed conflict. Peace is more likely to fail where the governing coalition is smaller because those excluded from the governing coalition have little to lose resuming armed rebellion. To test these propositions, we analyze data on post-civil war peace spells from 1946-2005.

Keywords: civil wars settlements, power-sharing, size of governing coalition, Survival of peace.

Building peace in the aftermath of a civil war is not impossible, but it is challenging to bring former enemies together in a post-war peace process. It is even more challenging to build a structure of peace that is durable. There are cases of post-war states that have managed to sustain the peace after the conflict ended (e.g., South Africa, Mozambique, El Salvador, Nicaragua, and very recently Nepal) while others have experienced peace failure and a return to armed conflict (e.g., Angola, Sudan, Democratic Republic of Congo). Of the 125 civil wars that occurred in 71 countries between 1945 and 2005, about 52% of those conflicts did not recur.¹

Previous studies relate the durability of the peace after civil war to the outcome of the conflict (i.e., whether it ended in a negotiated settlement or a decisive military victory by one side or the other; see Licklider 1995; Luttwak 1999; Quinn *et al.* 2007). Others have explored how the durability of the peace created by a negotiated settlement is affected by the presence or absence of third party security guarantees (Walter 2002), UN peacekeeping forces (Doyle and Sambanis 2000, 2006; Fortna 2004, 2008) and the extent of power-sharing institutions included in the peace agreement (Hartzell and Hoddie 2003 and 2007), while others add that the level of economic development is critical to the durability of post-civil war peace (Collier *et al.* 2008).

Our analysis focuses on the ways in which the size of governing coalition in a post-civil war state affects the durability of peace in the aftermath of civil war. We argue that the way the conflict terminates and the terms of the power-sharing agreements between former rivals structure the composition of the governing coalition in the post-civil war state and the rules of the game by which those groups pursue their interests. Any outcome to a civil war that broadens the size of governing coalition should provide former rivals with more opportunities to pursue their political and economic interests peacefully through institutional means. The larger the size of the governing coalition, the greater the opportunities are for any one group to become a part of

¹ Calculated from the dataset to be used in this study.

that governing coalition and influence the policy process in ways that enhance its interests. This should reduce their incentives to resort to armed rebellion. If the size of the governing coalition is smaller, then more groups will be excluded from the governing coalition. Eventually, some groups may revise downward their estimate of their chances of ever being in a governing coalition to the point that the resumption of armed conflict becomes more attractive than abiding by the institutional status quo as a means to pursue their interests.

This article proceeds as follows. First, we review existing literature on the duration of the peace in post-civil war states and suggest the size of the winning coalition in post-war states as an alternative framework to explain peace duration. We then present a theoretical argument on how the characteristics of the now-ended conflict and of the post-conflict environment affect the size of the governing coalition in post-civil war states. Then, we explain how variations in the size of the governing coalition affect the durability of the peace in post-civil war states. The research design section describes how we test the hypotheses derived from the theoretical framework. After presenting our findings, we conclude with a discussion of the implications of theory and findings for the broader debate on post-conflict peacebuilding and democracy.

The Durability of Post-Civil War Peace

Current research on the duration of post-civil peace falls into two schools. One argues that the destruction of one groups' organizational capacity (i.e., decisive military victory) leads to a more durable peace. The other suggests that durable peace can be established even in the absence of decisive victory if the rival factions agree to power-sharing arrangements formalized in a negotiated settlement. Wagner (1993), Licklider (1995), and Luttwak (1999) argue that decisive military victories produce a more durable peace than negotiated settlements because a military victory destroys the defeated side's capacity to conduct military operations (Wagner 1993: 255). It demobilizes their civilian support base: citizens who may have preferred the defeated side now

have an incentive to withdraw their support and hide their preferences. The defeated side has neither the military capacity nor the civilian support base to exert much influence on post-war state-building efforts. Nonetheless, Mukherjee (2006) adds that the durability of the peace established by a decisive military victory can be enhanced if the victor offers power-sharing concessions to the defeated group. Quinn *et al.* (2007) distinguish between the rebel victory and the government victory and suggest that the peace established by rebel victory is more durable than that produced by government victory (see Toft 2010).

A negotiated settlement also brings an end to the fighting. But inherent in a negotiated settlement is a credible commitment problem that leaves the signatories with fear of future uncertainties concerning both their physical security and their ability to pursue the interests of the constituency they claim to represent. Walter (2002) argues that during the disarming and demobilizing phase, each side knows that it would be better off with a sucker outcome: induce your rival to disarm while you covertly retain enough military capability to annihilate them once they are disarmed. Since both sides have this incentive and both sides know their rival has the same incentive, neither can trust their rival's commitment to disarm and demobilize under the terms of the settlement (Walter 2002: 34-37). Their payoffs are structured in such a way that their optimal strategy would be to defect (not to cooperate) no matter what their rival does. For this reason settlements become more likely and are more likely to hold when third parties provide security guarantees during the disarming and demobilizing phase. Doyle and Sambanis (2000, 2006) find a positive relationship between UN peacekeeping, post-civil war democratization, and peace duration. Fortna (2004, 2008), Hartzell and Hoddie (2007), Quinn *et al.* (2007) Mattes and Savun (2009) also find that the durability of the peace established by negotiated settlements can be enhanced by the presence of peacekeeping missions.

Hartzell and Hoddie (2007) add that credible commitment problems in negotiated settlements can be resolved to the extent that the agreement involves a range of power sharing arrangements that address security concerns of former rivals and distribute political power and resources between them. Political, military, territorial, and economic power-sharing arrangements in a peace agreement provide the former protagonists with some assurance that their rival will not be able to monopolize state power and use that power to establish their hegemony over the other parties to the peace agreement.

Certain dimensions of power-sharing create stronger incentives than others for the protagonists to sustain the peace rather than resume armed conflict. Walter (2002) finds that protagonists are more likely to sign a peace agreement if it involves political and territorial power-sharing, but the durability of the peace depends primarily on third party security guarantees. Hartzell and Hoddie (2003 and 2007) suggest that the different dimensions of power-sharing reinforce one another. Mattes and Savun (2009) find that only political power-sharing arrangements have a significant effect on the durability of the peace.

Collier and Hoeffler (2008), Paris (2004), Stedman *et al.* (2003) suggest the importance of post-war economic development as a means of reducing the risk of peace failure. But civil war nations were poor to begin with (Fearon and Laitin 2003; Sambanis 2004), and armed conflict destroys much of the economic infrastructure that did exist. Civil war also induces capital flight. For these reasons, Kang and Meernik (2005) find that post-conflict economic recovery is very difficult to achieve. Furthermore, the inability of politicians to credibly commit to the post-conflict peace constrains economic recovery by deterring investment (Flores and Nooruddin 2009).

Post-civil war power-sharing arrangements are temporary measures to induce rival groups to sign a peace agreement. Likewise, peacekeeping forces provide security guarantees so that

warring parties can disarm and demobilize. Power-sharing and peacekeeping enhance the durability of the peace only if they induce (and institutionalize) substantial change in the behavior of actors previously engaged in armed conflict. Does the post-conflict order established by these measures alter the political opportunity structure facing former enemies in ways that make it preferable for them to pursue access to power and resources through peaceful, institutional means rather than through a resumption of armed conflict? We argue that conflict outcomes, power-sharing agreements and third-party security guarantees affect peace duration by affecting the size of governing coalition in the post-civil war state and, therefore, the political opportunity structure available to former actors for the long term, after the peacekeepers have left and the power-sharing arrangements have been institutionalized in the form of a new set of state institutions.

Size of Governing Coalition after Civil War

Civil war is a violent struggle for political power and access to resources between politically mobilized groups (Tilly 1978). That struggle continues through nonviolent means after the civil war ends. The manner in which the conflict terminates determines the relative strength of the competing factions in the post-war regime, and the institutional arrangements that define the post-war regime determine the rules of the game by which factions compete for access to state power and resources. The relative capacity of groups to compete for power and resources is determined in large part by whether they achieved a decisive military victory over their rivals in the civil war, were defeated by their rivals, or signed a peace agreement with their rivals to end the war. Given their relative capacity, those groups then compete to become a part of the governing or winning coalition. Following Bueno de Mesquita et al. (2003: 51-55), we define the governing coalition as that subset of the selectorate of sufficient size whose support is necessary to claim political

power “over the remainder of the selectorate as well as the disenfranchised members of the society.” Post-conflict elections present the opportunity to become a part of the selectorate and to join the winning coalition (Bueno de Mesquita et al. 2003:42). Almost half of post-civil war states have held multiparty elections within five years of conflict termination, and about one-third of those states have held a second round of multiparty elections (Joshi 2010: 825-6). Thus, the termination of a civil war does usually produce a substantial change in the structure of the polity, regardless of whether the conflict ended in a government victory, a rebel victory or a negotiated settlement. This pattern of change suggests that we should find considerable variation among post-civil war states in the extent to which the size of the governing coalition expands in the post-war period, compared to the pre-war era. Institutional change in post-civil war states has the potential to not only increase the size of the winning coalition but also to incorporate into the selectorate new sets of actors to compete for positions in the governing coalition.

An increase in the size of the governing coalition should increase the incentives of former enemies and newly mobilized groups to preserve the current political system rather than seek to destroy it through renewed armed conflict. The size of the winning coalition in the post-war state, the political opportunity structure established by the mode of conflict termination, and extent of power-sharing institutions in the post-war regime should affect the durability of peace in the aftermath of civil war. We now explain how the size of the governing coalition is affected by the outcome of the civil war and derive hypotheses on the relationship between the size of the governing coalition and the durability of post-civil war peace.

Negotiated Settlement: In comparison to a decisive military victory by either the rebels or the government, a negotiated settlement should lead to an expansion in the size of the governing coalition in the post-war state. Negotiated settlement results from a military stalemate (Zartman

1989; Brandt *et al.* 2008). Civil war rivals are more likely to reach a negotiated settlement when there are third-party security guarantees against defections from the agreement and power-sharing institutions to resolve the credible commitment problems that otherwise would make the parties reluctant to agree to a settlement (Walter 1999, 2002; Hartzell and Hoddie 2003, 2007). Power-sharing institutions make it difficult for any one actor to monopolize state power and use it to marginalize or eliminate its rivals. The security concerns of rival groups are alleviated to the extent that power-sharing institutions operate effectively to constrain the hegemonic ambitions of all groups competing for power. This creates an environment that is more conducive to cooperation among former rivals than would be the case were there no formal power-sharing institutions in place. When the fear of renewed war is reduced by power-sharing institutions and third party guarantees, a substantial change takes place in the political opportunity structure confronting the former enemies, and this change should be reflected in the size of the governing coalition. This leads to the following hypothesis.

H1: Size of the governing coalition should be larger following negotiated settlement, compared to a decisive military victory by either government or rebels.

Hartzell and Hoddie (2003, 2007) discuss four different types of power-sharing agreements that can be included in a negotiated settlement: military, political, territorial and economic power-sharing. Previous research has shown that not all of types of power-sharing have equal effects on the duration of the peace. We argue that this is so, in part, because each dimension of power-sharing can have different effects on the size of the governing coalition and on the political opportunity structure confronting mobilized groups in the post-war environment. Under military power-sharing, some portion of the rebel's armed force is disarmed, demobilized and integrated into the national army; others are reintegrated into civilian society. Integration of rebel forces into the government's army provides security guarantees against either the government or

the rebels launching a surprise attack against their former enemies. The rebels no longer have an organized military force of their own, and the government's military is now constrained by the presence of former rebel soldiers inside its ranks. The size of the governing coalition is expanded by military power-sharing in the sense that military power-sharing prevents any one faction from monopolizing control of the military and using it to settle policy disputes by force, excluding rivals from the policy making process. Furthermore, military power-sharing shrinks the pool of potential recruits for armed conflict, which should increase the incentives for each side to pursue their interests peacefully through institutional channels.

Territorial power-sharing involves decentralization of policy making authority to groups at the sub-national level. It promotes self-governing institutions at the regional and local level and provides a legitimate framework for regional parties to emerge and compete for power and resources. Though regional parties can mobilize people for ethnic conflict and secession (see Brancati 2009), those parties' exercise of polity authority at the local level can enhance their ability to compete for political power in the central government as well. Small parties with local electoral support may not be able to win control of the national government, but their ability to command the support of local voting blocs can give them bargaining power with national parties that are trying to build a winning coalition in elections for offices in the central government. To the extent that local and regional officials can develop their own base of popular support independent of national parties, national parties must bargain with them to win the blocs of votes they control. In this manner, territorial power-sharing should have a positive effect on the size of the governing coalition in the post-war state.

Economic power-sharing does not confer any direct political advantage to any particular group, but it does channel resources to economically marginalized groups. To the extent that such groups gain access to more economic resources (in absolute terms and relative to the share

of resources controlled by other groups), they should gain more ability to exert influence over policy-making institutions. The democratization literature suggests that the degree of economic inequality influences political mobilization. The more equal the distribution of economic resources, the more people are willing and able to demand political rights and civil liberties (Vanhanan 2002). In the long term, therefore, economic power-sharing can bring about changes in the composition of the governing coalition, as previously marginalized segments of the population gain the economic resources that enable them compete for membership in the governing coalition.

Political power-sharing involves allocating offices in the transitional government to the parties in the negotiated settlement. The rebels may be invited to join the cabinet or assume other positions in the transitional government, thus expanding the governing coalition. Nilsson (2009) finds that when all rebel groups are not included in a negotiated settlement or the power-sharing arrangements established by that agreement, excluded groups will continue to fight but those included in the settlement are not more likely to defect from the agreement simply because other rebel factions continue to fight. Therefore, political power-sharing should have a positive impact on the size of the governing coalition.

From this discussion of the different dimensions of power-sharing deals, we derive following hypotheses:

- H1a: Size of governing coalition should be larger when military power-sharing agreements are adopted.
- H1b: Size of governing coalition should be larger when territorial power-sharing agreements are adopted.
- H1c: Size of governing coalition should be larger when economic power-sharing arrangements are adopted.

H1d: Size of governing coalition should be larger when political power-sharing arrangements are adopted.

One Sided Military Victory: One-sided military victory by either the government or the rebels creates a post-civil war environment that clearly favors the victor. Wagner (1993), Licklider (1995), and Luttwak (1999) argue that the victor does not have to share power with the defeated side because the balance of power so favors the victor as to preclude a resumption of armed conflict by their defeated rival. Therefore, a decisive military victory creates a post-civil war environment where the victorious side is more likely to adopt exclusionary policies enforced by its military dominance rather than expand the size of the governing coalition in order to co-opt the former rival's supporters. This suggests that the size of the governing coalition is less likely to expand following a decisive military victory.

All military victories are not alike, however. A victor has an incentive to co-opt the defeated side's support base to the extent that the victor fears that its rival can regroup, rearm and resume armed conflict at a later date (see Mukherjee 2006). A rebel victory eliminates the defeated elites from contention for power more thoroughly than does government victory. When a rebel group secures a decisive military victory, elites of the defeated government either killed or sent into exile, along with their allies among the economic elite (Quinn *et al.* 2007). Victorious rebels can seize the assets of the defeated government's economic allies and redistribute those resources in order to enhance their support among their own constituents and win the loyalty of the defeated government's civilian support base. Civilians have incentives to change their loyalty to the victorious rebels because the old elites lack access to economic resources to reward the loyalty of their former supporters or the military capacity to protect them. Therefore, victorious rebels have little incentive to expand the size of the governing coalition in order to co-opt the defeated government (see Gurses and Mason 2008).

By contrast, the same political and economic elites remain in power after a government victory. However, the capacity of those elites to sustain their power in the post-war state is weakened as a consequence of the economic damage inflicted during the war. Expanding the size of the governing coalition in the aftermath of government victory depends on the extent to which the victorious government believes a resumption of civil war is likely in the near future. When the rebel movement is completely eradicated and the victorious government has the resources to win over the loyalty of those who supported the rebels, it has less incentive to offer concessions to the defeated rebels or to expand the governing coalition.

However, a decisive government victory does not always lead to the eradication of the rebel movement. Defeated rebels can avoid annihilation by blending into population, rebuilding their military strength and awaiting a political opportunity that would make renewed combat feasible (Quinn *et al.* 2007). *Janatha Vimukti Peramuna* (JVP) in Sri Lanka suffered military defeats in 1977 and again 1987, but in both instances, the JVP leadership was able to avoid annihilation and maintain enough of their civilian support base that they were later able to revive their capacity to mount organized opposition to the government. Rather than risk a third conflict, the government gradually allowed JVP to enter the political process as a legal party. Similarly, competing *Sinhalese* parties mobilized Tamil groups in the January 2010 presidential elections in an effort to bring the Tamil minority into the democratic fold and deny the LTTE (*Liberation Tigers of Tamil Eelam*) the civilian support base they would need to resume their secessionist war.² The government recruited Tamils into the police force after defeating the LTTE in September 2009.³

Quinn *et al.* (2007) found that civil war is more likely to recur following government victory

² In the presidential election, the military commander who led the final battle with the LTTE received more than 60% of the votes in the Tamil strongholds (see, Ubayasiri 2010).

³ According to a news report, more than 6,500 Tamil youths, including 400 women, applied for 500 advertised police constable positions (see “Jaffna Tamils flock to join Sri Lanka police”, *The Independent*, 30 September 2009).

than rebel victory. Therefore, a victorious government has more incentive to expand the governing coalition than do victorious rebels. Expanding the governing coalition would allow the victorious government to incorporate enough of the rebels' supporters into the political process to make it difficult for the rebels to rebuild a civilian support base sufficient to support a resumption of armed conflict at a later date. This leads to the following hypothesis:

H2: The size of the governing coalition should be larger following government victory than the rebel victory.

Size of Governing Coalition and Survival of Peace

So far, we have presented a theory on how the manner in which a civil war ends and the extent and nature of the post-conflict power-sharing agreements affect the size of the governing coalition in the post-civil war state. However, the size of the governing coalition is highly volatile in the immediate aftermath of civil war. The rules of the political game can change suddenly and dramatically. In many post-war societies, politically mobilized groups can compete in elections, but the range of opportunities for groups to compete is subject to change from one election cycle to the next. It is not always clear to participants just what opportunities are available to them and what the costs/benefits of playing by the new rules are, compared to the expected payoffs from resuming armed conflict.

Ending the war and adopting power-sharing arrangements does change the balance of power between the groups that had been engaged in armed conflict. Such changes, however, are often institutionally inconsistent and fall short on one or more of the dimensions of institutionalized democracy (i.e., the executive dimension, executive constraints dimension, and participation dimension; see Gates *et al.* 2006). All of these considerations suggest that the post-war states are susceptible to relapse into armed conflict because of uncertainty about the stability of the size of the governing coalition over time.

Some scholars caution that embarking upon democratization immediately after a civil war ends may jeopardize the survival of the new democracy and the durability of the peace. Paris (2004: 187) and Diamond (2005) suggest that restoring political stability and effective administration over the territory should take priority over promoting political and economic liberalization. The risk is that the victor in the inaugural elections could undermine democracy by using the power won through elections to restrict their rivals' ability to compete in subsequent elections (Paris 2004: 188-9). Paris describes how democracy became a distant goal in post 1997 Liberia when Charles Taylor used his power to suppress his political opponents and consolidate a monolithic party system, transforming the presidency into an autocracy based on violence, repression and nepotism. Liberia plunged into renewed conflict in 1999 as *Liberians United for Reconciliation and Democracy* (LURD) resorted to violence against the Taylor government. The peace process that began with the 1997 agreement failed not because Liberia had elections that brought the rebel leaders into power but because Taylor used the power he won in the election to restrict the opportunities available to other parties in future elections. The winning coalition shrunk once Taylor assumed the presidency. Nepal has successfully avoided a relapse into civil war after its first post-conflict constituent assembly elections in 2008. Fifty-four political parties competed in the elections and nineteen won seats in the constituent assembly. If one party had dominated the constituent assembly and restricted other groups from participating in the legislative process or in future elections, that would have created strong incentives for excluded groups to use violence rather than sustain the peace under an increasingly authoritarian political order. Those excluded from peaceful competition for political power have little to fear from organizing a new armed rebellion. We argue that the risk of peace failure increases if politically mobilized groups that can credibly threaten the use of violence are excluded from the post-conflict political processes. Once political groups compete for power and resources, even

defeated groups have stronger incentives to preserve the system in the hope that they will win power in the future. This leads to the following hypothesis:

H3: The larger the size of the governing coalition, the less likely the peace is to fail.

Research Design

We use an updated version of Sambanis's (2004) civil war dataset to identify 125 post-civil war peace spells in 71 countries from 1946 - 2005. The unit of analysis is the post-conflict country-year. A peace spell begins with the year the conflict ends if it terminates in the first half of the year (January through June); otherwise the peace spell is counted as beginning with the next calendar year. We codes all variables on an annual basis and include time varying covariates that previous studies have treated as constant over time. In particular, we code power-sharing arrangements as present only in those years for which they were in effect; when they expire (as, for instance, the political power-sharing agreement in South Africa did in 1996), we code that variable as "0" for all subsequent years.

Our purpose is, first, to test whether civil war outcome and power-sharing agreements affect the size of the governing coalition in the post-civil war states. Our second purpose is to test whether the size of the post-civil war governing coalition affects the duration of the peace. We operationalize the *size of the governing coalition* with the measure (W) developed by Bueno de Mesquita *et al.* (2003: 134-5). They estimate the size of winning coalition (W) by using REGTYPE (regime type), XRCOMP (competitiveness of executive competition), XROPEN (openness of executive competition), and PARCOMP (competitiveness of participation) from the Polity II dataset.⁴ They code size of the winning coalition as "1" when REGTYPE is not missing data and XRCOMP is not coded 2 or 3 (suggesting no military or military/civilian regime).

⁴ More detail on operationalization of these variables can be found in "Polity IV Project: Dataset Users' Manual" (Marshall and Jaggers 2009).

When competitiveness of executive recruitment (XRCOMP) is larger than or equal to 2, W is coded “2”. When the value of XROPEN (the openness of executive recruitment) is greater than 2, W is coded “3”. If PARCOMP (competitiveness of participation) is coded as 5, W is coded “4”. Because none of the civil war states reached the level of institutionalized democracy, we do not have cases in the dataset where W is coded “4”. According to our dataset, the size of winning coalition improved in all cases from year 1 to year 5. When we break down the cases by type of civil war termination, we see larger increases in W after negotiated settlements, followed by (in order) rebel victory and government victory. Compared to decisive military victories, the rate of change in the mean value of W is higher following negotiated settlements, but in absolute terms the mean value of W at year 1 is largest following government victory (0.97 vs. 0.40); the same is true for year 5 (0.89 vs. 0.77). For those cases terminated in settlement, the mean value of coalition size increased almost 72% (from 0.90 to 1.55) from year 1 to year 5 (see Table 1).

Table 1 Here

The dependent variable in the second stage of the analysis is *peace duration* (or peace failure) in post-conflict states. We code peace failure as occurring when a group resumes armed conflict after a previous conflict has terminated. In a given peace year, if a new armed conflict begins, we code peace failure as “1”, otherwise “0”.

To test hypotheses 1 and 2, we use a series of dummy variables for the different ways civil wars can end. *Government victory* is coded “1” if civil war ends and the government is still in power with no negotiated settlement, otherwise “0.” *Rebel victory* is coded “1” if insurgents defeat the government and assume power themselves, otherwise “0”. If the government and the insurgents negotiate a peace agreement, we code negotiated settlement as “1”, otherwise “0.” We do not code “truce” as a separate category from negotiated settlement. Sambanis coded some cases like Papua New Guinea (1988-1991) and Sri Lanka (1987-1989) as terminating in “truce”,

which were later terminated in negotiated settlement and government victory, respectively. Among the cases identified as relevant for this study, 56 (44.8%) terminated in government victory, 28 (22.4%) in rebel victory, and 41 (32.8%) in negotiated settlement. The codings for all three types of conflict termination are taken from Sambanis (2004) and the *Third Party Interventions in Intrastate Disputes Project* (TPI Project) case narratives.⁵

To test the impact of power-sharing arrangements on size of the governing coalition, first we identify whether or not *military, political, economic* and *territorial power-sharing* agreements exist between the government and the rebels. These variables come from Hartzell and Hoddie (2003), updated with additional information for each case from TPI Project case narratives and *Keesing's Record of World Events*. All power-sharing variables are dichotomously coded. Unlike Hartzell and Hoddie, these variables are coded only if they were implemented.⁶

In the second stage of the analysis, we estimated a set of models that use the size of the governing coalition to explain the durability of the peace in post-war states (Hypothesis 3). Because we are interested in the impact of civil war outcome on, first, the size of the governing coalition and, second, the durability of post-civil war peace, we control for factors that could potentially affect each of our dependent variables. We identify the stakes of conflict in terms of issues of incompatibility: using Buhaug's (2006) incompatibility dataset, we code “1” for *governmental conflict* (i.e., revolution) if rebels sought to overthrow the central government or bring about change in the composition of the government, otherwise “0” (i.e., Buhaug's *territorial conflict*, or secession). To account for the effect of identity issues on the size of the post-war governing coalition and the durability of the peace, we use Doyle and Sambanis (2000)

⁵ Mark J. Mullenbach and William Dixon, Third-Party Interventions in Intrastate Disputes (TPI-Intrastate Disputes) Project, available at http://faculty.uca.edu/markm/tpi_homepage.htm.

⁶ We code only whether the power-sharing agreements were implemented or not. We do not code degree of success of implementation. For implementation of comprehensive peace agreements see ongoing research initiative “Peace Accords Matrix” at <https://peaceaccords.nd.edu/>.

data to code for *ethnic civil war* as “1” if the pattern of rebel recruitment followed ethnic lines, otherwise “0”. Since peacekeeping missions have been shown to have an effect on post-civil war peace and democratization (Fortna 2004; Hartzell and Hoddie 2007; Doyle and Sambanis 2000 and 2006) we code *UN mission* as “1” if such missions were deployed, otherwise “0”. Previous studies suggest that war costs (measured in terms of casualties and the duration of the war) affect the duration of post-civil war peace (Hartzell and Hoddie 2003, 2007; Walter 2004; Doyle and Sambanis 2000; Quinn *et al.* 2007). We control for war costs with the log of *battle related deaths* and the *duration* of the previous civil war. Both variables come from Doyle and Sambanis (2006), updated using TPI Project case narratives. Given the finding that economic development affects the capacity of the state to sustain the peace, we control for *GDP per-capita*, lagged by one year to avoid endogeneity problems. Previous studies suggest that dependence on natural resource exports (such as oil or gemstones) tends to strengthen authoritarian institutions and make such countries more susceptible to the outbreak of civil war (Le Billon 2001; Ross 2001; Fearon and Laitin 2003; Collier and Hoeffler 2002), we control for *oil dependence* with a variable coded “1” if a country's oil exports make up more than 33% of total exports, otherwise “0.” Data are from Doyle and Sambanis (2006). Doyle and Sambanis (2000: 780) found that the risk of peace failure increases with increases in the number of the factions. Therefore, we control for the effect of the *number of factions* on the size of the governing coalition as well as the duration of peace, using data from Doyle and Sambanis (2000, 2006). Finally, previous studies have found a positive relationship between past democratic experience and transition toward democracy (Epstein *et al.* 2006). We code *past democratic experience* as “1” if the post-conflict state had at least a +4 score on the Polity Scale at any time after the end of the World War II but before the onset of the civil war, otherwise “0”. We control for size of the nation's *population*, using the natural log of this variable from World Bank *World Development Indicator* (WDI)

updated using *Penn World Table Version 6.2* (Heston et al. 2006). We also control for the effect of the Cold War: conflicts terminated in 1990 and thereafter are coded “1”, otherwise “0”.

Findings and Analysis

Our first hypothesis is that the type of conflict termination strongly affects the size of the governing coalition in the aftermath of civil wars. We test this argument using Ordered Logit models, with size of the governing coalition the year the conflict terminated as our dependent variable. Since the size of the governing coalition is likely to change over the first few years of the peace spell, we follow all post-civil war states for five years after a civil war ends and test our arguments with panel regression models (fixed effects).⁷ Then, we test our second hypothesis that the size of the governing coalition affects the duration of the peace. Peace failure is coded “1” when a new civil war onset occurs. For this we use survival analysis in which the dependent variable measures the time that a nation spends before experiencing the failure event of a new civil war onset (see Box-Steffensmeier and Jones 2004).

Explaining the Size of the Governing Coalition

We estimated three sets of Ordered Logit models (Table 2) and panel regression models (Table 3), each testing whether variations in the balance of power established by different types of conflict termination affect the size of the governing coalition in post-civil war states. Tests reveal problems of multicollinearity. Therefore, we report robust standard errors. In the panel regression models (Table 2), we do not control for the Cold War effects because it creates collinearity problems and drops out of the models.

Table 2 Here

Table 3 Here

⁷ Because Ordered Logit is not commonly used to model panel data with ordered dependent variable, we have reported simple panel regression models.

As expected, we find a positive relationship between negotiated settlement and the size of the governing coalition in post-civil war states (H1) across all models. The estimated coefficient for negotiated settlement is 1.504 ($p < 0.05$, Model 2, Table 2). This finding holds in the panel regression models as well (Table 3). With respect to civil wars that ended in military victory, we argued that there are more incentives for a victorious government to accommodate rebels than for victorious rebels to accommodate a defeated government in the post-war political process (H2). The findings support this claim: the estimated coefficient for government victory is 1.692 and is significant across all models ($p < 0.01$, Table 2, Model 2), including the panel regression models (Table 3). Our findings suggest that victorious governments are more likely than victorious rebels to expand the size of the governing coalition because they have more reason to fear a recurrence of civil war. The size of the governing coalition is higher immediately following rebel victory (compared to government victory; see Table 1) but the overall size of the governing coalition remains larger following government victory compared to rebel victory. Our results are contrary to Toft's (2010: 25) claim that rebel victory is followed by an increase in the level of democratization. Since she does not use a decay function in her analysis, it is very difficult to determine (and dubious to claim) whether democratization or authoritarianism twenty years after a civil war ends is actually a function of the outcome of the civil war. The best way to address this question is to see whether there have been any significant institutional changes in the short-term and whether those institutional changes created incentives for rival groups to pursue their objectives through established institutions. Rebels may win a war by building a larger coalition, but they do not have incentives to expand that coalition beyond that boundary. This is not the case with the government victory. Expanding the governing coalition would be a prudent way for a victorious government to reduce the risk of civil war recurrence by allowing the defeated rebels to participate in the political process (see Mukherjee 2006).

We argued that the size of the governing coalition should be positively related to the adoption of military, economic, territorial and political power-sharing arrangements (Hypotheses 1a – 1d). We find a significant positive effect for territorial power-sharing across all models, including the panel models (Table 3). The estimated coefficient for the ordered logit model is 1.360 ($p < 0.05$; see Table 2, Model 2). This suggests that territorial power-sharing empowers politically mobilized groups at the regional level and provides them with expanded opportunities to participate peacefully in the political process.

Economic power-sharing has no significant effect on coalition size in the cross-sectional model (Table 2) but it is significant in the panel models 2 and 3 (0.53, $p < .01$, Model 2, Table 3). This suggests that economic power-sharing has a positive impact on size of governing coalition over the long-run but not in the immediate aftermath of conflict termination. Given the economic devastation that confronts a post-war regime, it is perhaps not surprising that it takes some time for economic power-sharing to generate enough growth to empower those whom the power-sharing provisions were intended to help.

Estimated coefficients for military power-sharing are positive but not significant. This unexpected null finding requires some explanation since military power-sharing agreements are sometimes seen as essential for rival groups to overcome the security dilemma that otherwise would preclude a negotiated settlement. Military power-sharing is a highly contentious issue between the warring parties, and it usually takes more than a year to implement any such agreement after the war ends. The panel regression models which follow post-conflict developments for five years after the conflict ends should capture the effect of military power-sharing on size of the governing coalition once the disarming, demobilization, and reintegration process is completed. However, we do not find support for a military power-sharing effect in these models either (Table 3). Therefore, we need to reconsider the influence of military power-

sharing in the post-civil war political process. Both rebels and government are less capable of credibly threatening a return to armed conflict once they agree to share military power. Once disarming, demobilizing, and reintegration of the rebel forces is completed, the rebel organization has to play by institutional rules to become a part of the governing coalition. It is possible that once DDR is completed, the former enemies cooperate to restrict other groups' access to power and resources.

The effect of political power-sharing is negative across all models but significant only in Model 1 (Table 2). This finding contradicts the conventional wisdom in the literature. The estimated coefficient is -2.340 ($p < 0.01$). In the panel regression models (Table 3) we find that political power-sharing has a negative and significant effect on the size of the governing coalition. This suggests that political power-sharing does not necessarily lead to the expansion of the political opportunity structure. This finding is in line with the argument of Roeder and Rothchild (2005) who suggested that political power-sharing can lead to gridlock and impede progress toward democratic consolidation. While political power-sharing may make a peace agreement more appealing to warring parties, it creates multiple veto players in the policy making process. In a post-civil war state those veto players have a history of armed conflict with each other. Political power-sharing also creates stronger incentives for those currently in positions of power in the state to exclude other groups from the selectorate. There is a finite number of government positions available to share. The more positions the incumbent government is obligated to share with the former rebels, the fewer positions there are for them to occupy themselves or allocate to their supporters in return for their votes in elections. This could lead them to exclude other groups which presumably were already part of the governing coalition. In short, for those who are currently in control of state power, political power-sharing reduces the resources available for them to redistribute as patronage to those who support them

in the competition for political power. This suggests that political power-sharing may result in the movement of groups into and out of the governing coalition but not necessarily the expansion of the governing coalition. Tilly characterized this as a constant mobility of challengers and contenders in the coalition polity (1978: 52-55). Under these circumstances, power-sharing can contribute to unstable governing coalitions and legislative gridlock marked by the inability of government to enact policies that address the urgent needs and demands of a population suffering from the devastation of war. One way to deal with a deadlocked governing coalition is to dissolve the government and form a new coalition. In a post-civil war state, the parties excluded from the new coalition have the option of returning to armed conflict as a way to regain power. To the extent that a gridlocked government has prevented them from delivering any tangible benefits to their supporters, they have little to lose by resuming armed conflict and little reason to trust that they may be able to gain more influence in the current government after the next round of elections.

Among control variables, we find that the presence of UN peacekeeping missions has a positive effect on the size of the governing coalition. The coefficient for this variable is 2.323 ($p < 0.01$, Model 1, Table 2). This finding holds in the panel regression model as well (Model 1, Table 3). Since UN peacekeeping forces help to resolve the security dilemma that keeps rival groups from cooperating on such matters as institutional design in the post-war state, the positive effect of UN peacekeeping is expected. Similarly, we find a positive and significant effect for the level of economic development on the size of the governing coalition. The coefficient is 0.447 ($p < 0.01$, Model 1, Table 2). Post-civil war states with higher levels of economic development are more likely to expand the size of the governing coalition than states with a lower GDP per-capita. Estimated coefficients for oil dependence are negative across all models, but significant only in Model 1 (Table 2) and Model 1 and 3 (Table 3). This finding is in line with the existing

literature that suggests that the oil dependence should impede expansion of the governing coalition in post-war states. The cost of war measured in terms of battle deaths (log) has a negative effect across all models (including panel regressions) but is significant only in Model 3 (Table 2). This finding is consistent with previous studies (e.g., Walter 2004) and suggests that more deadly conflicts harden conflictual identities in ways that make former rivals reluctant to expand the governing coalition. The costs of conflict measured in terms of duration of previous civil war, however, has no significant effect. The effect of ethnic conflict on the size of the governing coalition is negative and significant across all models (including panel regressions) indicating the difficulties of expanding the coalition when competing groups are divided along ethnic lines. Similarly, the former protagonists find it difficult to open up the political system when rebels sought to overthrow the government versus secede from it. The estimated coefficient is -0.922 ($p < 0.10$, Model 2, Table 2). This finding does not hold in the panel regression models. Nevertheless, the significant finding is quite surprising and perhaps some of the effects of the incompatibility variable could have been picked up by territorial power-sharing. Conflicts that are not revolutionary are coded as territorial conflicts and almost all territorial conflicts are ethnic in nature. We did not find statistically significant support for the effect of the Cold War on size of the governing coalition, and the findings for number of factions, past democratic experience and population are not significant in most of the models.

Size of Governing Coalition and Survival of Peace

Our second core hypothesis is that the larger the size of the governing coalition, the longer the peace should endure. To test this hypothesis, we use both non-parametric and parametric distributional models. We performed distributional model selection tests by using AIC and BIC information criteria, which were estimated after running Cox, log normal, Weibull, log logistic

and exponential models. Based on the results of these tests, we determined that a log normal model fits the data better than Cox, log logistic, Weibull, or exponential models.

Results from the log normal models are presented in Table 4. Table 4 reports coefficients, not hazard ratios. We present three different models with a different combination of control variables. Model 1 includes all control variables that are theoretically relevant except ethnic conflict and government incompatibility. Those two variables are included in Model 2, but Model 2 excludes GDP per capita, population and past democratic experience because they were not significant in the Model 1. Model 3 is estimated without GDP per capita, population, past democratic experience, ethnic conflict and government incompatibility. Model 4 includes the number of factions variable.

As expected, the size of the governing coalition variable has a positive and significant on peace duration (H3) across all models. The estimated coefficient is 0.655 ($p < 0.05$, Model 1, Table 4), which means the survival time increases by almost 65% [$100 \times (1 - (\exp(-\hat{\rho} \hat{\beta})))$] if the size of the governing coalition is equal to 1. If there are no constraints on groups' ability to participate in the political process, and they have an opportunity to be a part of the governing coalition, the survival time increases by almost 95%. This relationship is depicted graphically in Figure 1. This figure is generated by allowing the size of the governing coalition variable to vary from 0 to 3 while holding other variables constant. As the size of the governing coalition increases from 0 to 3, the survival time of post-civil war peace increases. This finding challenges several studies, including Snyder (2000), Paris (2004) and Diamond (2005), which suggest the potentially perilous effects of opening up the political system to broader democratic competition before the institutions of the post-war state have had time to mature. While early democratization might reopen old wounds, delaying democratization might allow non-democratic tendencies to ossify. If the new state institutions are not tested early, we cannot know whether they can

weather a crisis that risks conflict recurrence. Establishing democratic institutions and processes early in the post-conflict period would install incentives for rival groups to pursue their interests through peaceful means and, perhaps, restrict the opportunity for groups to pursue the sort of hegemonic, exclusionary control over the state that gives their excluded rivals incentives to return to armed conflict. Our findings suggest that expanding the political opportunity structure in the immediate aftermath of civil war contributes to the survival of post-civil war peace.

Table 4 Here

Figure 1 Here

Among the control variables, we find UN missions have a significant and positive effect on the duration of post-civil war peace. The estimated coefficient for UN peacekeeping missions is 8.206, which means the introduction of peacekeeping forces increases the time to peace failure by almost 99% ($p < 0.01$, Model 1). This finding is consistent with previous studies (Doyle and Sambanis 2002, 2006; Fortna 2004; Hartzell and Hoddie 2007). The estimated coefficient for civil war duration is 0.007 across all models but significant only in Models 3 and 4 ($p < 0.10$, Model 3, Table 4). Consistent with the previous literature, the effect of battle deaths is negative across all models, but the effect is significant in only Models 1 and 3 ($p < 0.10$). Dependence on oil exports is associated with shorter peace duration this control is significant only in Model 2 ($p < 0.05$). We did not find any significant effect for GDP per capita, population, past democratic experience, number of factions or negotiated settlement on the duration of post-civil war peace. The findings on GDP per capita are especially puzzling since economic well being has consistently been found to have positive impact on peace duration after civil wars. There could be two explanations for the insignificant finding. First, the governing coalition variable accounts for some of the variance in peace duration that previous studies attribute to GDP per-capita because, as the first stage of our analysis shows, the size of the governing coalition is also

affected by GDP/capita. Second, we use time varying covariates rather than assuming a constant effect of variables to predict the durability of peace.

Conclusion

In this paper, we presented arguments on how the mode of civil conflict termination and the power-sharing agreements designed to facilitate the transitional process structure the composition of the governing coalition in the post-civil war state. Being a part of the governing coalition, former protagonists can compete for access to power and resources without resorting to the armed conflict. Therefore, we suggested that peace is more likely to fail where the governing coalition is smaller because those excluded from the governing coalition have less to lose from resuming armed rebellion. The statistical tests enabled us to clarify which conditions contribute to expansion of the governing coalition and how expansion of the governing coalition influences the survival of peace in post-civil war states. We find support for the argument that how a civil war ends does affect the size of the governing coalition in post-civil war states. The size of the governing coalition established by the mode of civil war termination then influences the incentives for former rivals to sustain the peace versus resuming armed conflict. We find strong support for a larger governing coalition being more likely to emerge following negotiated settlements and government victories, compared to rebel victories. We also find stronger support for territorial power-sharing expanding the governing coalition, compared to other forms of power-sharing. Our findings also support the proposition that expanding the size of the governing coalition creates stronger incentives for former rivals to sustain the peace because they can pursue their political objectives through institutional means that are less costly and less risky than the alternative: a return to armed conflict.

In the post-civil war peacebuilding literature there is a debate over whether peacebuilding or democracy building efforts should come first. Some argue that early democratization should take precedence over peacebuilding to establish the legitimacy of the post-civil war state. Others argue that subjecting a post-war state to democratic competition too soon after the civil war ends can undermine the peace by opening old wounds. For this reason, international initiatives should focus more on stabilizing the post-war state than on democratizing it. Findings from this study, however, suggest that increasing the size of the governing coalition early in the post-war period does not derail the peace process so long as the opportunity structure affords groups a reasonable chance to become part of the governing coalition.

Once the governing coalition is expanded through democratization, the winner of the first democratic election can dismantle the institutions of democracy and restrict the ability of opposition groups to participate in future elections. The fear of being marginalized could create strong incentives for the defeated side to resort to armed conflict. Therefore, the key question is how to sustain an expanded governing coalition, once it is created. Future research should focus on what factors contribute to the stability of an expanded governing coalition in post-war states by giving former rivals incentive to preserve a system they believe will allow them to compete for power and resources without having to revert to armed conflict instead.

Reference

- Box-Steffensmeier, Janet M., and Bradford S. Jones. (2004) *Event History Modeling: A Guide for Social Scientists*. Cambridge University Press.
- Brandt, Patrick T.; T. David Mason; Mehmet Gurses; Nicolai Petrovsky & Dagmar Radin. (2008) When and How the Fighting Stops: Explaining the Duration and Outcome of Civil Wars. *Defence and Peace Economics* 19(6): 415-434.
- Bueno de Mesquita, Bruce, Alastair Smith, Randolph M. Siverson, and James D. Morrow. (2003) *The logic of political survival*. The MIT Press.
- Buhaug, Halvard. (2006) Relative Capability and Rebel Objective in Civil War. *Journal of Peace Research* 43(6): 691-708.
- Collier, Paul, and Anke Hoeffler. (2002) On the incidence of civil war in Africa. *Journal of Conflict Resolution* 46(1): 13.
- Collier, Paul, Anke Hoeffler, and Soderbom, Måns. (2008) Post-conflict Risks. *Journal of Peace Research* 45(4): 461.
- Diamond, Larry. (2005) Lessons from Iraq. *Journal of Democracy* 16(1): 9-23.
- Doyle, Michael W., and Nicholas Sambanis. (2000) International peacebuilding: A theoretical and quantitative analysis. *American Political Science Review* 94(4): 779-801.
- Doyle, Michael W. and Nicholas Sambanis. (2006) *Making War and Building Peace : United Nations Peace Operations*. Princeton, N.J., Princeton University Press.
- Epstein, David L. Robert Bates, Jack Goldstone, Ida Kristensen, and Sharyn O'Halloran. (2006) Democratic Transition. *American Journal of Political Science* 50(3): 551–569.
- Fearon, James D., and David D. Laitin. (2003) Ethnicity, Insurgency, and Civil War. *American Political Science Review* 97(1): 75-90.

- Fortna, Virginia Page. (2004) Does Peacekeeping Keep Peace? International Intervention and the Duration of Peace after Civil War. *International Studies Quarterly* 48(2): 269-292.
- Fortna, Virginia Paige. (2008) *Does Peacekeeping Work? Shaping Belligerents Choices after Civil War*. Princeton, NJ: Princeton University Press.
- Gates, Scott, Håvard Hegre, Mark P. Jones, and Håvard Strand. (2006) Institutional inconsistency and political instability: Polity duration, 1800-2000. *American Journal of Political Science* 50(4): 893-908.
- Gurses, Mehmet, and T. David Mason. (2008) Democracy Out of Anarchy: How Do Features of a Civil War Influence the Likelihood of Post-Civil War Democracy? *Social Science Quarterly* 89(2): 315-336.
- Hartzell, Caroline A., and Matthew Hoddie. (2003) Institutionalizing peace: Power sharing and post-civil war conflict management. *American Journal of Political Science* 47(2): 318-332.
- Hartzell, Caroline A., and Matthew Hoddie. (2007) *Crafting Peace: Power-sharing Institutions and the Negotiated Settlement of Civil Wars*. University Park, PA., Pennsylvania State University Press.
- Joshi, Madhav. (2010) Post-civil War Democratization: Promotion of Democracy in Post-civil War States, 1946-2005. *Democratization* 17(5): 826 – 855.
- Kang, Seonjou, and James Meernik. (2005) Civil War Destruction and the Prospects for Economic Growth. *Journal of Politics* 67(1): 88–109.
- Kessing's Contemporary Archives. (2005) *Keesing's World News Archives, 1931-2005*. Bath, UK: Longman Group.
- Le Billon, Philippe. (2001) The Political Ecology of War: Natural Resources and Armed Conflicts. *Political Geography* 20(5): 561-584.

- Licklider, Roy. (1995) The consequences of negotiated settlements in civil wars, 1945-1993. *American Political Science Review* 89(3): 681-690.
- Marshall, Monte G., and Keith Jagers. (2009). Polity IV Project: Dataset Users' Manual. <http://www.systemicpeace.org/inscr/p4manualv2007.pdf> (accessed on December 14, 2009).
- Mason, T. David, Joseph P. Weingarten, and Patrick J. Fett. (1999) Win, Lose, or Draw: Predicting the Outcome of Civil Wars. *Political Research Quarterly* 52(2): 239-268.
- Mattes, Michael, and Burcu Savun. (2009) Fostering Peace after Civil War: Commitment Problems and Agreement Design. *International Studies Quarterly* 53(3): 737-759.
- Mukherjee, Bumba. (2006) Why Political Power-sharing Agreements Lead to Enduring Peaceful Resolution of Some Civil Wars, but not Others? *International Studies Quarterly* 50(2): 479-504.
- Paris, Roland. (2004) *At War's End : Building Peace after Civil Conflict*. New York, NY: Cambridge University Press.
- Quinn, J. Michael, T. David Mason and Mehmet Gurses. (2007) Sustaining the Peace: Determinants of Civil War Recurrence. *International Interactions* 33(2): 167-193.
- Ross, Michael L. (2001) Does Oil Hinder Democracy? *World Politics* 53(3): 325-361.
- Sambanis, Nicholas. (2004) What Is A Civil War? Conceptual and Empirical Complexities of an Operational Definition. *Journal of Conflict Resolution* 48(6): 814-858.
- Snyder, Jack. (2000) *From Voting to Violence*, New York, NY: Norton.
- Tilly, Charles. (1978) *From Mobilization to Revolution*, Reading, MA: Addison-Wesley.
- Toft, Monica Duffy. (2010) Ending Civil Wars: A Case for Rebel Victory? *International Security* 34(4): 7-36.

- Ubayasiri, Kasun. (2010) Sri Lankan Presidential Election 2010: Preliminary Observations - An Ethnic Polarisation? *South Asia Analysis Group*, Paper no. 3634.
- Wagner, Robert Harrison. (1993) The Causes of Peace. In *Stopping the Killing: How Civil Wars End*, eds. Roy Licklider, New York: New York University Press. Pp. 235-268.
- Walter, Barbara F. (2002) *Committing to Peace: The Successful Settlement of Civil Wars*. Princeton, N.J., Princeton University Press.
- Walter, Barbara. (2004) Does Conflict Beget Conflict? Explaining Recurring Civil War. *Journal of Peace Research* 41(3): 371-388.
- Zartman, I. William. (1989) *Ripe for Resolution*. New York: Oxford University Press.

Table 1: Wining Coalition Distribution at 1 and after 5 years of conflict termination

	Obs.	Mean	St. Dev.	Min	Max
At Year 1					
Settlement	41	0.902439	0.916648	0	3
Rebel Victory	28	0.392857	0.785955	0	3
Government Victory	56	.9464286	.7488086	0	2
For all Types of Termination	125	0.808	0.839508	0	3
At Year 5					
Settlement	31	1.548387	0.767625	0	3
Rebel Victory	22	0.772727	0.922307	0	3
Government Victory	47	.8723404	.7106954	0	2
For all Types of Termination	100	1.06	0.83871	0	3

Table 2: Size of Governing Coalition after Civil Wars, 1946-2005.

	Model 1	Model 2	Model 3
Negotiated Settlement (1, 0)	2.318** (1.071)	1.504** (0.682)	1.555** (0.732)
Government Victory (1, 0)	1.989** (0.917)	1.692*** (0.634)	1.682*** (0.655)
Territorial Power-sharing (1, 0)	2.273**** (0.629)	1.360** (0.556)	1.462**** (0.509)
Political Power-sharing (1, 0)	-2.340*** (0.913)	-1.295 (0.881)	-1.382 (0.881)
Economic Power-sharing (1, 0)	-0.586 (1.158)	0.606 (0.897)	1.008 (1.003)
Military Power-sharing (1, 0)	0.604 (0.837)	0.440 (0.867)	0.256 (0.859)
UN Peacekeeping (1, 0)	2.323**** (0.862)		
Civil War Duration (Months)	0.001 (0.002)	0.002 (0.002)	0.001 (0.002)
Battle Deaths (log)	-0.200 (0.122)	-0.118 (0.120)	-0.183* (0.106)
Faction Number	-0.564*** (0.226)	-0.265 (0.172)	-0.271 (0.177)
Oil	-1.596*** (0.554)	-0.438 (0.429)	-0.501 (0.396)
Ethnic Conflict (1, 0)		-1.032** (0.503)	-0.881* (0.475)
Incompatibility (1, 0)		-0.922* (0.526)	
GDP Percapita (log)t-1	0.447*** (0.183)		
Past Democratic Experience (1, 0)	0.531 (0.602)	0.862* (0.520)	0.622 (0.522)
Cold War	0.341 (0.614)		0.483 (0.506)
Population (log)			0.269** (0.124)
/cut1	8.193* (4.152)	-1.882 (1.445)	2.752 (2.578)
/cut2	10.14* (4.265)	0.00718 (1.470)	4.693 (2.647)
/cut3	15.13** (4.816)	3.456 (1.769)	8.212** (3.050)
<i>N</i>	102	125	121
<i>Wald Chi</i> ²	39.40	48.05	47.15
<i>Prob>Chi</i> ²	0.000	0.005	0.000
<i>Pseudo R</i> ²	0.282	0.184	0.193

Ordered logit models. Robust Standard errors in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3: Panel Regression Models of Size of Governing Coalition after Civil Wars, 1946-2005.

	Model 1	Model 2	Model 3
Negotiated Settlement (1, 0)	0.688*** (0.172)	0.704*** (0.159)	0.729*** (0.171)
Government Victory (1, 0)	0.453** (0.189)	0.459*** (0.175)	0.438*** (0.173)
Political Power-sharing (1, 0)	-0.548*** (0.145)	-0.314** (0.147)	-0.342** (0.146)
Territorial Power-sharing (1, 0)	0.528*** (0.173)	0.284** (0.142)	0.300** (0.136)
Economic Power-sharing (1, 0)	0.315 (0.195)	0.530*** (0.189)	0.565** (0.190)
Military Power-sharing (1, 0)	-0.043 (0.146)	-0.127 (0.154)	-0.151 (0.154)
UN Peacekeeping (1, 0)	0.508*** (0.199)		
Civil War Duration (Months)	0.000 (0.001)	0.000 (0.001)	0.001 (0.001)
Battle Deaths (log)	-0.040 (0.032)	-0.023 (0.032)	-0.040 (0.033)
Faction Number	-0.078** (0.038)	-0.0413 (0.030)	-0.034 (0.033)
Oil	-0.460** (0.188)	-0.292 (0.185)	-0.288* (0.172)
Ethnic Conflict (1, 0)		-0.295** (0.149)	-0.258** (0.128)
Incompatibility (1, 0)		-0.195 (0.161)	
GDP Percapita (log)t-1	0.050 (0.041)		
Past Democratic Experience (1, 0)	0.258¥ (0.160)	0.351** (0.152)	0.308** (0.148)
Population (log)			0.055 (0.036)
Constant	-0.051 (0.941)	1.051*** (0.370)	0.166 (0.691)
<i>N</i>	489	571	555
<i>R</i> ²	0.440	0.367	0.379

Standard errors in parentheses, * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Fixed effect models. Matching groups are not checked to know whether they are nested within clusters. Panel regressions were run looking all cases for next five years after conflict termination when available.

Table 4: Size of Governing Coalition and Peace Duration after Civil Wars, 1946-2005.

	Model 1	Model 2	Model 3	Model 4
Size of Governing Coalition(0 -3)	0.655**	0.386*	0.638***	0.618***
	(0.286)	(0.211)	(0.241)	(0.241)
Civil War Duration (Months)	0.005	0.003	0.007*	0.008**
	(0.004)	(0.003)	(0.004)	(0.004)
GDP Percapita (log)t-1	0.119			
	(0.226)			
Population (log)	-0.0298			
	(0.227)			
Past Democratic Experience (1, 0)	-0.187			
	(0.472)			
UN Peacekeeping (1, 0)	8.206***	5.910***	7.733***	7.427***
	(0.978)	(0.632)	(0.917)	(0.842)
Cold War (1, 0)	0.448	0.610*	0.243	0.216
	(0.416)	(0.319)	(0.375)	(0.357)
Negotiated Settlement (1, 0)	0.231	0.619	-0.143	-0.082
	(0.688)	(0.467)	(0.588)	(0.574)
Government Victory (1, 0)	0.552	1.068**	0.497	0.461
	(0.555)	(0.398)	(0.555)	(0.564)
Battle Deaths (log)	-0.198*	-0.117	-0.198*	-0.187*
	(0.121)	(0.083)	(0.117)	(0.116)
Incompatibility (1, 0)		-0.697**		
		(0.354)		
Ethnic Conflict (1, 0)		-1.960***		
		(0.417)		
Oil (1, 0)		-0.805**	-0.604	-0.620
		(0.411)	(0.505)	(0.500)
Faction Number				-0.102
				(0.156)
Constant	1.306	4.511***	3.762*	3.969**
	(3.441)	(1.154)	(1.474)	(1.548)
Sigma	1.596	1.288	1.541	1.535
Wald χ^2	215.36	214.26	223.21	237.41
Probability of χ^2	0.000	0.000	0.000	0.000
Observations	1212	1348	1348	1348
Number of Subjects at Risk	93	99	99	99
Failures	37	42	42	42

Robust Standard Errors in Parenthesis. Two tail tests. *p<0.10; **p<0.05, ***p<0.01

Figure 1: Size of Governing Coalition and Survival of Peace after Civil War, 1945-2005.

