September 21, 2016

# State Capacity, Regime Type, and Sustaining the Peace After Civil War


## Abstract

About half of the nations that experience civil war eventually relapse into renewed conflict within a few years after the original war ends. This observation has motivated a stream of research into the factors that affect the risk of peace failure in the aftermath of civil war. While the outcome of the previous civil war – i.e., military victory versus peace agreement – structures the post-war environment in ways that affect the risk of peace failure, the capacity of the post-war state to enact and implement policies that affect the incentives for and capacity of groups to undertake armed violence as a means of advancing their interests should also affect the risks of peace failure. Using Geddes' categories of non-democratic regime types, we will present a theory of how different regime types have varying capacities to repress and/or implement accommodative policies that affect the risk of peace failure. We test propositions derived from this theory with a series of event history models. Our findings suggest that while peace agreements significantly increase the duration of post-civil war peace, peace agreements involving some types of non-democratic regimes actually increase the risk of post-civil war peace failure.

**State Capacity, Regime Type, and Sustaining the Peace After Civil War**

Since the publication of *Breaking the Conflict Trap* (Collier *et al.,* 2003) it has become apparent that about half of the nations that experience civil war eventually relapse into renewed conflict within a few years after the original war ends (Collier et al. 2003: 83). This observation has motivated a stream of research into the factors that affect the risk of peace failure in post-civil war nations. Among those factors are characteristics of the war itself – e.g., how long it lasted, how deadly it was, whether it ended in a decisive victory or a negotiated settlement – and characteristics of the post-conflict environment – e.g., the level of economic development, ethnic divisions, and the extent of democracy/autocracy.[1]

The ability of the post-war regime to sustain the peace is in part a function of state capacity: does the state have the capacity to enact policies that reduce the incentive of groups in society to choose a resumption of armed conflict over sustaining the peace? DeRouen and Bercovich (2008) find that state capacity, measured with a number of discrete indicators, is associated with a more durable peace. Hegre and Nygård (2015) find that indicators of both formal and informal dimensions of "good governance" affect the risk of peace failure. Walter (2015) finds that elements of institutional accountability are associated with a lower risk of peace failure. We argue that these and other elements of state capacity – and therefore the state's ability to deal with challengers in ways that preserve the post-civil war peace – vary across distinct regime types. Using Geddes' (2000; see also Geddes, Wright and Frantz, 2014) categories of non-democratic regime types, we present a theory of how different regime types have varying sets of

[1] See, for instance, Collier *et al.* (2003), DeRouen and Bercovitch (2008), DeRouen *et al.* (2010), Fortna (2004), Hartzell and Hoddie (2003, 2007), Joshi and Mason (2011), Licklider (1995), Mason *et al.* (2011), Mattes and Savun (2009), Quinn *et al.* (2007), Toft (2010), Hegre and Nygård (2015), Walter (2015).

capacities to enact and implement policies that reduce the risk of peace failure. We begin by examining how the risk of peace failure varies across regime types. We then refine our analysis to focus on how regime type affects the ability of a post-civil war state to sustain the peace established by peace agreements specifically. This is especially salient since negotiated settlement (as opposed to military victory) has become the modal outcome of civil wars in the post-cold war era (Hartzell and Hoddie, 2007: 10). The different regime types vary in terms of their willingness and ability to accommodate dissident demands or, alternatively, to repress their movement. Therefore, *ceteris paribus*, the risk of peace failure following a negotiated settlement should vary depending on whether the post-war regime is a democracy, a one-party regime, a military regime, a personalist dictatorship, or monarchy. We test propositions derived from this theory with a series of event history models. Our findings suggest that while peace agreements significantly increase the duration of post-civil war peace, peace agreements involving some types of non-democratic regimes actually increase the risk of post-civil war peace failure.

## Sustaining the Peace after Civil War

Once a civil war ends, the risk of the nation relapsing into civil war is a function of whether one or more organized groups – be they former rebels, elements of the pre-civil war government, or groups newly mobilized in the post-war environment – develop both the capacity and the incentive to defect from the peace and return to armed conflict. This choice has been represented in expected utility terms as the difference in an actor's expected payoffs from sustaining the peace versus resorting to arms. Rationalist models of civil war recurrence represent the expected utility from resuming armed conflict as a function of actors' estimate of (1) the expected payoffs from victory (or a better peace agreement), (2) the probability of achieving victory (or a better peace agreement), (3) the rate at which that actor will have to absorb the costs of war in the quest

for military victory (or a more favorable peace agreement), and (4) the time it will take to achieve victory or a more favorable peace agreement (i.e., how long that actor will have to absorb the costs of war in order to achieve a better outcome than the status quo). This logic implies that any factor that (1) decreases an actor's estimate of the payoffs from victory (or a new peace agreement), (2) decreases the actor's estimate of the probability of victory (or a better peace agreement), (3) increases that actor's estimate of the rate at which its forces will have to absorb the costs of conflict, or (4) increases the actor's estimate of the amount of time required to achieve victory (or a better peace agreement) should make that actor more willing to sustain the peace rather than resume armed conflict (see Quinn, Mason and Gurses 2007; Mason et al. 2011).

Rationalist theories of war depict war is an information revealing process (Fearon 1996), and the attributes of the previous civil war provide dissident groups in the post-war environment with information on their prospects for achieving a better outcome by resuming conflict rather than sustaining the peace. Among the salient attributes are the duration and outcome of that conflict, the deadliness of the conflict, and whether the stakes of the conflict involved control of the government (revolution) or control of territory (secession). The outcome of the previous civil war conditions the post-war environment in ways that affect the risk of peace failure. Beginning with Licklider (1995) a series of studies have shown that military victories produce a more durable peace than negotiated settlements because decisive victory by one side degrades the capacity of the losing side to mount an armed challenge in the near future (see Quinn et al., 2007; Mason et al., 2011; Toft 2010). If the previous war ended in a decisive victory, dissident groups in the post-war environment will likely lower their estimates of their chances of achieving victory in a renewed war. If the previous conflict ended in a peace agreement, dissident groups

will still have the capacity to resume armed conflict, and the fact that the previous war ended in a peace agreement may encourage them to seek a better deal by resuming armed conflict. The duration of the previous conflict gives actors information on how long they can expect to absorb the costs of conflict before they can expect to achieve a more favorable outcome than the status quo. The longer the previous war lasted, the more durable the post-war peace is likely to be, *ceteris paribus* (Quinn, Mason and Gurses 2007; Mason *et al.* 2011). The deadliness of the now-ended civil war provides actors with information on the rate at which they can expect to suffer costs (casualties, economic destruction, etc.), should they choose to resume conflict rather than sustain the peace. Expected utility logic implies that higher casualty rates should reduce the risk of post-war peace failure by raising actors' estimates of the rate at which they would have to absorb costs before achieving a more favorable outcome than the status quo. However, Walter (2004) found that the more deadly the previous conflict, the *more* likely the conflict was to recur, a finding confirmed by Mason *et al.* (2011). This suggests that casualty rates may affect the risk of peace failure more by intensifying credible commitment problems: the more deadly the previous conflict was, the less likely an actor is to trust their rival to abide by the peace agreement because the costs to that actor of their rival defecting would be substantial.

Another set of factors that affect the risk of peace failure involves characteristics of the post-civil war environment. Primary among these is state capacity. State capacity has been implicated in the vulnerability of states to the onset of the initial civil war: weak states are more susceptible to the outbreak of civil war than are strong states. Research on this relationship, then, has focused on identifying the critical elements of state strength or state weakness that are most directly relevant to the risk of civil war occurring. Hendrix's (2010) survey of the state capacity literature identifies three major dimensions of state capacity measures employed in those studies:

military capacity, bureaucratic administrative capacity, and the quality and coherence of state institutions. DeRouen and Sobek's (2016: 59-60) four dimensions of state capacity add to the military and bureaucratic dimensions the capacity to enact the sort of accommodative policies required for peace agreement implementation and the capacity to enact public sector reforms essential to "good governance". Almost all studies use some variant Polity IV's democracy-autocracy scale as a measure of state strength as well (see, for instance, Hegre *et al.,* 2001; Vreeland, 2008; Gleditsch, Hegre, and Strand, 2009; Gleditsch and Ruggieri 2010).

However, as Gleditsch and Ruggeri (2010: 299) note, many of the indicators of state capacity used in studies of civil war onset are only loosely related to the underlying theoretical concept. Many have been used as indicators for other concepts as well (such as grievances). Given this, we propose using Geddes' regime type categories as indicators of clusters of regimes that share a similar syndrome of state capacities. Within a given regime type category, there is less variation in their scores on any set of state capacity measures than there is between states in that category and those in the other regime type categories. Hendrix's (2010) factor analysis of fifteen indicators of state capacity lends some support to this proposition: measures of state capacity tend to cluster into three dimensions that map rather closely onto Geddes' regime type categories.

If weak state capacity renders a nation susceptible to civil war, then it should be even more directly relevant to the risk of peace failure after a civil war. Civil wars are more likely to occur in nations with weak state capacity, and the experience of civil war renders those states weaker still. Hence, we need to examine how state capacity affects the ability of a post-civil war nation to sustain the peace rather than relapse into renewed war.

The challenge confronting a post-civil state is how to prevent the reemergence of armed

groups with the political incentives, the military capacity, and the civilian support base to mount and sustain an armed challenge to the post-war regime. First, post-civil war states face the daunting task of rebuilding a war-damaged economy. This requires the bureaucratic capacity to collect taxes, provide essential services, and implement a broad range of programs to catalyze the growth and development of the post-war economy. In terms of rationalist logic of how and why peace failure occurs, the state must have the capacity to provide citizens with the opportunity to meet their material needs under conditions of law and order and security from threats to their lives, property, and well-being. To the extent that the post-civil war state develops these capacities, the opportunity costs of choosing a return to violence rather than sustaining the peace increase for opposition groups. The capacity of the state to fulfill this mandate is a function of the accommodative and coercive capacities at its disposal and its willingness and ability to deploy those capacities to enact and implement policies that sustain the peace.

Second, the post-war regime faces formidable credible commitments problem. It must knit together into a functioning society factions that have been at war with each other for an extended period of time. State leaders must enlist the support of those who were loyalists of one or another of the warring factions in the now-ended civil war. This requires not only that the state enact and implement effective policies but that it give those factions some assurance that they will have access to and some influence in the policy process.

One set of tools by which the post-war state can deter the resumption of armed combat is accommodation: the state can enact policies that provide both tangible benefits to organized groups and access to influence in the policy process for their leaders. For this, the state needs the institutional capacity and the redistributable resources necessary to enact and implement programs that give potential opposition groups a greater incentive to sustain the peace.

The other set of policy tools available to the regime is state repression: the state can deploy its repressive capacity to preempt opposition groups from developing the military capacity to resume armed conflict. Post-war regimes that are the result of decisive military victory are more able to employ this strategy than are states established by negotiated settlements. Military victory degrades the military capability of the defeated to the point that they have to rebuild their military capacity virtually from scratch, and do so in the shadow of the forces that defeated them in the first place. With respect to sustaining the peace established by a peace agreement, the effects of repression on the risks of peace failure are more complicated. State repression in and of itself does nothing to address the very real material needs of groups that retain some capacity to resume armed conflict by virtue of having avoided military defeat. While repression is intended to raises the cost of challenging the post-war state, it also raises the cost of abiding by the status quo relative to the risks of resuming armed conflict. If the state's response to group demands is repression rather than accommodation, then the option of resuming armed conflict in hopes of achieving a military victory or a better peace agreement becomes more attractive compared to what the opposition can expect to achieve from sustaining the peace under a repressive state. This is especially true to the extent that the targeting of repression becomes indiscriminate (see Mason and Krane 1989).

In this study we begin with the premise that regime type can serve as an effective proxy for the clusters of state capacities that are relevant to the state's ability to prevent a relapse into civil war. Fjelde (2010) and Gurses and Mason (2010) have shown that the risk of civil war onset does vary across regime types.[2] Thus, it seems reasonable to expect that the ability of post-war states to prevent the recurrence of civil war should also vary across regime types. We would also

[2] Fjelde used regime type data from Hadenius and Teorrell, 2007.

expect that the regime types that are more successful at sustaining the peace established by a negotiated settlement may not be the same ones most able to sustain the peace after a military victory.

## Regime Types and Sustaining the Peace[3]

The risk to the post-civil war peace is that one or more organized groups will have both the incentive and the capacity to return to armed conflict rather than continue to pursue their interests peacefully through the institutions of the post-war regime. As noted earlier, the capacity of groups to resume armed conflict should vary with the outcome of the previous civil war. Where the conflict ended in a negotiated settlement, former rebel groups will still have the organizational capacity to resume armed conflict. Where the previous conflict ended in a military victory, it is less likely that there will be an organized group with the capacity to resume armed conflict. Hence, the baseline risk of peace failure following military victory should be lower than it would be following a peace agreement (Wagner 2003; Licklider 1995; Toft 2010; Quinn, Mason, and Gurses 2007; Mason et al. 2011). The willingness of groups to abide by the terms of the post-war regime rather than resort to violence is a function of the state's capacity to provide material benefits and opportunities to influence the policy process or, alternatively, its capacity to repress dissident groups. Regime type can affect these calculations by opposition groups in several ways. First, the ability of the regime to deliver policies and programs that address the material demands and grievances of different groups in society will vary by regime type. Second, those groups' estimate of their prospects for gaining access to power in government will vary across these regime types. Third, the willingness and ability to repress opposition challenges that might escalate to civil war should also vary across regime types.

[3] Portions of this section draw from .

Geddes, Wright, and Franz (2014) present a typology of non-democratic regime types: one-party, military, personalist, and monarchy. Geddes points out that these different non-democratic regime types differ from each other in terms of the relevant dimensions of state capacity – i.e., coercive capacity, bureaucratic capacity, accommodative capacity, and "good governance" – as much as they differ from democratic regimes. They have selectorates of different sizes and use different criteria for choosing candidates to staff government offices. They have different procedures for making and implementing policy decisions. And they differ regarding how they respond to demands from different segments of society and to challenges to the state from emerging opposition groups. Therefore, we would expect these different regime types to have different capacities to sustain the peace following civil war. More specifically, we would expect them to vary in their capacity to sustain the peace established by a peace agreement (as opposed to a military victory) in that they vary in the ability to enact and implement accommodative policies and, thereby, to solve the credible commitment problems that otherwise would encourage opposition groups to resort to armed violence as a means of advancing their interests. After a brief description of each non-democratic regime type, we discuss how dissidents' incentive to resume fighting versus sustaining the peace might vary across these regime types, *ceteris paribus*.

**Single Party Regimes**

Geddes (2000: 124) describes *single party regimes* as states in which "party organization exercises some power over the leader at least part of the time, controls the career paths of officials, organizes the distribution of benefits to supporters, and mobilizes citizens to vote and show support for party leaders in other ways." This category includes one-party state socialist regimes such as Cuba and China as well as one-party dominant regimes such as the PRI-era

Mexico and the KMT-era Taiwan (before those two nations made the transition to democracy in the 1990s).

The one-party state socialist variety maintains control through a monopolistic party structure that pervades all institutions of society. No rival parties are permitted. Bueno de Mesquita et al. (2003) depict such regimes as having a large selectorate (i.e., membership of a mass party) with a small winning coalition (the top party leadership). The party justifies its monopoly with a thoroughly articulated ideology. Both the economy and society are *etatized* in the sense that the party monopolizes control of both and reinforces its control with its monopoly over the coercive machinery of the state. It uses that machinery to monitor society in order to preempt the emergence of autonomous social organizations that could evolve into challengers to the party's authority and control (Linz and Stepan 1996, 40-42).

Single party dominant regimes rely less on totalitarian control of the economy and society and more on a corporatist bargain between the party-state machine and society (see Malloy 1977; Schmitter 1974). The party provides a steady flow of material benefits to organized sectors of society (organized under the auspices of the party-state through its corporatist machinery) in return for society's acquiescence to the party's control over the state and over the selection of leaders for the party organization, state institutions, and the sectoral organizations (e.g., labor, peasants, the military, industry). State-sponsored corporatist structures represent the means by which the dominant party preempts the emergence of autonomous social organizations that could challenge its authority or provide an organized support base for rival parties.

One-party dominant regimes allow other parties to exist, and there are regular elections in which those parties can and do compete for votes and even win seats in the legislature. However, the dominant party maintains control over both the executive and a substantial legislative

majority. It uses the patronage resources of state-sponsored sectoral organizations to mobilize votes for its candidates. It monopolizes access to the mass media for campaign purposes. And, if necessary, the dominant party can manipulate election mechanics and results in such a way as to ensure its victory in elections.

We would expect one party dominant regimes to face a lower risk of peace failure after civil war. They should be especially successful (compared to other non-democracy regime types) at sustaining the peace established by a negotiated settlement. One-party dominant regimes maintain power by delivering material benefits to organized groups in exchange for their members acceding to the party's monopoly on leadership selection. As such, one party regimes are more likely than personalist or military regimes to have in place the institutional machinery to deliver material benefits; they are effective patronage machines. The exercise of this dimension of state capacity should raise the opportunity costs of resuming armed conflict for any organized group in society, including former rebels. The payoffs from abiding by the peace agreement include a steady flow of patronage benefits, whereas a resort to armed conflict would mean the loss of those benefits in return for an unknown probability of achieving greater payoffs through military victory or a more favorable peace agreement. To the extent that the dominant party can deliver patronage benefits to a large enough share of the population, aspiring rebels will have a more difficult time mobilizing support for any call to arms, especially among a population that has only recently suffered through a civil war.

Opposition groups should also estimate their chances of gaining access to office (and, therefore, influence over policy) to be greater under one-party regimes than under either personalist or military regimes. One party regimes prefer cooptation over repression as a means of preempting opposition movements from disrupting the political order. Any group that is large

enough and strong enough to challenge the dominant party becomes a target for cooptation by the party. When such groups are admitted into the corporatist bargain, their leaders gain access to a flow of benefits to distribute to their constituents in exchange for acceding to the party's control over the machinery of the state. If those leaders are admitted to the party, they have reason to mobilize their constituents to support the party rather than to take up arms against it.

$H_1$: *One-party regimes should be less likely than personalist and military regimes to experience peace failure; they should be especially less likely to experience peace failure following a negotiated settlement.*

**Personalist Regimes**

Personalist regimes are described by Geddes (Geddes 1999: 121) as states in which a single leader has consolidated personal control over policy-making and recruitment. In the process, that leader has succeeded in marginalizing other elites and subordinating them to his own exclusive claims to power. Examples include the Mobutu regime in Zaire, the Qaddafi regime in Libya, and the Somoza regime in Nicaragua. In many cases, this regime type evolves from a military regime or a one party regime: the leader of the coup or of the dominant party staffs the coercive machinery of the state with his own loyalists and then utilizes that machinery to eliminate or marginalize other elites (in the military and/or the party bureaucracies) who could challenge or constrain the dictator's own exercise of power. Neither the loyalty of his inner circle nor the support of the general population is based on any ideological vision of what the regime seeks to establish or how it intends to go about building a new order. Instead, loyalty is based on a mixture of fear and greed. The leader shares with the inner core of loyalists the spoils that can be extracted from society. In return they protect him from challengers and enforce his exclusive claims to power with brutal repression. The flow of patronage benefits provides the lubricant for

the inner circle's commitment to keep the dictator in power. Knowledge of what befalls those who fall out of favor with the dictator or challenge his authority is the fear that cements their loyalty and society's quiescence.

Monarchies (such as the Saudi regime) are rare in the contemporary world. However, they do share many characteristics with personalist regimes. Like personalist regimes, political power is endowed in a single individual. Unlike personalist regimes, however, monarchies have an institutionalized means of leadership succession: heredity. The death of a monarch does not necessarily precipitate a crisis of succession that could lead to the collapse of the regime. The death of a personalist dictator can lead to instability or even regime collapse as members of the inner circle compete (often violently) to take over as dictator.

Personalist dictators and monarchies tend to rotate personnel through critical state offices in order to prevent any of them from using office-based patronage to cultivate their own autonomous base of supporters with which they could challenge the authority of the autocrat (Geddes 1999: 133). By gradually eliminating any actual or potential rival power centers, the dictator weakens state institutions and, therefore, institutional constraints on his own exercise of power. State institutions are staffed not by a merit-based civil service of technocrats but by loyalists whose sole qualification for their position is their tie of loyalty to the dictator (or, in the case of monarchies, family ties). As a consequence, the capacity of state institutions to produce and distribute public goods, to provide basic public services, and to perform the routine but essential functions of governance deteriorates under a personalist dictator, leaving those regimes with repression as the primary, if not sole, instrument for dealing with opposition challenges.

Geddes (1999) found that personalist regimes have the worst economic performance record of any of the regime types. Their mismanagement of and predatory interventions into the

economy to benefit the leader and his inner circle alienate the middle class and other elite groups. Promises to address grievances with accommodative reforms carry little credibility, given the degenerative institutional capacity of personalist regimes, their parasitic management of the economy, and their reliance upon repression and corruption as instruments of power.

For these reasons, we would expect personalist regimes to be especially ill-suited for sustaining a post-civil war peace based on a negotiated settlement. First, they lack the institutional capacity to make and implement effective policies that catalyze economic growth and development. Their management of the economy tends more towards the parasitic than the developmental. Hence, personalist regimes have less capacity (and willingness) to accommodate the material demands of critical constituencies in the post-war environment.

Second, opposition groups are likely to estimate that they have little chance of gaining membership in the winning coalition or otherwise gaining access to government offices that would enable them to influence policy debates and outcomes. Consequently, their opportunity costs for challenging the regime by returning to armed violence are lower than they would be under a one-party regime, for instance.

On the other hand, Geddes (1999) found that, on average, personalist regimes have a very long life span. This is because they are quite effective at identifying and repressing, often preemptively, any opposition group that emerges. While their repressive capacity may account for their longevity, their preference for repression over accommodation also gives opposition groups few options other than suffering in silence or resorting to armed rebellion to overthrow the regime. For these reasons we expect the risk of post-war peace failure to be greater among personalist regimes than among the other regime types. They should be especially susceptible to peace failure following negotiated settlements.

$H_2$: *the risk of peace failure should be higher among personalist regimes than among one party regimes or military regimes; it should be especially higher following conflicts that end in negotiated settlement*.

**Military Regimes**

Geddes (2003: 71-77) defines *military regimes* as states "governed by an officer or retired officer, with the support of the military establishment and some routine mechanisms for high level officers to influence policy choice and appointments." The military as an institution is more professionalized and institutionalized than its counterpart in the typical personalist regime. The command structure is organized according to formal bureaucratic principles with staffing appointments based predominantly on merit rather than just on personal loyalty to the top officers. The officer corps typically is well-educated, usually with training at a national military academy. O'Donnell (1978) characterizes "bureaucratic authoritarian" regimes in this manner, with the added ideological component of a strong nationalist institutional culture. The military sees itself as the final guardian of the national interest. Indeed, in most bureaucratic authoritarian coups the military justified its seizure of power on the grounds that the military was the only institution that could deal with the national crisis that motivated the coup because only the military could implement the harsh austerity programs required to restore economic stability while containing any resulting popular unrest through the application of harsh repression (O'Donnell 1978). Examples include the military juntas that took power in Brazil (1964), Argentina (1966 and 1976), and Chile (1973).

This pattern also reveals the weakness of military regimes as governing institutions: the one policy tool which the military is most capable of deploying in policy disputes is repression. The bureaucratic authoritarian regimes of the 1960s and 70s restored order by "demobilizing the

popular sector": crushing labor unions, peasant associations and other organized opposition groups, and imprisoning, killing, or "disappearing" their leadership. Military regimes as a rule are less well equipped to formulate and implement accommodative policies that might reduce opposition activity by remedying their grievances. As such, military regimes are better equipped to preserve the peace that follows a military victory than one that results from a peace agreement.

Compared to one-party regimes, military regimes are less well equipped institutionally to preserve the peace following a negotiated settlement. That requires implementing accommodative policies that address the material grievances of opposition groups and that grant them credible access to influence over the policy process. For opposition groups, the difference in expected payoffs from abiding by the status quo versus returning to armed conflict might be smaller under a military regime than would be the case under a one-party regime. However, the costs of resuming conflict should be higher than would be the case with either a one party regime or a personalist regime. Military regimes are marked by a more professional, institutionalized, and capable coercive machine than is the case with a personalist regime. In the latter, career advancement in the military hierarchy is based more on loyalty ties to the dictator than on training or demonstrated competence in battle.

While military regimes are less able than one-party regimes to design and implement accommodative policies that remedy grievances, they have one other advantage over personalist regimes in this regard. In the midst of a crisis in which the regime is being challenged, military regimes have the option of regime change: they can "return to the barracks" and allow the transition to a new civilian (democratic) regime. That new regime should be more inclusive even if transition in and of itself does not immediately endow the new regime with enhanced institutional capacity or resources to deliver accommodative programs to defuse popular unrest.

At least dissident groups will gain greater access to power through government office. They can then use that power to influence policy making in ways that address their grievances and serve their interests. Under those circumstances, the alternative of seeking power by resorting to renewed armed conflict becomes less attractive.

$H_3$: *military regimes should face a lower risk of peace failure than personalist regimes, but a higher risk than one-party regimes, especially following negotiated settlements*.

**Democracies**

The "domestic democratic peace" proposition suggests that democracies are less likely to experience civil war because dissident groups can pursue redress of their grievances through institutional means. Democratically elected leaders have an incentive to accommodate groups by enacting policies that provide their constituents with benefits. Otherwise, those leaders risk paying a price at the polls. For the same reason, democratically elected leaders have incentives to develop effective state institutions that are capable delivering to citizens public goods benefits that raise the opportunity costs of resorting to armed conflict as a means of pursuing their interests. Democratic regimes should also be less likely to use repressive violence against dissident groups because that too can be costly for leaders at the polls (Poe and Tate 1994). Thus, we would expect democratic regimes to be more successful than authoritarian regime types at sustaining the peace established by a negotiated settlement.

There is some empirical support for a domestic democratic peace effect. Walter (2015) found that the greater the extent of voter participation in post-war elections, the lower the risk of peace failure is. Hegre et al. (2001) found that strong democracies (and strong autocracies) are less likely to experience civil war than "anocracies". However, they also found that recent regime change increases the risk of civil war for moth democracies and non-democracies. Thus, while

we expect the participatory elements of democracy to enable democratic regimes to sustain the peace established by a negotiated settlement, the risk of peace failure should be greater to the extent that it is a new democracy.

H4: *democracies should face a lower risk of peace failure than personalist regimes, one-party regimes, and military regimes, especially following negotiated settlements*.

## Research Design

Our purpose is to test whether the risk of peace failure varies across regime types. To do this, we estimate a series of hazard models, with peace failure (the resumption of civil war) as the failure event. We use the UCDP Conflict Termination Dataset (Kreutz, 2010) to determine the start and end dates of civil wars. Following Buhaug, Gates and Lujala (2004) we exclude from the list of conflicts those that are military coups. As Thyne (2015) notes, coups are not civil wars; they differ from civil wars in several critical ways. First, coup perpetrators come from within the central state; they are not non-state actors, as one of the parties to a civil war must be, by definition. Second, the goal of a coup is to overthrow the chief executive, while a nontrivial share of civil wars have as their goal secession or territorial autonomy from the central state, not seizing control of it. Third, while coups are sometimes embedded in the civil war process, the coup itself is often so brief that it is over before the public is even aware that a coup has been attempted. Including coups in civil war datasets can bias findings, especially to the extent that the incidence of coups is related to some of the same covariates that are associated with civil war onset and recurrence, as well as civil war duration and outcomes. Including coups in a civil war dataset adds cases of far shorter duration than is the average for civil wars, and coups almost always end in "rebel victory", while rebel victory is the least frequent outcome in civil wars. For these reasons, we used Thyne's (2015) list of list of UCDP conflicts that are coups to eliminate

those cases from our dataset.

Our unit of analysis for the study is the dyad-year. Each dyad contains one government and one rebel group. A dyad enters our sample when a civil war involving the dyad ends,[4] and it remains at risk until conflict recurs, at which point the dyad exits the sample until the new conflict ends, at which point it reenters the sample. Dyads can experience multiple failure events in our data setup.

In order to examine the influences on the risk of peace failure, we employ Cox hazard models. The Cox model allows us to account for the censoring of dyads that never return to conflict while examining the duration of peace in dyads that do return to conflict. A chief advantage of the Cox model is that it allows us to be agnostic about the shape of the hazard function. Because the Cox model depends upon the proportional hazards assumption, we generated Schoenfeld residuals to evaluate the model globally and the independent variables individually for evidence of violations of the proportional hazards assumption. We then generated log-log plots for potential violators of the assumption and saw evidence that the monarchy variable violated the proportional hazards assumption. As a result, we employed the standard correction for such violations and added to the model an interaction between monarchy and the natural log of time.

The primary independent variables of interest are included as a series of binary variables for each regime type: military regime, personalist regime, monarchy, and democracy. The omitted category used as the baseline for our analysis is one party regimes: those cases receive a score of "0" on all of the regime type dummy variables. We identify military, personalist, and monarchy

[4] A conflict is counted as ended if there is a spell of at least two years between the end date of one war and the start date of the next war. This approach is consistent with the existing literature. Buhaug, Gates, and Lujala (2004) combine ACD episodes if separated by 2 years or less. Similarly, Wood and Kathman (2013) use a 36-month

regimes using data from Geddes, Wright, and Frantz (2014). The democracy variable is coded as a "1" for any regime year in which the state has a polity2 score in Polity IV (Marshall, Gurr, and Jaggers, 2014) greater than or equal to 1 and scored a "0" on all of the authoritarian regime type dummies identified above using data from Geddes, Wright, and Frantz (2014).

We also include as controls the list of variables that previous studies have shown to be related to peace failure. These variables are primarily taken from Mason et al. (2011). They include:

1. *Outcome of the previous civil war*: We include a dummy variable for outcomes from the UCDP conflict termination dataset that identifies the occurrence of a peace agreement or truce to begin a peace spell. This variable is coded as "1" for any peace spell identified by Kreutz (2010) as beginning with a peace agreement, ceasefire, or a truce. Cases that ended in a decisive victory by either the government or the rebels or in "low activity" were coded "0".[5] Because we expect that the combined effect of peace agreements and regime type will influence the duration of peace, we also include interaction terms between personalist regimes and peace agreements and military regimes and peace agreements.
2. *Peacekeeping*: Because we expect the presence of peacekeepers to affect the risk of peace failure after a civil war (Fortna 2004; Mason et al. 2011), we use data from Mullenbach (2013) to code with a "1" dyad-years in which peacekeepers were deployed to a country and a "0" otherwise.

gap before a conflict is treated as a new conflict.

[5] "Low activity" is what UCDP Conflict Termination Dataset codes as "other outcome". This condition occurs when fighting continues but drops below the 25 death threshold. As a result, UCDP codes the conflict as having terminated. There is no peace agreement, the government that was in power when the conflict started is still in power. Therefore, it seems reasonable to code it in the same category as government victory.

3. *Ethnic fractionalization*: Because the extent of ethnic divisions might increase the risk of peace failure, we use data from Alesina et al. (2003) to code the degree of ethnic fractionalization in the nation.
4. *Duration of previous war*: Previous studies have found that the duration of the previous civil war makes the former combatants less willing to resume armed conflict (Walter 2004; Mason et al. 2011; Quinn et al. 2007; Kreutz 2010). We use data from Kreutz (2010) to calculate the number of years the last conflict between the dyad lasted.
5. *Battle deaths*: Previous studies have also found that the deadliness of the previous conflict makes former protagonists more inclined to resume armed conflict (Walter, 2004; Mason et al. 2011). We use data from UCDP Battle-Related Deaths Dataset v.5-2015 to calculate the logarithm of the cumulative number of battle-deaths in the dyad during the most recent conflict.
6. *War over government*: We use the *incomp* variable contained in Kreutz (2010) to code dyads in which the last conflict centered upon control over the government (i.e., revolution) with a "1" and a "0" for those fought over control of territory (i.e., secession).
7. *Infant mortality rate*: IMF has been used as an alternative to GDP/capita as an indicator of the general level of economic well-being in the nation (see Walter, 2004). We use data from the UN Inter-agency Group for Child Mortality Estimation (IGME) (2014) to code a variable that describes the infant child mortality rate for each country-year.[6]
8. *Number of ongoing conflicts*: This variable is coded using Kreutz (2010) and describes the number of other ongoing conflict dyads for each dyad peace year. More on-going conflict

[6] For robustness, we also estimated our models using per capita GDP instead of infant mortality. The results of these analyses were nearly identical to the results with infant mortality. These results are reported in the online appendix.

dyads should increase the risk of peace failure for a given peace dyad.

9. *Peace spell*: We include a variable describing the number of peace spells, including the current one, a dyad has experienced. The more peace failures a dyad had experienced in the past, the more likely the current peace spell is to fail.

The temporal domain for our analysis extends from 1951-2009 and includes 292 civil war dyads. After excluding observations with missing data, this yields a dataset of 6036 dyadic peace years. We also perform analysis controlling for the cumulative number of battle deaths produced by each prior conflict. Because the UCDP Battle-Related Deaths Dataset v.5-2015 (Pettersson, 2014) covers a limited set of years, our temporal domain for this analysis is 1990-2009 and includes 168 dyads. After accounting for missing data, the dataset for this time period includes 2002 dyadic peace spell-years. Table 1 provides a summary of the variables used in the analysis.

## Results

Our findings provide clear evidence that the risk of post-civil war peace failure does vary across regime types. We also find that the effect of regime type on peace failure varies quite dramatically according to whether the conflict ended in a peace agreement or not. Personalist and military regimes as well has democracies all reduce the risk of peace failure compared to one-party regimes. For peace spells established by a peace agreement, however, personalist regimes face a significantly *higher* risk of peace failure than one-party and military regimes. We find consistent results both across our full sample as well as for the post-Cold War 1990-2009 period[7]. These findings are summarized in Table 2.

(Table 2 about here)

[7] We analyze a post-Cold War sample separately because the literature has noted important differences, particularly in terms of the frequency of peace agreements after the end of the Cold War (see Kreutz (2010), for example).

Contrary to our expectations, models 1-4 show that the post-civil war peace is significantly less likely to fail in personalist regimes than one-party regimes. In model 1, compared to the base category of a one-party regime, peace is nearly 65% less likely to fail in any given year in a country with a personalist regime. In model 3, which covers the post-Cold War period and controls for the effects of cumulative battle deaths, the effects are even more dramatic: personalist regimes reduce the hazard of peace failure by nearly 85% at any point in time, compared to one party regimes.

While these findings point to a dramatic dampening effect on conflict recurrence among personalist regimes, this effect is conditioned by how the civil war ended in the first place. In models 2 and 4, the interaction between personalist regime and peace agreement indicates that where personalist regimes preside over a peace spell established by a negotiated settlement, the risk of peace failure is nearly 163% greater than it is for a one-party regime and more than six times greater after the Cold War.

Figures 1 & 2 use the results from model 2 to plot the predicted survival curves for peace duration among personalist, military, and one-party regimes both without a peace agreement and with a peace agreement, respectively. As Figure 1 shows, where personalist regimes preside over a peace spell not resulting from a negotiated settlement (i.e., the previous civil war ended in military victory or "low activity"), the hazard of peace failure is substantially lower relative to the hazard of peace failure in a one-party regime. For a peace spell involving a personalist regime that begins without a peace agreement, there is about a 9% chance that peace will fail within the next 5 years and slightly less than a 12% chance that peace will fail within the next 10 years. By contrast, for one-party regimes presiding over a peace spell begun without a peace agreement there is nearly a 30% chance that the peace will fail within the first 5 years and nearly

a 39% chance that peace will fail within the first 10 years.

Figure 2 shows that while personalist regimes in general tend to experience longer peace spells than one-party regimes, this effect is dampened when the peace spell results from a peace agreement rather than a military victory or "low activity". For a peace spell involving a personalist regime that follows a peace agreement, there is about a 16% chance that peace will fail within 5 years and slightly more than a 22% chance that peace will fail within 10 years. In this respect, the hazard of peace failure for personalist regimes nearly doubles when the peace spell is the result of a peace agreement rather than some other outcome. By contrast, peace agreements cause the risk of peace failure to decline for one-party regimes. These findings suggest that personalist regimes are more effective than one-party regimes at sustaining the peace following a military victory (or “low activity), perhaps because they are more effective at repressing potential challengers from mounting a new armed challenge. One-party regimes, by contrast, are more likely than personalist to try to coopt defeated rebels and, in so doing, allow them the space to organize and mobilize for armed challenges in the future if efforts to coopt them do not succeed.

The link between military regimes and peace duration shows a different pattern than what we observed for personalist regimes. While military regimes significantly reduce the hazard of conflict recurrence relative to one-party regimes, unlike personalist regimes, we see no interaction effect between military regimes and peace agreements. In model 1, military regimes reduce the hazard of peace failure by nearly 58% relative to one-party regimes. In model 4, during the post-Cold War period, military regimes still reduce the hazard of conflict recurrence by more than 63%. In models 2 and 4, however, the interaction between military regime and peace agreement is not significant, indicating that military regimes that preside over peace

agreements are no more or less likely to experience peace failure than one party regimes. The apparent advantage military regimes enjoy over one party regimes when it comes to sustaining the peace does not apply to the peace established by negotiated settlements. Perhaps the option of "returning to the barracks" gives military regimes an option other than just repression as a way to avoid the recurrence of conflict

Figure 1 shows the strong pacifying effect that military regimes have on conflict recurrence relative to one-party regimes. Without a peace agreement, there is nearly a 30% chance of conflict recurrence for a one-party regime within 5 years after the end of conflict, while there is less than a 13% chance of conflict recurrence within that same time period for a military regime. Similarly, while there is nearly a 39% risk that peace will fail within 10 years for a one-party regime, military regimes have less than an 18% chance of conflict recurrence over that same period of time. In this respect, military regimes have a deterrent effect upon conflict recurrence that is similar to personalist regimes. This effect, however, is not significantly influenced by how peace spells begin in the first place.

Contrary to our expectations, it appears that personalist and military regimes are better at sustaining the peace where they have eliminated the condition of multiple sovereignty through a decisive victory or a campaign that drives the rebels into inactivity. Where personalist regimes enter a peace agreement with rebels, their inability or unwillingness to commit to accommodative reforms makes them less able than one-party regimes to sustain the peace after a peace agreement. One-party regimes have the institutional machinery and the political skills to accommodate dissident groups through policy concessions and/or cooptation. And they have in place the institutional machinery to provide dissident groups with access to political power through elections and by coopting them into the party machine. Personalist regimes rely on

repression of dissent to stay in power, with patronage benefits confined only to the small winning coalition (including the military) that is necessary for them to maintain their hold on office and political power. Military regimes, likewise, are better equipped to deal with opposition organizations through repression than through accommodation. However, unlike personalist regimes, they can return to the barracks and allow a more accommodative civilian regime to enact policies that sustain a peace agreement.

One argument suggests that more decisive civil war outcomes – peace agreements and military outcomes – can produce a more durable peace than more indecisive outcomes such as truces, ceasefires, and low activity. For robustness, we restructured our analyses in models 3 and 6 to more narrowly operationalize our peace agreements variable to exclude those civil war outcomes identified by Kreutz (2010) as truces and ceasefires. Because we include in these models a separate variable identified as military victory outcomes, the less decisive civil war outcomes – truces, ceasefires, and low activity – serve as the reference category in models 3 and 6. The results from this robustness analysis highlight the important role that decisive civil war outcomes play in the establishment of a durable peace.

In models 3 and 6, peace agreements involving non-military regimes and non-personalist regimes sharply reduce the likelihood of civil war recurrence by more than 60%. Decisive victories even more sharply dampen the likelihood of renewed conflict, reducing the chances of civil war by more than 75%. Unlike the results in models 2 and 5, when we use this narrow operationalization of peace agreements, we see no evidence in models 3 & 6 that peace agreements involving personalist regimes are any more or less likely to prove durable than peace agreements involving other types of non-military regimes.

With respect to military regimes, in model 3, across the full sample of our analysis, we see

that peace agreements involving military regimes increase the likelihood of peace failure more than twenty-fold. Model 6, which constrains the sample to the post-Cold War era, suggests that peace agreements involving military regimes during this period of time are substantially *less* likely to see conflict recur. Deeper inspection of this result, however, makes us more skeptical of this finding. When peace agreements are operationalized more narrowly, as they are in model 6, peace agreements involving military regimes turn out to be very rare during the post-Cold War period. In our sample, we only see two such cases (involving El Salvador and Niger). While peace only lasts one year for the military regime in Niger, the peace survives much longer in El Salvador, despite the fact that the military regime in El Salvador itself only survives for 3 years, according to the coding in the Geddes et al. data.[8] In this respect, the results in model 6 for military regimes are driven entirely by one peace failure and the rarity of peace agreements among military regimes during the period.

Looking beyond our theoretical argument, our findings with respect to control variables are largely consistent with the extant literature. Democracy tends to reduce the hazard of future conflict as does the duration of the last conflict between the warring sides. Measures of conflict intensity, both within and outside the dyad, serve to increase the hazard of conflict recurrence, as both the cumulative number of battle deaths and the number of ongoing conflicts within a state each significantly increase the likelihood of renewed conflict. The findings on battle deaths are consistent with Walter (2004), Mason et al. (2011). They indicate that the deadliness of a conflict intensifies credible commitment problems, making renewed conflict more likely. This finding is contrary to the rationalist cost/benefit expectations regarding the effect of casualties, which

[8] Coding El Salvador as a military regime the time of the peace agreement is puzzling in and of itself. Polity codes El Salvador as a democracy (6) as of 1984, when the new constitution went into effect and national elections produced a democratically elected legislature and president. Give this, one could argue that there is only

suggests that higher casualty rates should deter a relapse into armed conflict by raising dissidents' estimates of the likely costs of resuming armed conflict compared to sustaining the peace. The findings on duration of the previous conflict, however, do fit with rationalist logic: the longer the duration of the previous war, the longer will be dissidents' estimates of the time they will have to absorb the costs of conflict before achieving a more favorable outcome than they can expect from sustaining the current peace (see Quinn et al. 2007; Mason et al. 2011). Interestingly, we find little evidence that conflict management efforts translate into a reduced risk of conflict recurrence. Not only do peace agreements not decrease the risk of peace failure, even increasing it for personalist regimes, but we also see no evidence that peacekeepers significantly reduce the risk of peace failure. The findings on the fragility of the peace established by negotiated settlements conforms to what earlier studies report, beginning with Licklider (1995). The lack of effect for the introduction of peacekeeping efforts, however, is contrary to what Fortna (2004) and others have found. This does not necessarily mean that conflict management efforts like peacekeeping are ineffective, as they can reduce conflict intensity and mitigate the effects of fighting upon civilians. They can enhance the prospects of securing a negotiated settlement in the first place. But our results suggest that the survival of peace is not substantially shaped by third-party conflict management efforts.

## Conclusion

Much of the existing research on post-civil war peace failure has begun with consideration of how the outcome of the previous war – military victory or peace agreement – shapes the prospects for civil war recurrence. This study has sought to add to that stream of research by exploring how state capacity affects the ability of the post-war regime to sustain the peace and

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one case of a military regime presiding over a peace agreement during the post-Cold War era.

how relevant state capacities vary across regime type. Our findings reveal some interesting aspects of how the stability of the post-civil war peace varies across different regime types. First, we found that the more authoritarian non-democratic regime types – i.e., personalist dictatorships and military regimes – are better able to sustain the peace after a civil war than are one-party regimes. However, we also found that those same regime types are far less successful than one-party regimes or democracies at sustaining the peace that is established by peace agreements (as opposed to the peace established by a decisive victory or a conflict that simply peters out into low activity). These findings may not be very surprising since, compared to one-party regimes, both military regimes and personalist regimes typically have serious deficits in the institutional capacity to formulate and implement accommodative policies that would address the grievances of dissident groups and thereby reduce their incentives to return to armed combat as a way to pursue their interests. One-party regimes, by comparison, sustain themselves by accommodating or coopting dissidents. They have in place the machinery to allow emerging dissident groups to compete for the attention and patronage of the party leadership, even if the party is less willing to allow such groups to compete for the party's near monopoly over control of political office. If the international community is considering "investing" in state capacity to sustain the peace, these finding suggest that the prescriptions for military and personalist regimes are different from what treatments are needed in one-party regimes. One party regimes have the institutional capacity to sustain the peace; what they may lack is the resources necessary to fund accommodative policies. On the other hand, one-party regimes' preference for cooptation over repression implies that they are more tolerant of the existence of opposition groups than are personalist or military regimes. This could leave them more vulnerable than military and personalist regimes to the emergence of an armed challenger. The terms of the peace agreement,

then, should be attentive to the need to reduce the incentive and capacity for opposition groups to develop their own military capacity. Military and personalist regimes, by contrast, appear to have deficits in the institutional capacity to adopt and implement accommodative policies. Their default option for responding to opposition challenges is repression, but the near-exclusive reliance on repression may increase the risk of peace agreements failing and war resuming. These differences suggest that, for military and personalist regimes, the international community should target its support to building accommodative institutions and to institutionalizing constraints on the tendency of these regime types to to resort to repression.

The other effect of regime type that is consistent across all of our models is that democracies reduce the risk of peace failure by a substantial amount compared to one-party regimes. Hence, the findings from this study suggest as a direction for future research how regime type affects the prospects for a transition to democracy following civil war, since such a transition appears to enhance the prospects for the peace to endure.

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Table 1: Summary Statistics

| | 1951-2009 | | | | 1990-2009 | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Min | Max | Mean | SD | Min | Max |
| Ethnic fractionalization | 0.537 | 0.226 | 0 | 0.879 | 0.545 | 0.232 | 0 | 0.875 |
| Democracy | 0.358 | 0.480 | 0 | 1 | 0.466 | 0.499 | 0 | 1 |
| Personalist regime | 0.181 | 0.385 | 0 | 1 | 0.235 | 0.424 | 0 | 1 |
| Military regime | 0.211 | 0.408 | 0 | 1 | 0.105 | 0.306 | 0 | 1 |
| Monarchy | 0.021 | 0.145 | 0 | 1 | 0.010 | 0.099 | 0 | 1 |
| Peacekeepers | 0.204 | 0.403 | 0 | 1 | 0.354 | 0.478 | 0 | 1 |
| Infant mortality | 66.517 | 39.143 | 3.5 | 211.5 | 57.940 | 36.661 | 3.8 | 149.8 |
| Number of other conflicts | 0.944 | 1.715 | 0 | 9 | 0.659 | 1.454 | 0 | 8 |
| Peace agreement | 0.214 | 0.410 | 0 | 1 | 0.358 | 0.479 | 0 | 1 |
| Duration of last conflict | 4.099 | 5.210 | 1 | 41 | 3.928 | 5.313 | 1 | 32 |
| Government issue | 0.553 | 0.497 | 0 | 1 | 0.531 | 0.499 | 0 | 1 |
| Peace spells | 1.272 | 0.693 | 1 | 7 | 1.479 | 0.974 | 1 | 7 |
| GDP per capita | 7.664 | 1.046 | 5.094 | 10.557 | 7.817 | 1.060 | 5.094 | 10.376 |

Table 2: Cox Regression Results for Civil War Recurrence (Hazard Ratios Reported)

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | | **1951-2009** | | | **1990-2009** | |
| Ethnic fractionalization | 2.453 | 2.355 | 2.788 | 1.107 | 1.058 | 1.696 |
| | (1.614) | (1.554) | (1.971) | (0.967) | (0.901) | (1.627) |
| Democracy | 0.502* | 0.523* | 0.559* | 0.238** | 0.244** | 0.250** |
| | (0.138) | (0.144) | (0.151) | (0.0751) | (0.0761) | (0.0827) |
| Personalist regime | 0.354** | 0.259** | 0.443* | 0.153** | 0.0614** | 0.150** |
| | (0.134) | (0.122) | (0.175) | (0.0611) | (0.0443) | (0.0674) |
| Peace agreement*Personalist regime | | 2.625+ | | | 6.246* | |
| | | (1.503) | | | (5.410) | |
| Peace agreement only*Personalist regime | | | 1.103 | | | 2.366 |
| | | | (1.031) | | | (2.442) |
| Military regime | 0.419* | 0.396* | 0.418* | 0.365* | 0.361* | 0.379* |
| | (0.160) | (0.149) | (0.166) | (0.153) | (0.147) | (0.147) |
| Peace agreement*Military regime | | 1.762 | | | 0.941 | |
| | | (1.351) | | | (0.917) | |
| Peace agreement only*Military regime | | | 20.81** | | | 0** |
| | | | (14.19) | | | (0) |
| Peace agreement | 0.912 | 0.756 | | 0.931 | 0.754 | |
| | (0.203) | (0.197) | | (0.254) | (0.232) | |
| Peace agreement only | | | 0.367* | | | 0.317* |
| | | | (0.168) | | | (0.170) |
| Monarchy | 8.07e-06** | 4.30e-06** | 0.000136** | 0 | 0** | 0** |
| | (3.42e-05) | (1.91e-05) | (0.000416) | (0) | (0) | (0) |
| Monarchy*ln(time) | 48.16** | 58.61** | 20.36** | | | |
| | (60.60) | (77.24) | (19.13) | | | |
| Victory | | | 0.226** | | | 0.134** |
| | | | (0.0943) | | | (0.0941) |
| Peacekeepers | 1.105 | 1.123 | 1.125 | 1.444 | 1.468 | 1.482 |
| | (0.302) | (0.304) | (0.297) | (0.492) | (0.487) | (0.486) |
| Infant mortality | 0.992* | 0.993* | 0.993+ | 0.998 | 0.998 | 0.996 |
| | (0.00358) | (0.00357) | (0.00356) | (0.00449) | (0.00443) | (0.00454) |
| Number of other conflicts | 1.262** | 1.258** | 1.232** | 1.449** | 1.451** | 1.413** |
| | (0.0513) | (0.0509) | (0.0500) | (0.0890) | (0.0918) | (0.0939) |

| | | | | | | |
|---|---|---|---|---|---|---|
| Duration of last conflict | 0.884** | 0.883** | 0.872** | 0.824* | 0.819* | 0.827* |
| | (0.0389) | (0.0396) | (0.0413) | (0.0653) | (0.0685) | (0.0666) |
| Government issue | 0.616* | 0.614* | 0.728 | 0.486* | 0.495* | 0.549* |
| | (0.141) | (0.139) | (0.149) | (0.152) | (0.151) | (0.150) |
| Peace spells | 1.872** | 1.859** | 1.756** | 1.240* | 1.229* | 1.136 |
| | (0.180) | (0.181) | (0.167) | (0.110) | (0.111) | (0.0982) |
| Cumulative battle-deaths (logged) | | | | 1.262** | 1.275** | 1.313** |
| | | | | (0.111) | (0.112) | (0.0993) |
| Cases | 292 | 292 | 292 | 168 | 168 | 168 |
| Failures | 135 | 135 | 135 | 86 | 86 | 86 |
| Observations | 6,036 | 6,036 | 6,036 | 2,002 | 2,002 | 2,002 |

Robust S.E. in parentheses
** p<0.01, * p<0.05, + p<0.1

Figure 1: Survival Until Conflict Recurrence By Regime Type – Without Peace Agreement

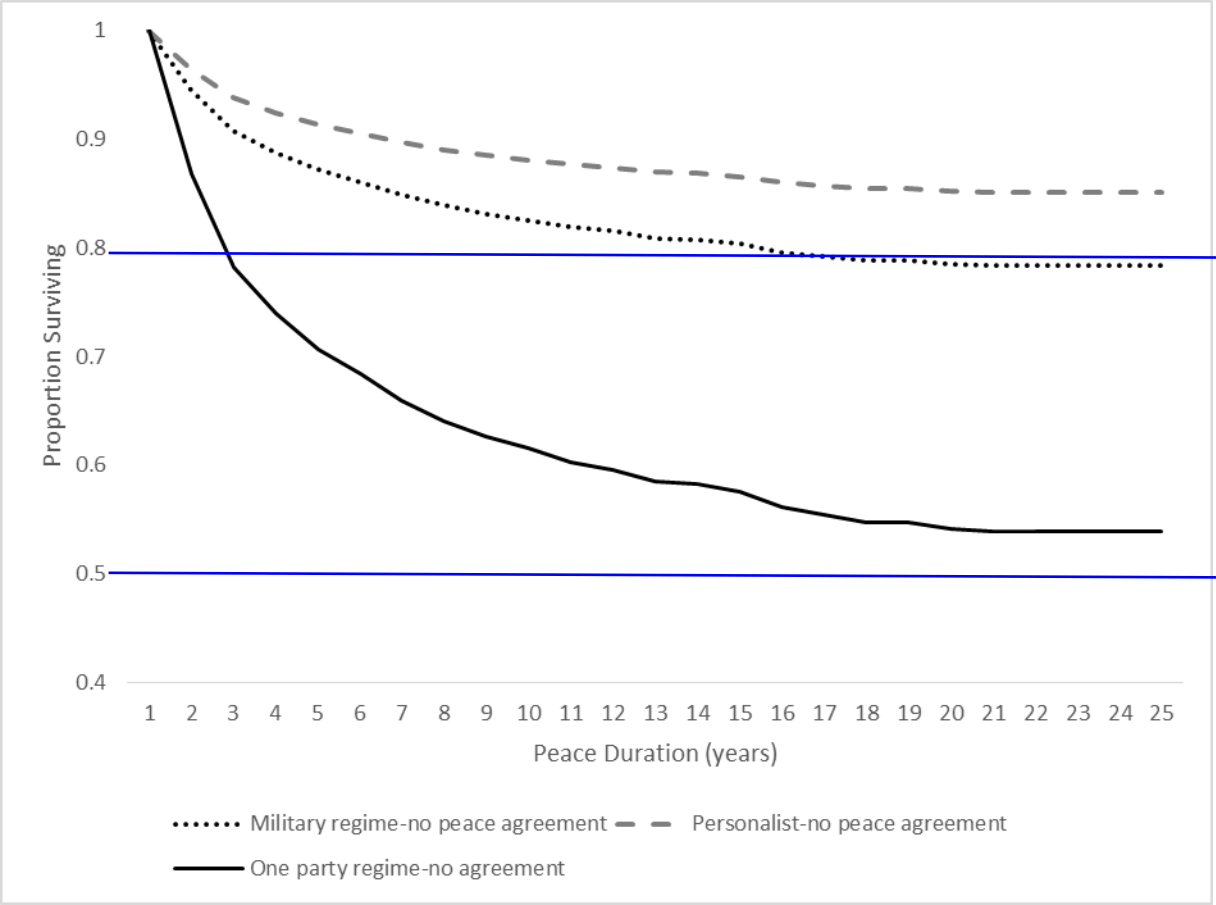
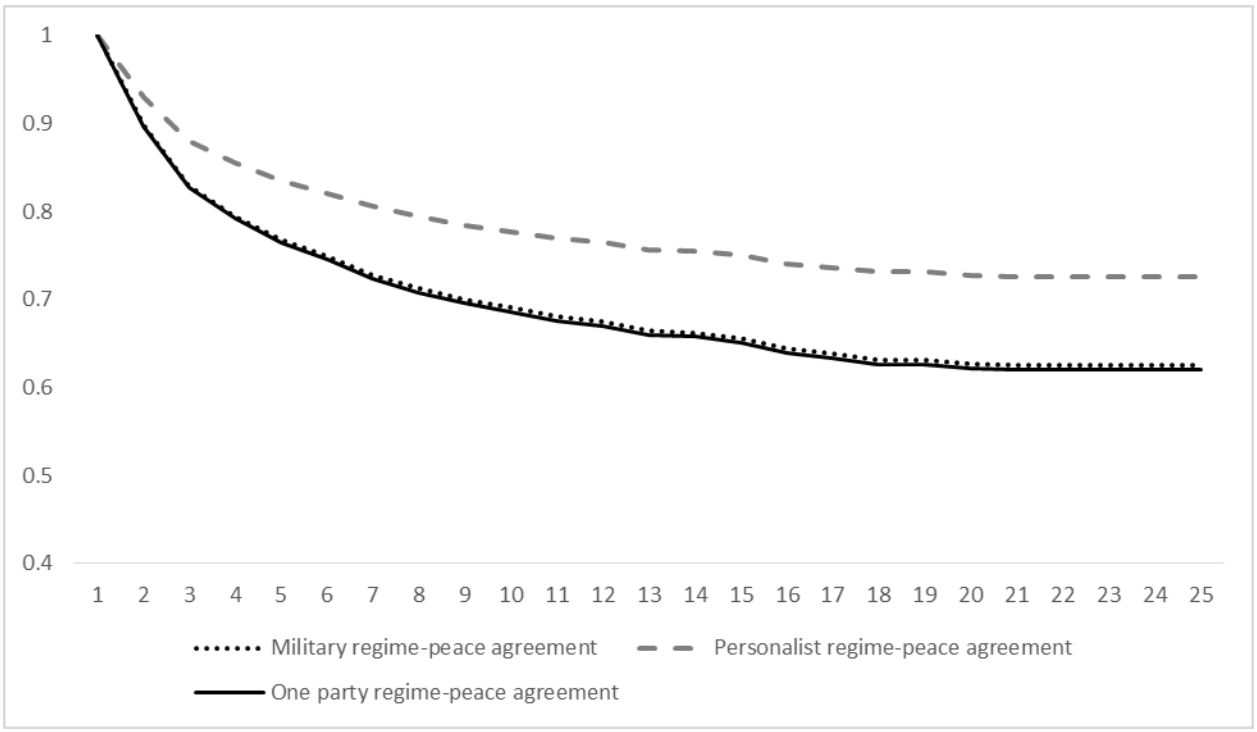
Figure 2: Survival Until Conflict Recurrence By Regime Type – With Peace Agreement