Sustaining the Peace: Determinants of Civil War Recurrence

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Abstract

The last half century has been characterized as an age of revolution. Civil wars (including revolutionary, secessionist, and anti-colonial revolts) have replace interstate wars as the dominant conflict modality in the international system. Recent research has explored the conditions that determine whether or not a civil war will end in a negotiated settlement or a victory by the government or the rebels. Whatever the outcome, evidence indicates that many of these civil wars recur once they have concluded the first time. In this paper, we will explore the extent of civil war recurrence since the end of World War II and develop a model to explain what characteristics of a civil war and the post-war political order make civil war more or less likely to recur. We test this model with Doyle and Sambanis’s data on civil wars, 1944-1997. The findings suggest that the level of post-war democracy, the presence of international peacekeeping operations, and improvements in economic well-being make civil war less likely to recur.
Sustaining the Peace: Determinants of Civil War Recurrence

It has become abundantly clear that since the end of World War II civil war – revolutions, secessionist wars, and other forms of armed conflict within nations – has replaced interstate war as the dominant conflict modality in the international system. Fearon and Laitin (2003: 75) report that between 1945 and 1999 there were only 25 interstate wars (resulting in a total of 3.3 million battle deaths) while five times as many civil wars (127) occurred producing five times as many battle deaths (16.2 million). The end of the cold war has brought no end to the epidemic of civil war. Wallensteen and Sollenberg (2001: 632) note that 104 of the 111 armed conflicts that they documented as occurring between 1989 and 2000 were civil wars.

What is less widely recognized is that most of the civil wars that have occurred in the last half century have recurred in a nation that previously experienced a civil war. The 111 civil wars in the Correlates of War data set that began and ended between 1945 and 1997 took place in only 56 nations, and only 25 of those nations experience a solitary civil war; The remaining 31 nations each experienced multiple civil wars during that period, with fourteen having two civil wars, eleven having three, five having four separate conflicts, and one nation experiencing five separate civil wars. Similarly, the civil war data set compiled by Doyle and Sambanis (2000) reports 124 conflicts occurring in only 69 nations, with only 36 nations experiencing a lone civil war. Eighteen nations had two separate conflicts, 9 nations had three, 5 nations had 4 and one nation had 5 (see Table 1). Given this pattern, we explore the question of what conditions affect the likelihood that a civil war will recur. Alternatively, we examine the conditions that make it more likely that the new regime emerging from the conclusion of a civil war will be able to sustain the peace.

Several scholars have examined the conditions that contributed to the peaceful resolution of civil wars (Mason and Fett 1996; Mason, Weingarten and Fett 1999). Patrick Regan has examined the impact of varying forms of third party intervention on the termination of civil wars (1996) and the duration of civil wars (2002). Despite the evidence that third party intervention can bring civil wars to an end, the interveners must have an incentive to perform that role, given the high risks involved for the intervener. Hence, Regan (1998) and Carment and Rowlands (1998) have examined the conditions under which potential interveners have an incentive to intervene.

Once a civil war has been brought to a conclusion through a negotiated settlement, the issue of how to sustain the peace arises. Licklider (1995) first noted that while there had been a number of negotiated settlements to civil wars, nearly one-quarter of all civil wars since 1945 have resumed with the same sides and the same issues after the initial war has ended for at least five years (Licklider 1995). Barbara Walter (1997) demonstrated the critical importance of third party mediators in persuading civil war protagonists to accept a negotiated settlement. Third parties provide the credible commitments that allow both sides to disarm and demobilize without fear of their rival cheating on the agreement and using the truce to achieve through deception what they could not achieve on the battlefield (Walter 1999, 2002). Hartzell has shown that the terms of the settlement agreement have a strong effect on the probability that a negotiated settlement will hold. Specifically, the more dimensions of power-sharing arrangements that are specified in the agreement – including military, political, economic, and territorial power-sharing – the more likely the settlement is to last (Hartzell 1999) and the longer it is likely to last (Hartzell and Hoddie 2003; Hartzell, Hoddie, and Rothchild 2001).
A critical factor in understanding when and why civil wars resume is how critical features of the post-conflict environment affect the former combatants' choice between renewing the war or sustaining peace. First, we discuss some risk factors or security concerns that make it difficult for groups in divided societies to sustain peace in the aftermath of civil war. Second, we present a model of the decision calculus by which former combatants choose between resuming the conflict or sustaining the peace. Third, we formulate a series of testable hypotheses that related characteristics of the previous civil war and risk factors in the post-civil war environment to the probability of civil war recurring. Finally, we use Doyle and Sambanis' (2000) data on 124 civil wars to estimate a logistic regression model that measures the relative impact of these risk factors on the probability of a civil war recurring.

**Literature Review**

There are several ways in which characteristics of a civil war, particularly how it ends, could affect the likelihood of conflict resuming. Harrison Wagner suggests that negotiated settlements are more likely to lead to renewed violence than military outcomes (i.e., victory by the government or the rebels) because settlements allow both sides to retain the organizational capability to renew war in the future (Wagner 1993:255). Conversely, wars that end in a decisive military victory are followed by some degree of compulsory disarming or dissolution of the defeated side's forces, thereby precluding the resumption of civil war for some time. Licklider (1995) found empirical support for the proposition that negotiated settlements tend to break down into future violence more often than military outcomes, suggesting that resuming war is more difficult when the original war ended in a military victory by one side or the other rather than a negotiated settlement.

Presumably, no side in a military contest will agree to stop fighting if they believe they have the capability to defeat or disarm the other party. Thus, settlements are more likely to be reached in a situation of "mutually hurting stalemate" whereby "the countervailing power of each side, though insufficient to make the other side lose, prevents it from winning" (Zartman 1993: 24). While a balance of military power may increase the utility of a settlement compared to continued conflict, the settlement preserves the organizational capacity of each side to make war. Renewed war is one broken promise away. As Wagner (1993:261) writes,

> The fact that a civil war has occurred implies that the organizational advantage of government has been overcome. Thus one of the disadvantages of a negotiated settlement may be that, because no combatant is able to disarm its adversaries, a settlement requires that all the adversaries retain some semblance of their organizational identities after the war, even if they are disarmed. While such an agreement may facilitate the ending of one civil war, it may also facilitate the outbreak of the next”.

Walter (1999) has examined how the absence of credible commitments to enforce peace agreements contributes to the breakdown of settlements and the resumption of conflict. Former enemies have to be apprehensive leaving themselves vulnerable to future attacks if that disarming or demobilizing in compliance with a settlement agreement. As Walter (1997:2) argues,

> At a time when no legitimate government and no legal institutions exist to enforce a contract, they are asked to demobilize, disarm, and disengage their military forces and prepare for peace. But once they lay down their
weapons and begin to integrate their separate assets into a new unified state, it becomes almost impossible to either enforce future cooperation or survive attack”.

Crafting and enforcing peace settlements in civil wars presents a prisoner’s dilemma problem in that both sides would benefit if they cooperated but neither side can afford to trust the other not to cheat. Overcoming this dilemma requires third party intervention to police compliance with the settlement and guarantee each side against cheating by the other.

A more general theoretical explanation may be that war follows a path-dependent process. The risk of war recurrence is greater in post-war societies than in countries with no prior or recent history of war. There is no shortage of theoretical linkages between the consequences of civil wars and the likelihood of future conflict. The destructiveness of civil war means that the nation’s economy is likely to be in far worse condition than it was prior to the war. The grievances that fueled the initial war probably remain to some degree, and the violent atrocities typical of large-scale combat, no doubt, harden the incompatibility of the two sides, facilitating future violence. Moreover, a weakened state will be less able to police the territory in such a way as to prevent or deter predatory violence. It is difficult to imagine how a state that includes former enemies will be able to function effectively.

Licklider (1993: 4) captures this post-war dilemma:

Ending international war is hard enough, but at least there the opponents will presumably eventually retreat to their own territories .... But in civil wars the members of the two sides must live side by side and work together in a common government to make the country work. ... How do groups of people who have been killing one another with considerable enthusiasm and success come together to form a common government?

Several studies have sought to identify and explain risk factors and aspects of the post-conflict environment that are more or less conducive to a peaceful transition and recovery from war. Paul Collier (2000) notes,

The risk of conflict is likely to be higher in post-conflict societies for several reasons. First, unless the country was very unlucky, it presumable had risk factors which made it atypically prone to conflict and these are likely to have persisted. Secondly, the conflict is likely to have caused some of these underlying factors, such as per capita income, to deteriorate. Third, the conflict will have changed the consequences of a given set of pre-conflict risk factors: some risk factors have different affects post-conflict than pre-conflict. Fourth, it will have generated grievances which themselves temporality increase the risk of conflict.

Collier identifies natural resource predation, lack of economic opportunities and the presence of ethnic dominance as critical determinates that can create a high-risk post-conflict environment. Along similar lines, Blomberg, Hess & Thacker (2000) examine the potential for “conflict-poverty traps” to explain renewed violence in post-war societies. In such a model, the economy deteriorates under the pressures and destructiveness of civil war, leaving a post-war economic environment in which resource-driven rebellion becomes even more likely.

What is missing so far in the research on civil war, post-conflict transitions and renewed war is any attempt at linking the three periods together by attempting to explain how the
post-conflict environment, in which renewed war becomes an option, may be influenced by characteristics of the previous war. This paper attempts to add to the body of literature on post-conflict transitions and conflict resolution by focusing on the consequences of civil wars on the post conflict environment and conflict survivability.

**Sustaining the Peace: the Post-Conflict Environment**

The initiation – and recurrence – of a civil wars requires two general pre-conditions. First, a revolutionary situation must exist leading potential combatants to the conclusion that civil war is necessary and feasible. Charles Tilly (1978: 200) describes a revolutionary situation as having three elements:

1. the appearance of contenders or coalitions of contenders, advancing exclusive alternative claims to the control over the government which is currently exerted by the members of the polity;
2. commitment to those claims by a significant segment of the subject population;
3. the incapacity or unwillingness of the government or its agents to suppress the challenger coalition and/or the commitment to its claims.

Second, one or both of the potential combatants must conclude that renewing armed conflict is preferred to the post-conflict status quo. This implies that, for that actor, the anticipated benefits of eventual victory exceed the benefits of the status quo, even when those benefits are discounted by the probability of winning and the accrued costs that will have to be absorbed in order to achieve victory. These two preconditions take into account both agent and structure by focusing on the decision calculus of potential combatants to renew war and the structural conditions of the post-conflict environment that make the choice to resume war preferable to learning to live with the status quo.

The critical structural determinant of civil war is what Charles Tilly (1978) refers to as a condition of *dual or multiple sovereignty*:

The revolutionary moment arrives when previously acquiescent members of that population find themselves confronted with strictly incompatible demands from the government and form an alternative body claiming control over the government, or claiming to be the government...and those previously acquiescent people obey the alternative body. They pay taxes, provide men to its armies, feed its functionaries, honor its symbols, give time to its service, or yield other resources despite the prohibition of a still existing government they formerly obeyed. Multiple sovereignty has begun. When only one polity exerting exclusive control over the government remains, and no rivals are successfully pressing their claims - however that happens - the revolutionary situation has ended (Tilly, 1978:192).

Thus, any factor which preserves or intensifies the system of dual sovereignty in the post-conflict environment will contribute to a post-war political order in which the “revolutionary situation” remains and the mobilization of the remaining opposition groups into defensive enclaves is necessary and potential combatants are much more likely to choose renewed war over the status quo. This is implicit in Walter’s (2002) and Hartzell’s arguments about the conditions necessary to sustain the peace. Walter argues that third party guarantees are necessary for the protagonist to disarm and demobilize, which would amount to dismantling the condition of dual sovereignty. Similarly, Hartzell’s analysis the sustainability of peace agreements that dual sovereignty must be replaced by enforceable power-sharing
arrangements (see Hartzell, Hoddie, and Rothchild 2001).

The question of agency in the recurrence of civil wars involves the decision calculus by which potential combatants choose between sustaining the peace or resuming war. Unlike the expectations of insurgents in the initial war the decision to resume a previously terminated conflict is presumably more calculated because each party has a better idea of what to expect from their opponent the second time around. As potential combatants adjust their estimates of the expected utility of victory versus the expected costs, no doubt experiences of the previous war serve as primary indicators of what the payoffs and risks would ensue from resuming the war.

To capture the decision calculus of former combatants who can choose peace or resume war, the proposed model of civil war recurrence will incorporate information from the previous war. Drawing on the logic of Wittman (1979) and Mason and Fett (1996), the choice to sustain peace or resume war can be represented as the difference between the expected utility from resuming conflict versus accepting the status quo. The payoff from resuming the conflict can be represented as follows:

$$EU_C - P_v(U_v) + (1 - P_v)(U_D) - \sum_{i=1}^{n} C_{stub} i$$  \hspace{1cm} (1)

where $EU$ is the expected utility of resuming the conflict, $U_v$ is the payoff from victory, $P_v$ is the probability of achieving victory, $U_D$ is the expected cost from defeat, $(1-P_v)$ is the probability of defeat, $C$ is the rate at which the costs of conflict will be absorbed from the present time ($t = 0$) to that time in the future in which victory is achieved, $t_v$. For resuming civil war to be rational, the expected utility of resuming the war, $EU_c$, must be greater than the expected utility of sustaining the peace, $EU_p$.

As a heuristic device, this model suggests some general propositions concerning the factors that would induce one of the combatants in a now-terminated civil war to resume the conflict. Any variable that (a) increases the probability of victory, (b) increases the payoffs from victory, (c) decreases the rate at which the costs of conflict are absorbed, (d) decreases the duration of the war, and (e) decreases the payoffs from maintaining the status quo should increase that actor’s incentive for resuming civil war. In combination with the structural conditions of dual sovereignty, this model implies that we would expect a civil war recurrence if a condition of sovereignty persists after the initial war and for at least one of the former protagonists the expected utility of resuming war is greater than the expected utility of sustaining peace. This model allows us to derive a series of hypotheses regarding factors that influence the probability of civil war recurrence.

**Sustaining the Peace or Reverting to War? Hypotheses**

The model of civil war recurrence described earlier suggests that any factor which preserves or intensifies the problem of dual sovereignty will increase the likelihood of civil war recurrence. This implies that the probability of civil war recurrence should vary with the outcome of the original conflict: whether it ended in a government victory, a rebel victory, or a negotiated settlement.
Civil War Outcome: Negotiated Settlement versus Military Victory

Licklider (1995) found that negotiated settlements tend to break down into renewed violence more often than conflicts ending in a military victory by one side. Military defeat disrupts or destroys the organizational capacity of the defeated side’s forces, making it more difficult for the defeated party to mobilize the human and materials resources necessary to renew the war effort. In contrast, negotiated settlements should be more susceptible to renewed violence because settlements often fail to dismantle the conditions to dual sovereignty that made civil war possible in the first place.

H1: A civil war that ends in a negotiated settlement is more likely to experience a recurrence of conflict than one that ends in either a government victory or a rebel victory.

Walter (1997, 2002) has shown negotiated settlements are more likely to hold in the presence of a third-party mediator who can police the disarming and demobilization of the two armed forces and provide both sides with guarantees that their rival will be able to induce them to disarm and then renege on the agreement by launching a surprise attack. Hartzell has shown that the terms of terms of the settlement – specifically, the extent of power-sharing arrangements in it – can moderate this tendency by making settlements more durable (see Hartzell, Hoddie, and Rothchild 2001; Hartzell and Hoddie 2003). In both cases, peacekeepers make it possible for both sides to dismantle the condition of dual sovereignty by disarming and demobilizing their troops, thereby making it more likely that the settlement will endure and civil war will not resume. This suggests the following hypothesis:

H2: A civil war is less likely to recur when multinational peacekeepers are introduced to police the post-conflict reconstruction.

Government Victory versus Rebel Victory

Comparing the two military outcomes, a condition of dual sovereignty is more likely to survive under a government victory than a rebel victory. This would lead us to expect that civil wars are less likely to recur following a rebel victory than following either a negotiated settlement or a government victory.

H3: A civil war which ends in a rebel victory is less likely to be followed by civil war recurrence than one that ends in a government victory or a negotiated settlement.

The defeat of an armed rebellion by the incumbent regime often merely drives the conflict underground, to resurface another day. The fact that a civil war broke out initially clear indicates a condition contested sovereignty of sufficient severity to attract thousands of civilians into supporting overtly or covertly armed conflict with their government. Once they have made that commitment it unlikely that the rebels will ever give up the struggle entirely and accept the incumbent regime as legitimate. If they cannot sustain the challenge militarily, their options (other than surrender) are to go into exile or blend back into the civilian population and await the time when they can muster sufficient strength to revive the
conflict. Only in rare instances of genocide or politicide have government victories ended the system of contested sovereignty in a way that precludes the recurrence of conflict.

Guerrilla tactics enable the members of a rebel organization on the verge of defeat (but not a government on the verge of collapse) to avoid annihilation on the battlefield by simply blending into the civilian population. The rebel army alone has the advantage of being able to blend into the civilian population, thereby reducing the ability of the government to completely annihilate them even if it possess an overwhelming advantage in combat capabilities. The presence of mountainous, forested, or otherwise geographically isolated regions, especially if they span international borders, allows a defeated rebel army to establish a sanctuary where they can hide, heal and live to fight another day (Fearon and Laitin 2003). Thus, any battlefield defeat short of annihilation is not likely to preempt completely the rebels’ capacity to revive their armed challenge at some time in the future. Attempts to exterminate the remaining rebel forces and their civilian support base create a security dilemma whereby rebels and their supporters will be better off fleeing the nation or continuing to fight. Otherwise, they will leave themselves vulnerable to politicide.

Conversely, a rebel victory is less likely to be followed by a recurrence of civil war because rebel victory is more likely to eliminate the condition of dual sovereignty. Officials of the defeated government do not have the option of hiding among the civilian population. When rebel victory become imminent, exile is the only viable option for officials of that government and its military if they wish to avoid capture and punishment. Once they have consolidated control of the government apparatus, the rebels have less need to engage in the kind of indiscriminate counterinsurgency tactics that create a security dilemma for the civilian population. Indeed, we would expect a more conciliatory post-war political order to emerge as rebels seek to reward their civilian support base with collective goods.

**Costs and Benefits of Resuming the War**

Earlier, we presented a decision calculus by which government and rebels choose between resuming the conflict or not. That model suggests a number of variables that should affect the willingness and ability of either of the former combatants to renew the civil wars. In general, that model implies that any variable that 1) increases the costs of resuming conflict, 2) reduces the expected benefits of victory (relative to the benefits from peace), 3) extends the time required to achieve victory through armed conflict, or 4) decreases the estimated probability of achieving victory should make the parties less likely to resume the conflict and more willing to sustain the peace.

**Casualty Rate**
Because fighting a civil war consumes both human and material resources, the decision to continue fighting or to resume war at some time later could be affected by the level of resources that were consumed in the previous conflict. The casualty rate in the previous war is a primary if not the primary indicator of the costs of renewing war. We expect high casualty rates in the previous war to be negatively associated with conflict recurrence for two reasons. First and foremost, with every death, the size of the population pool from which both the government and the rebels can draw recruits is diminished. Second, high casualty rates should increase the reluctance of potential recruits to enlist in the government’s army or join the rebel movement. Thus, high casualty rates create a recruitment dilemma for both the government and the rebels: as the need for replacements increases due to battle deaths, potential supporters are less willing to put themselves in harm’s way. Third, high casualty rates should reduce one or both sides’ estimate of their probability of achieving victory. Thus, we expect high casualty rates to both reduce the manpower and capability of an army while simultaneously making it more difficult to mobilize fresh recruits.

H4: The higher the casualty rates in the previous war the lower the probability of civil war recurrence.

In a civil war (in contrast to an interstate war) both the government and the rebels draw on the same population and the same economy to sustain their military operations. High casualty rates, therefore, diminish the ability of both sides to sustain their combat operations. Therefore, high casualty rates should make both sets of actors less willing and less able to resume armed conflict after the initial civil war has ended.

**Duration**

A number of studies have found a strong relationship between the duration of a civil war and its outcome. Mason and Fett (1996) found strong empirical support for the proposition that the probability of a civil wars ending in a negotiated settlement increases with the duration of the conflict. Indeed, conflict duration was the single strongest predictor of a negotiated settlement. This relationship was confirmed by Mason, Weingarten, and Fett (1999), when they found that both government victories and rebel victories occur early in the conflict; otherwise, the longer the conflict lasts, the more likely it is to end in a negotiated settlement.

The decision model presented earlier suggests a similar effect for civil war recurrence:

H5: The longer the duration of the previous war, the less likely it is to be followed by civil war recurrence.

As former combatants consider the choice between resuming armed conflict or not, the duration of the previous civil war is an indicator of what they can expect if the war resumes. The longer the previous war lasted, the greater the accumulated costs of war will have been and the more difficult it will be for aspiring rebels to mobilize the remaining human and material resources for the purpose of resuming combat operations. Moreover, because conflict duration is inversely related to the probability of victory for either side, the duration of the previous conflict should be negatively related to their estimate of the probability of victory should they resume the war.\(^1\)
Stakes of the Conflict: Ethnic Division

A number of studies have argued that ethnic civil wars differ from ideologically-based civil wars in that the stakes are more nearly indivisible. Therefore, ethnic civil wars are less likely to be brought to an end through a negotiated settlement (Licklider 1995; Mason and Fett 1996). Chaum Kaufman (1996) presents the rationale as follows:

The key difference is the flexibility of individual loyalties, which are quite fluid in ideological conflicts, but almost completely rigid in ethnic wars. The possible and impossible solutions to ethnic civil wars follow from this fact. War hardens ethnic identity to the point that cross-ethnic political appeals become futile, which means that victory can be assured only by physical control over the territory in dispute. Ethnic wars also generate intense security dilemmas, both because the escalation of each side’s mobilization rhetoric presents a real threat to the other, and even more because intermingled population settlement patterns create defensive vulnerabilities and offensive opportunities.

For the same reasons, we would expect ethnic civil wars to be more likely to recur than civil wars that are ideologically based:

H6: The recurrence of civil war is more likely when the issues at stake in the previous were derived from ethnic divisions in society.

If the government and rebels are divided along ethnic lines, we can expect that ethnicity and cultural differences will remain a critical source of societal division even after the initial war has ended. Dismantling the condition of dual sovereignty will be more difficult in the aftermath of an ethnically based civil war because ethnicity as a source of identity (and as a source of societal cleavage) endures no matter what the terms of the post-war settlement. Indeed, post-conflict democratization in ethnically divided societies is likely to result in a party system that is defined along ethnic lines (Horowitz 1985). Under such circumstances, elections degenerate into little more than ethnic census, and minority groups may come to see themselves as relegated to permanent minority status. To the extent that they also see themselves as susceptible to a tyranny of the ethnic majority, they may find it preferable to resumed armed conflict as a means of negotiating through force a more favorable division of political power than they could ever hope to achieve at the polls. Moreover, the post-conflict environments of wars that are ethnic based are likely to produce renewed security dilemmas for groups targeted for repression on the basis of ethnic markers. Ethnic markers also make it easier for aspiring rebels to identify potential supporters and enemies of a call to renewed conflict.

Ethnic Diversity
While the presence or absence of ethnic divisions is a key determinant of the stakes of the conflict, the degree of ethnic fragmentation can affect the type and degree of grievances held by ethnic minorities as well as their willingness and ability to mobilize for the resumption of armed conflict. The degree of ethnic fragmentation affects the coordination costs of organizing or re-organizing an insurgency. Brown and Boswell (1997: 112) argued that nations characterized by a high level of ethnic fragmentation are less prone to serious ethnic strife. Similarly, Collier and Hoeffler (1998; 2000) found that ethnic fragmentation in combination with religious diversity makes the outbreak of civil war less likely. Ethnic identity can facilitate the coordination of a movement by reducing the costs of recruitment and enhancing the ability of movement leaders to detect and sanction free riders. High levels of ethnic fragmentation might facilitate intra-group coordination but will also require more inter-group coordination to assemble a rebel coalition of sufficient strength to sustain an armed challenge to the incumbent regime. Sambanis (2001: 273) found that the probability of ethnic war increased as a nation became more ethnically heterogeneous. However, Elbadawi and Sambanis (2000) have found evidence of a parabolic relationship between ethnic diversity and the risk of civil war onset, with civil war being less likely at both very low and very high levels of ethnic fragmentation and more likely at moderate levels.

Thus, the literature on ethnicity and civil war present us with two mutually reinforcing considerations regarding civil war recurrence. First, the salience and permanence of ethnic identity is likely to make ethnically-based civil violence more difficult to end as deep social cleavages extend into the post-war environment. Second, while ethnicity contributes to a high risk post-conflict environment in which renewed war is more likely, it also greatly lowers the costs of re-mobilizing or remaining mobilized for future war. Following this logic, I present the following hypothesis:

H7: The recurrence of civil war is less probable as the level of ethnic fragmentation increases and more probable in racially polarized societies.

Initial War Goals

Another way to conceptualize the stakes of the previous conflict is whether the goal of the rebels was revolution or secession. In a revolutionary civil war, the rebels seek to overthrow the incumbent regime and take its place. In a secessionist revolt, the rebels seek not to replace the incumbent regime but to gain independence from it; they wish to create two sovereign nations out of one. Our model suggests the following hypothesis:

H8: The recurrence of civil war is more likely to follow separatist conflicts rather than revolutionary conflicts.

First, secessionist wars are ethically based: they are fought by regionally concentrated ethnic groups. The same logic that suggests ethnic civil wars are more likely to recur should also imply that secessionist wars are more likely to recur than revolutionary conflicts. This tendency is reinforced in the case of secession because the rebellious ethnic group is concentrated in a territorial enclave, which enhances their capacity for mobilization and their security from the state’s armed forces. In short, ethnoregional concentration preserves the basis for dual sovereignty and a resumption of civil war.

In this sense, separatist conflicts are more likely to survive because the population
demographics which led to the initial desire for territorial autonomy will persist into the post-conflict environment. The desire for ethnoregional autonomy is prevented by a government victory in the prior civil war. If the war ended in a negotiated settlement which granted some degree of regional autonomy (through federal or consociational arrangements) the ethnoregional group may, in time, come to believe that these concessions are not sufficient. If the grant of autonomy is seen as not sufficient to guarantee the group against the recurrence of an ethnic security dilemma, they may be motivated to resume the conflict at some point in the future.

Unlike a secessionist revolt, the two parties in a revolution cannot retreat to separate territories and maintain their own independent capacity to defend themselves against a resumption of hostilities. Supporters of the government and the rebels are often intermingled geographically and indistinguishable by ethnic markers. The termination of a civil war – whether through negotiated settlement or victory by one side or the other – is more likely to result in the dismantling of the conditions of dual sovereignty than is the case with a secessionist revolt. Because the civilian support bases of the two rivals are intermingled, it is more difficult for the rival elites to mobilize their supporters for a resumption of revolutionary conflict because they are not concentrated in a secure territorial enclave.

**Structures of Peace**

Besides the incentives and disincentives for resuming conflict, the prospects for a recurrence of civil war are affected by the ability of the post-war regime, often with the assistance of the international community, to build a structure of peace. Sustaining the peace requires the establishment political institutions that afford former combatants a fair opportunity to pursue their interests and redress their grievances through peaceful means. It also requires the rehabilitation of the economy so that the grievances that fueled support for the initial war are diminished and the appeal of the status quo (compared to a resumption of conflict) is enhanced.
**Post-Conflict Democracy**

The domestic corollary of the democratic peace proposition holds that democracies are less likely to experience civil war because the institutions and processes of democracy defuse revolutionary violence by diverting popular discontent into electoral competition and nonviolent protest. Empirical support for this proposition is found in the frequently cited “inverted U-curve” relationship between repression and civil violence. The “inverted U” suggests that established democracies and harshly autocratic regimes are less susceptible to civil war than weak authoritarian regimes (Hegre *et al.* 2001; Muller and Weede 1990). The establishment of post-conflict democracy reduces the probability of civil war resuming because the benefits of peaceful negotiations exceed the benefits of violent conflict; revolution is not necessary. Dissident movements do not need to resort to organized violence against the state because they can seek the redress of their grievances through electoral means and other forms of nonviolent collective action. Democratic states are also less likely to repress nonviolent protest. Hence, opposition social movements are not compelled by state repression to choose between withdrawing from politics in order to escape repression or shifting to violent tactics of their own in order to combat it. Conversely, harshly autocratic regimes preempt the resumption of revolutionary violence by crushing opposition movements before they develop the capacity to mount a serious challenge to the state. In this circumstance, rebellion is irrational because the costs are prohibitively high, and the likelihood of success is remote. Weak authoritarian or semi-democratic post-conflict regimes lack both the institutional capacity to accommodate opposition grievances through electoral mechanisms and the coercive capacity to crush opposition movements preemptively. When organized opposition movements do emerge, the weak authoritarian state attempts to repress them but fails. In so doing, the state converts nonviolent opposition into revolutionary movements (Mason and Krane 1989).

We would expect a similar relationship to hold for civil war recurrence: civil wars should be less likely to recur in nations that adopt democratic institutions and in nations where the post-conflict regime is harshly autocratic. Civil war should be most likely to recur in semi-democracies or weak authoritarian post-conflict regimes.

**H9:** A democratic post-conflict environment should be negatively associated with the probability of civil war recurrence.

**Economic Well-Being**
In the high-risk environment following civil war the decision to sustain peace or return to violence may depend on post-war quality of life issues facing potential combatants. Prosperous people do not participate in armed revolts. Fearon and Laiting (2003) have demonstrated a strong negative relationship between the level of economic development and a nation’s susceptibility to civil war. The State Failure Project (2003) found a strong relationship between “unbalanced development” (defined as high urbanization with low GDP per capita) and state failure events (including civil war). For the recurrence of civil war, the relationship may be more difficult to specify. Presumably, a nation that experienced a civil war was already characterized by low levels of economic development and well-being. The war itself destroys some portion of the nation’s economic infrastructure and disrupts economic production, leaving the post-civil war environment even weaker economically and, therefore, more susceptible to the recurrence of civil war. Consequently, there may be little variation in the level of economic well-being among nations that have experienced a civil war. Following this logic, we propose the following:

**H9:** Civil war recurrence will be less likely the higher the level of socio-economic well being in the post-conflict environment.

### Methods and Data

To test the model, we estimated a logistic regression model with the dependent variable being a dichotomous measure of whether a nation that had a civil war experienced another one at a later date. The data we used were taken from Doyle and Sambanis (2000) and were made available by the World Bank through its research project on “The Economics of Civil War, Crime and Violence”. This file contains data on 124 civil wars that occurred between 1994 and 1997. The dependent variable MOREWAR was created by coding each war for whether or not that nation experienced a subsequent civil war. We then used the list of conflicts from Gleditsch et al. (2002) to determine whether any of the civil wars that had not recurred by the end of 1997 (the end of the Doyle and Sambanis data) had experienced a recurrence of civil war by the end of 2001 (the last year of the Gleditsch et. al data set). This left us with a set of 103 conflicts that began and ended between 1944 and 2001 and for which we had complete data on all of the independent variables.

The model specifies two sets of variables that should influence the probability of civil war recurrence: those that affect the willingness and ability of former combatants to resume organized combat and those that affect the post-civil war environment and, therefore, the incentives for former combatants to resume conflict rather than live with the status quo.

**War Outcome** (H1, H2): The Doyle and Sambanis data contain codes for whether the civil war ended in a government victory (VGOV), a rebel victory (VREB) or a negotiated settlement (TREATY).

**Costs of Conflict** (H3): The costs of conflict were estimated using variables on casualties. We created a new variable, DEATHRATE, as the total number killed divided by the duration of the civil war (DEAD/WARDUR). However, the best fit in the model turned out to be the log of the total number killed (LOGDEAD).
Duration: The duration of the conflict was measured using the Doyle and Sambanis variable WARDUR, which measures the duration in months.

Ethnic Divisions: The model suggests that civil wars that are ethnically based are more likely to recur than those that are ideologically based. The Doyle and Sambanis data set contains several variables that can be used to test this hypothesis. WARTYPE is a dichotomy that is coded "1" if the conflict was ethnically based and "0" otherwise.

A second dimension of the role of ethnicity is the hypothesis that civil wars are less likely to recur in nations that are more ethnically fragmented than in nations that are ethnically polarized between a small number of ethnic groups. To test this hypothesis, we used the variable ELF which is the ethno-linguistic fractionalization index based on Taylor and Hudson’s (1972) formula for calculating party fragmentation in parliaments. The variable ranges from 0 to 100, with higher values corresponding to greater degrees of ethnolingustic fractionalization. We also used Vanhanen’s (1999) measure of ethnic heterogeneity, an additive index that ranges from 0 (minimum heterogeneity) to 144 (maximum heterogeneity) by combining three indices of racial, linguistic, and religious divisions within a nation. ELF turned out to be the better predictor.

Post-Conflict Democracy: the model suggests that civil war recurrence is less likely if an effectively functioning democracy is established in the aftermath of the conflict. The data set contains a number of variables to test this hypothesis, including scores on the Polity IV democracy-autocracy scale (ranging from 0 to 20, with 0 being the most autocratic and 20 being the most democratic) for two, five, and ten years after the conflict ended as well as average polity scores for five and ten years prior to the onset of the conflict (GURRLAG5 and GURRLAGX).

Peacekeeping: we hypothesized that conflicts that are brought to an end with the intervention of UN peacekeeping operations are less likely to recur because UN peacekeepers can provide the credible commitment that makes a peace agreement more likely to hold and their presence diminishes the chances of new internal security dilemmas arising. The Doyle and Sambanis data set contains a number of variables measuring the presence or absence of UN intervention and the form of that intervention. We used the variable PEACEOP, which is coded "1" if the UN or any other organization provided peacekeepers and "0" otherwise.

Economic Well-Being: the data set contains a number of variables that measure the level of well-being for the population before and after the conflict. These include several variations of GDP per capita, life expectancy, infant mortality, energy consumption. We tried each of these in the model and found the variable GDPCAP (gross domestic product per capita) was the best fit.

Findings
We estimated a logistic regression model (Table 2) with MOREWAR as the dependent variable. Our standard for including variables in the model was the predictive power of the model: we sought the model that did the best job of predicting the recurrence of civil war. The model represented in Table 1 successfully predicted the recurrence/non-recurrence in
83 of the 103 conflicts for which we had complete data (80.6%).

Three variables in the model (ELF, VGOV and VREBEL) failed to pass any acceptable standard of statistical significance, and one (GDPCAP) is significant only at p > .06. However, removing any one of them from the model reduces its predictive power. Therefore, they were left in the model.

Of the remaining variables, most of the coefficients were in the expected direction. In general, the probability of a recurrence of civil war declines if peacekeeping operations are undertaken (PEACEOP) and democratic institutions implemented post conflict (POLITY2). Similarly, as the duration of the prior conflict is extended (WARDUR) the probability of a subsequent recurrence is reduced. On the other hand, higher casualty levels (LOGDEAD) are associated with an increased probability of civil war recurrence. When conflict ends in either a rebel win (VREBEL) or government win (VGOV) the probability of a recurrence is reduced relative to conflicts that end in a negotiated settlement. The GDP per capita and degree of ethnic fractionalization (ELF) had no marginal effect on the probability of civil war recurrence.

Odds ratios are evaluated relative to the average value of each continuous independent variable and to the presence or absence of a condition for nominal variables. The odds ratio gives the odds in favor of success for an event (i.e., MOREWAR = 1) given a change in an independent variable versus the probability of the event without the change. Variables GDPCAP and ELF, while important to the predictive model, do not seem to affect the probability of civil war recurrence. Increasing by one unit the nation’s democracy score two years after the previous conflict ended (POLITY2) reduces the odds of a civil war recurrence by almost 8 percent (1 - 0.922 = 0.078 ~ 8%). However, increasing the 5-year average pre-war democracy score (GURRLAG%) by 1 unit increases the odds of civil war recurrence by over 11 percent. The presence of peacekeepers reduces the odds of a civil war recurrence by almost 39 percent (1 - 0.611 = 0.389 ~ 39%). Because the two outcome variables, VREBEL and VGOV, failed to achieve statistical significance, we cannot derive any decisive conclusions concerning their effect on the probability of civil war recurrence. However, we would note that the odds ratios suggest that a rebel victory does reduce the probability of a civil war recurrence by substantially more than a government victory.

**Discussion and Conclusions**

We began by highlighting a critical issue in the study of civil wars: the fact that most nations that experience civil wars are likely to experience additional conflicts. The theory we developed to explain this phenomenon focused on the structural conditions in the post-war environment – specifically, the extent to which the termination of the original civil war had dismantled the conditions of dual sovereignty that Tilly has defined as a “revolutionary situation” – and the incentives for the former combatants to resume armed conflict rather than accept the status quo.

The findings present a picture in which the critical features for sustaining the peace in the post-war environment are matters of structure rather than agency. Introducing peacekeeping operations and creating a more democratic post-war environment do appear to immunize a nation against the recurrence of civil war more effectively than any other policy-manipulable variables. Democratization contributes to defusing the revival of a revolutionary situation by dismantling the condition of dual sovereignty. Presumably, former combatants can enter the post-war polity as contenders in a democratic political contest in
which the losers have some confidence that they will have the opportunity to renew their peaceful competition for political power at the next election cycle. The presence of multinational peacekeepers does appear to provide the credible commitments necessary for former combatants to disarm, demobilize, and compete for political power through peaceful institutional means. This conclusion must be tempered, however, with the unanticipated finding that higher pre-war democracy scores actually increase the probability of civil war recurrence. Exploring this finding remains a task for future research.

It is also worth noting that none of the cost/benefit variables in the decision calculus to resume war or accept the peace appear to have very strong effects on the probability of civil war recurrence, though several of them are statistically significant. The degree of ethnolinguistic fractionalization, often implicated as a cause of civil war, is not significantly related to the probability of civil war recurrence. While GDP per capita is statistically significant, the odds ratio imply that variations in GDP per capita have only marginal effects at best on the probability of civil war recurrence. Likewise, a number of other variables that were entered in the model and found to be unrelated to the dependent variable and contributed nothing to the predictive power of the model are also interesting in terms of what is not related to the recurrence of civil war. Whether the goal of the war was revolution or secession had no effect on the likelihood of civil war recurrence. Other indicators of post-war economic well-being, including infant mortality rate, energy consumption, and other measures of GDP per capita all measured at varying points in time after the original war ended had no effect on the probability of civil war recurring. The size of the government’s army, the presence or absence of third-party intervention on one side or the other, and the number of people displaced by the original war had no effect on civil war recurrence.

More work is needed to explore other possible explanations of this phenomenon. However, with a relatively small number of variables derived from a theoretical model that depicts the incentives for potential protagonists and the structural conduciveness of the post-conflict environment, we were able to predict the recurrence or non-recurrence of civil war in 83 of 103 cases. That model not only gives us some insight into the conditions that make civil wars more likely to recur but some encouragement that international intervention for the purpose of nurturing democracy providing the former enemies with credible commitments that the post-war peace will be ensured can inoculate those nations against the recurrence of civil war.

Endnotes
References


Table 1. The Frequency of Civil War Occurrences in Nations, 1944-2001

<table>
<thead>
<tr>
<th>Number of Civil Wars</th>
<th>Doyle and Sambanis</th>
<th>Correlates of War 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>36</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Wars</strong></td>
<td><strong>124</strong></td>
<td><strong>111</strong></td>
</tr>
<tr>
<td><strong>Total Nations</strong></td>
<td><strong>69</strong></td>
<td><strong>56</strong></td>
</tr>
</tbody>
</table>
Table 2. Logit Model of Civil War Recurrence

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Coefficient (stnd. error)</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP/cap</td>
<td>-.0006027* (.0003203)</td>
<td>.9993974</td>
</tr>
<tr>
<td>Polity 2yr post CW</td>
<td>-.0814454*** (.0236792)</td>
<td>.9217831</td>
</tr>
<tr>
<td>ELF</td>
<td>-.0002997 (.0095499)</td>
<td>.9997004</td>
</tr>
<tr>
<td>Polity Ave 5yr pre-CW</td>
<td>.1055958** (.0520244)</td>
<td>1.111373</td>
</tr>
<tr>
<td>Duration</td>
<td>-.0144883*** (.004896)</td>
<td>.9856161</td>
</tr>
<tr>
<td>Peacekeeping</td>
<td>-.4925834** (.2459078)</td>
<td>.6110458</td>
</tr>
<tr>
<td>Log Casualties</td>
<td>.570765*** (.1733229)</td>
<td>1.76962</td>
</tr>
<tr>
<td>Rebel Victory</td>
<td>-1.038752 (.7866086)</td>
<td>.3538959</td>
</tr>
<tr>
<td>Government Victory</td>
<td>-.2514973 (.7693999)</td>
<td>.7776355</td>
</tr>
<tr>
<td>constant</td>
<td>-4.149236 (1.765512)</td>
<td></td>
</tr>
</tbody>
</table>

Log likelihood = -44.95524
Prob > chi² = 0.0000
n=103
Table 3. Prediction Success of Logit Model

<table>
<thead>
<tr>
<th>Predicted</th>
<th>Civil War Recurs</th>
<th>No Civil War Recurs</th>
<th>Total (% correct)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil War Recurs</td>
<td>48</td>
<td>12</td>
<td>60 (80%)</td>
</tr>
<tr>
<td>No Civil War Recurs</td>
<td>8</td>
<td>35</td>
<td>43 (81.3%)</td>
</tr>
<tr>
<td>Total (% Correct)</td>
<td>56 (85.7%)</td>
<td>47 (74.5%)</td>
<td>103 (80.6%)</td>
</tr>
</tbody>
</table>

1. On the other hand, duration could be positively associated with conflict survivability by increasing the ability of the rebel group to attract supporters. The longer the previous war lasted, the more viable a rebel group may appear to free riders who supported the cause but remained uninvolved to avoid the potential costs of fighting. Duration could also affect determination. It is much easier to give up in a struggle at the beginning when your investment is low.

2. On the inverted “U” relationship between state repression and civil violence, see Muller (1985), Muller and Seligson (1987), Muller and Weede (1990), Hegre et al. (2001).


4. The following cases were coded “1” on more war based on Gleditsch et al (2002) reporting the level of conflict reaching “war” in that nation between 1997 and 2001: Algeria (1992-1997), Congo-Zaire (1996-1997), India (Kashmiri insurgents), Indonesia (1986), Liberia (1996), Philippines (MNLF/MILF), and Russia-Chechnya.